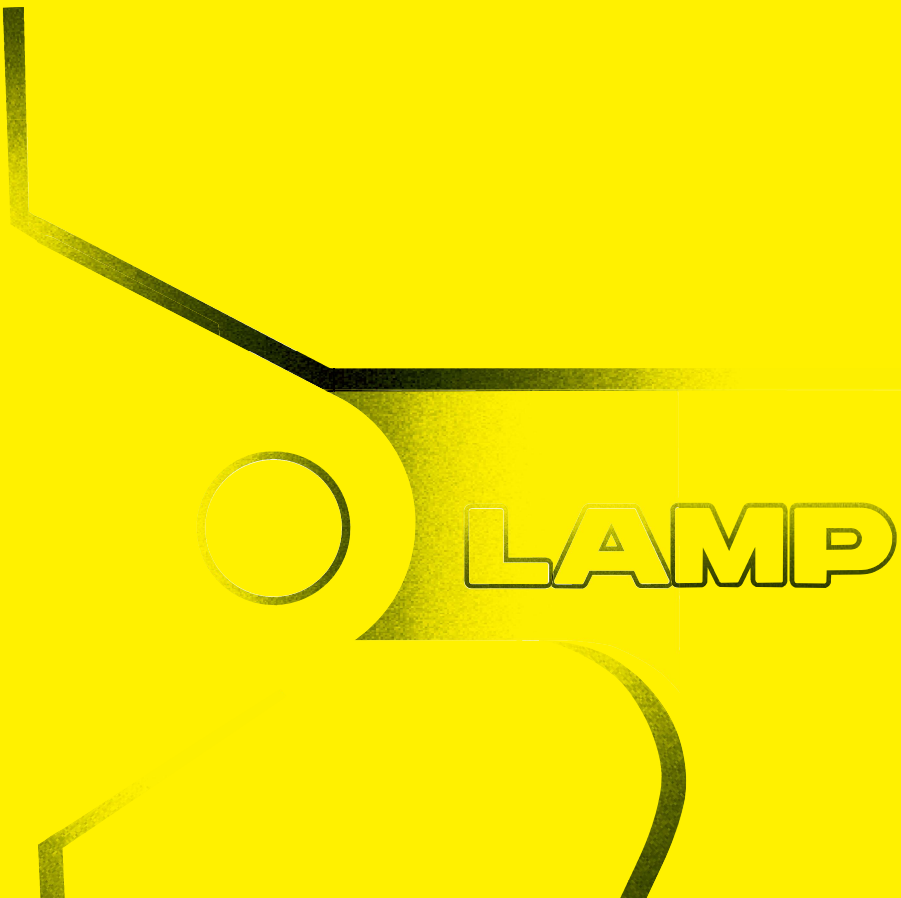
SUGATSUNE

Industrial Component Hardware



June 2022

No.400

INDEX

HINGES
LID SUPPORTS
CATCHES, LATCHES & FASTENERS
DRAWER SLIDES
HANDLES, PULLS & KNOBS
HOOKS & BRACKETS
MONITOR MOUNTS
CABINET DOOR HARDWARE & SHUTTER DOORS
LOCKS
CASTERS
LEVELLING GLIDES & BASE
MISCELLANEOUS

Motion Design Tec

LAMP®

DRAWER SLIDES

Drawer slides are parts of linear motion mechanism.

[Drawer Slides]
Sugatsune offers a broadest line of products in the industry, from small and thin slides to ultra heavy duty ones with a load capacity up to 272 kgf/pair.
In terms of functionality, standard products are equipped with soft-close, push-to-open, 2-ways, bumper and other functions.
Besides, we also offer made-to-order specifications even for small lot, such as setting a pocket or claw for installing on the slide, or processing a clinching nut in advance for screwing.

[Linear Slides]
Linear slides are used for the linear motion parts of various kinds of equipment. In recent years, they are also used for opening/closing of station platform doors, etc. Sugatsune mainly offer roller type, ball type and ball bearing-less (sliding) type.

SUGATSUNE

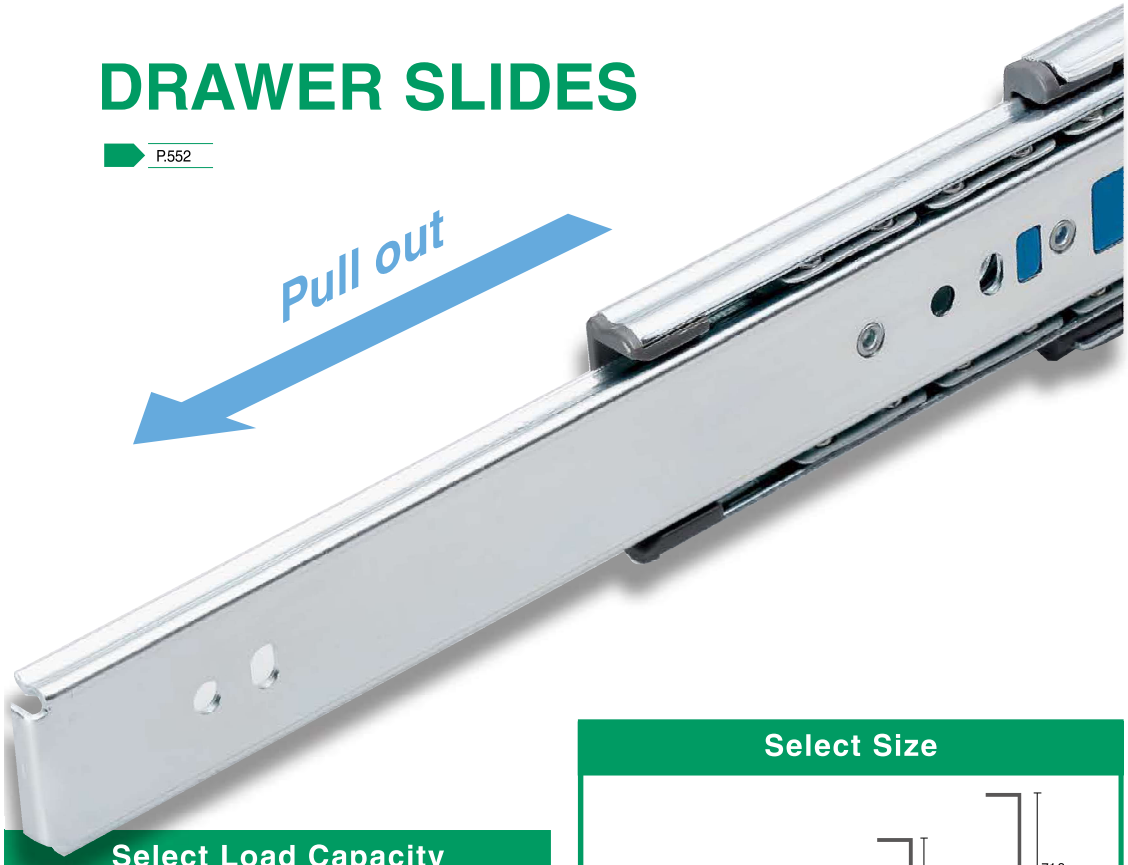
June 2022

SOFT-CLOSE SLIDES
PUSH-TO-OPEN SLIDES
MINI SLIDES
MEDIUM SIZE SLIDES (STAINLESS STEEL)
MEDIUM SIZE SLIDES (ALUMINIUM)
MEDIUM SIZE SLIDES (OTHERS)
LINEAR SLIDES
STAINLESS STEEL
ALUMINIUM
STEEL

Wide Variation

DRAWER SLIDES

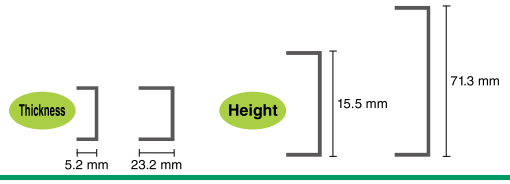
P.552



Select Load Capacity

11N~2667N

Select Size



Select Material

Steel | Aluminium | Stainless Steel

Extra Functions

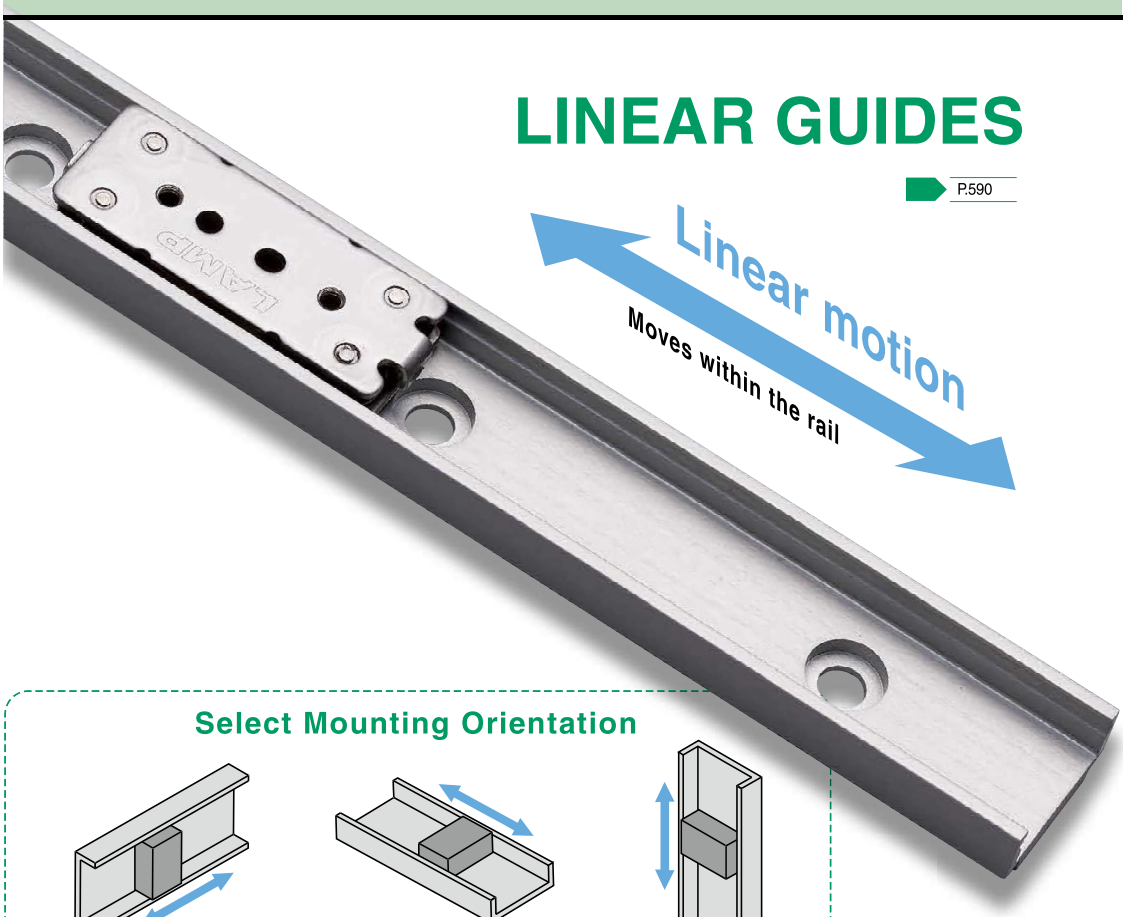
Soft-closing ▶ P.552

Push-open ▶ P.558

Abundant variety | **Plentiful inventory** | **Custom orders available**

LINEAR GUIDES

P.590



Select Mounting Orientation

Select Material

- Steel
- Aluminium
- Stainless Steel

Select Type

- Roller P.590~
- Ball P.602~
- Sliding (Greaseless) P.592~

LINEAR GUIDES PICKUP



LGB P.598~ | MRS P.592~ | MLG P.590~ | SCRL2 P.565~ | ARL2-16 P.562~ | TSSL P.602~

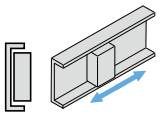
Be Sure to Read

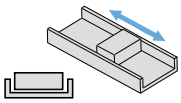
Drawer Slides

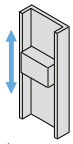
- For one cabinet, select slides from the same series. Or the sliding feeling and noise may change greatly.
- Some stainless steel slides use certain plastic parts. Please confirm when using under high temperature and chemical environment.
- Detachable ball bearing type slides (not including those with 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 self-closing mechanism varies depending on slides.
- Slides with a bumper reduce the metal-to-metal noise at the end of the course, but cannot completely mute the noise. Also noted that the noise from retainer movement cannot be relaxed.

Linear Slides

- 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).

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

LOCK OPENED — 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.

L=R — Non-handed.

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

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

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

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

CATCH — Self-closing system catches the drawer when closing.

INDEX

Drawer Slides

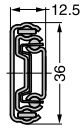
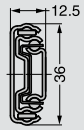
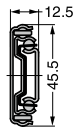
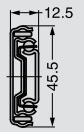
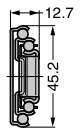
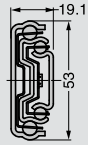
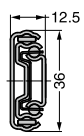
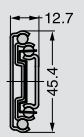
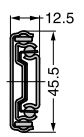
INDEX by Specifications P.545
Cautions for Slide Selection and Installation P.549

Linear Slides

INDEX by Specifications P.551

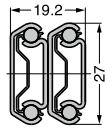
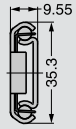
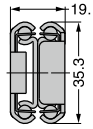
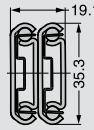
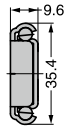
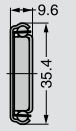
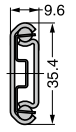
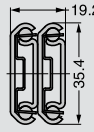
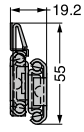
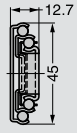
INDEX by Drawer Slide Specifications

Slides are summarised by specifications and listed in ascending order of slide height.

Type	Material	Product Name	Load Capacity N/pair (200 / 400 / 600 / 800 / 1000)	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Soft-Close Slides	Steel	3670 	147~196	3 Members				○			○		P.552
		3670 Black 	147~196					○			○		P.553
		4670 	147~392					○			○		P.554
		4670 Black 	147~392					○			○		P.555
	Stainless Steel	ESR4670 	157~343					○	○				P.556
	Steel	5370 for Heavy Duty 	784~980					○					P.557
Push-to-Open Slides	Steel	3660 	147~196					○			○		P.558
		4638 	265~441					○		○			P.559
		4660 	147~441					○			○		P.560

Type	Material	Product Name	Load Capacity N/pair	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Mini Slides	Aluminium Alloy	AR3-16	20~39	3 Members									P.561
		ARW2-16	11~69	2 Members								○	P.562
	Stainless Steel	SCR3	98~118	3 Members									P.563
		SCR3-15S	98~118										P.563
		SCRW2	137~177	2 Members								○	P.564
		SCRW2-15S	137~177									○	P.564

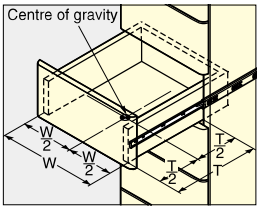
Type	Material	Product Name	Load Capacity N/pair	Slide	Hold When Closed	Detachable	With Bumper	Page
Medium Size Slides (Stainless Steel)	Stainless Steel	ESR-DC4513	392~529	3 Members	○	○		P.566
		ESR-3813	284~441		○	○		P.567
		ESR2021	108~157	2 Members				P.568
		ESR2031	127~167	3 Members				P.569
		SNS27S	176~255	2 Members				P.570
		SNS27D	275~373	3 Members				P.571
		272SL	137~177	2 Members		○		P.572

Type	Material	Product Name	Load Capacity N/pair (200 400 600 800 1000)	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Medium Size Slides (Stainless Steel)	Stainless Steel	273SL 	118~177	3 Members				○					P.573
		SNS35S 	245~481	2 Members									P.574
		SNS35D 	441~588	3 Members									P.575
		SNS35W 	355~623					○		○			P.576
		ESR1 	245~481	2 Members			○	○					P.577
		ESR13 	245~481						○				P.578
		ESR8 	245~481			○		○					P.579
		ESR7 	355~623	3 Members		○		○					P.580
		ESR3 	422~637					○			○		P.581
		ESR4658 	314~490					○	○				P.582

Type	Material	Product Name	Load Capacity N/pair	Slide	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	Page
Medium Size Slides (Stainless Steel)	Stainless Steel	5302S For Heavy Duty	627~1137	3 Members				○		P.583
		ESR5 For Heavy Duty	785~1118	2 Members						P.584
		ESR10 For Heavy Duty	1785~2667	3 Members						P.585
Medium Size Slides (Aluminium Alloy)	Aluminium Alloy	AR2 For Light Weight	80~150	2 Members						P.586
		AR3 For Light Weight	30~110	3 Members						P.586
		AR2-K With Hold-out Detent	85~125	2 Members					○	P.587
		AR3-K With Hold-out Detent	85~105	3 Members					○	P.587

Type	Material	Product Name	Load Capacity N/pair	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Medium Size Slides (Others)	Stainless Steel	RKA5	147	2 Members				○					P.588

Cautions for Slide Selection and Installation

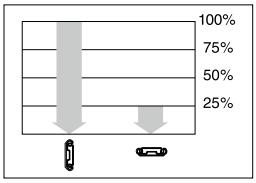


Calculation of slide centre of gravity

The load capacity is determined with the drawer centre of gravity at the centre of travel length and width in the lateral direction. (Refer to left figure). Conditions are set to slide installation width 300mm, about 10 times of withdrawal per month, static load, and the slide is securely fixed to the cabinet and drawer and installed vertically.

※Load capacity change by installation method

Load capacity changes greatly with slide not installed vertically.
For example, the load capacity with slide installed horizontally may be less than 25% of that listed in this catalogue.



[Cautions for Slide Selection]

Slide performance varies depending on its use condition. The durability and load capacity of slide varies greatly depending on cabinet dimensions and centre-of-gravity position, frequency of use, slide installation method, cabinet installation place, etc.

- Slide selection reference

Application examples

※The slide must be installed properly.

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

- Do not change the combination of inner member and outer member.

[Temperature Range]

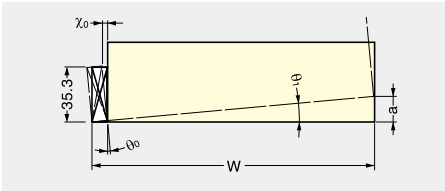
5℃~35℃

Cautions for Slide Installation

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

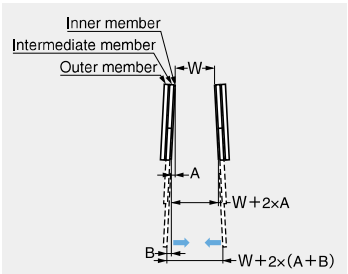
[Installation Parallelism]

1. Front



Although it depends on the parallelism (θ_0), 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



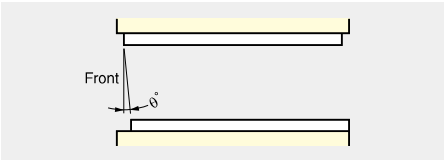
When the rear side is narrowly [widely] installed

When the slide is fully closed, the installation width difference between the front and rear sides is A for 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 2×(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 be decreased. 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 1 <Installation Example>).

※Allowable range of A: Varies depending on the slide length, travel length, model, and slide use conditions, etc.

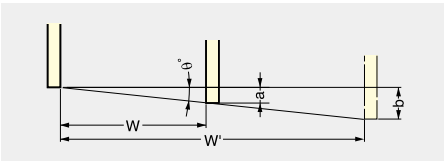
Refer to 1 : P.550

[Installation Perpendicularity]



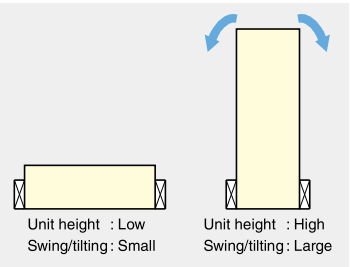
Please minimise the perpendicularity (θ°) to reduce the occurrence of ※ ball creep 1 and lateral swing.

[Installation Width]



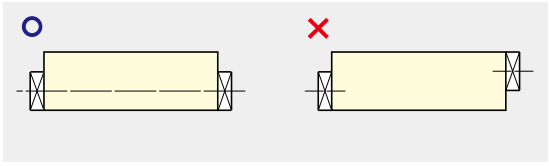
When the slide installation width is large, even if the swing factor of slide is small, the swing becomes strong as the width increases. Also, depending on the handle position and shape, swing may be caused by unstable opening/closing operation of drawer (opening/closing operation is not performed at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

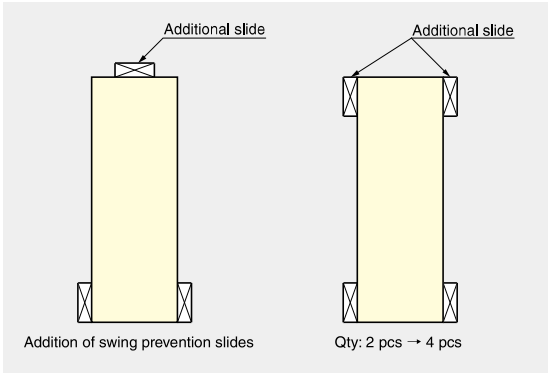
[Drawer Unit Height]



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.

[Installation Position of Left and Right Slides with Respect to Drawer Unit]



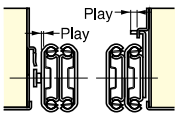


Therefore, please consider model selection, installation position, number of used slides (adding slides for preventing swing) and other conditions such as load.
Refer to <Installation Example>

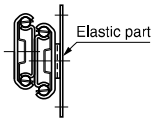
The allowable swing and tolerance may be larger for more flexible slide installation part. For increasing the allowance, please devise the installation method carefully.

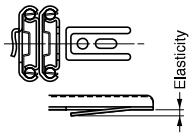
<Installation Example>

1. Give a play between the slide and the installation part.

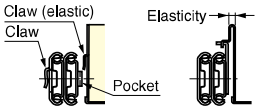


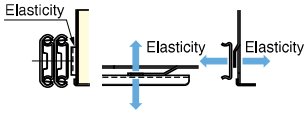
2. Make the slide elastic.



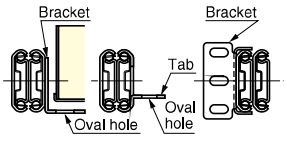


3. Make the installation part elastic.

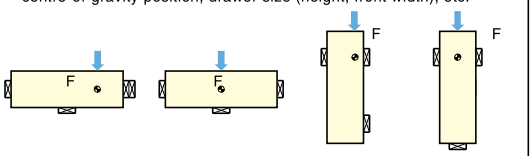




4. Use bracket and tab to make oval mounting hole.



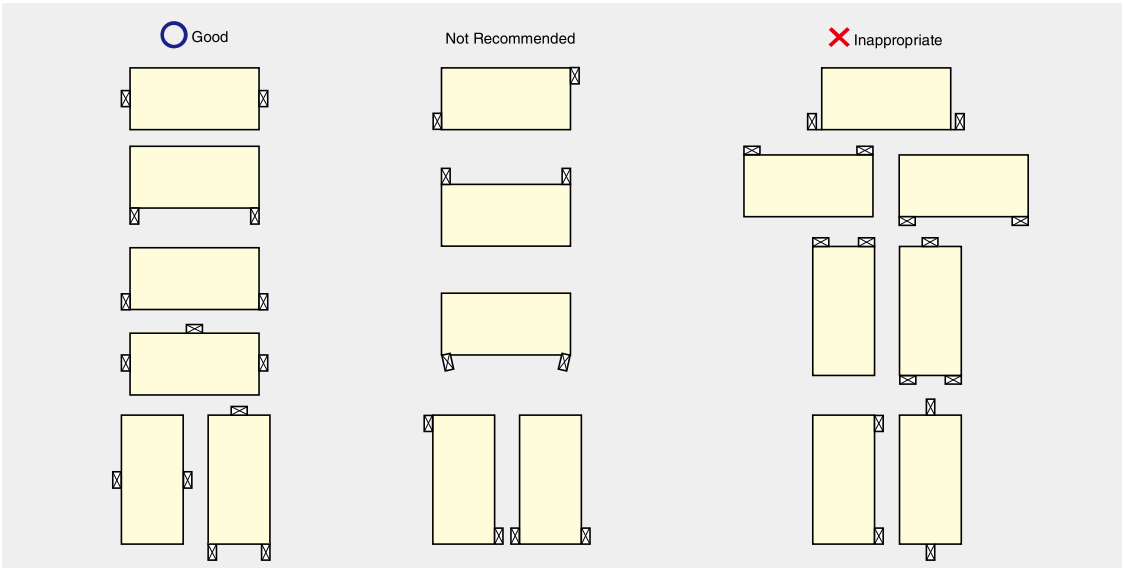
5. Determine the number and models of slides depending on the load, centre-of-gravity position, drawer size (height, front width), etc.



Load: Heavy Centre of gravity: Eccentric Front width: Wide	Load: Heavy Centre of gravity: Centre Front width: Wide	Load: Heavy Centre of gravity: Eccentric Drawer: High	Load: Heavy Centre of gravity: Centre Drawer: High

[Installation of Drawer Slides]

There are following possible installation methods, which may be good, not recommended or inappropriate.
The most important thing for slide installation is to install the slides in parallel.



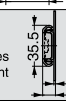
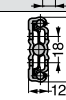
※What is ball creep?

Sometimes the slide can only move within a range less than the travel length. This is called ball creep. Ball creep is likely to occur when slides are not installed in parallel, when not using all the travel length, when not moving smoothly, or when sliding up and down, etc.
Ball creep may be corrected by forcibly opening the slide fully. At this time, please pull it out slowly. Fast opening or strong shock may cause damage.

INDEX by Linear Slide Specifications

Slides are summarised by specifications and listed in ascending order of slide height.

Type	Material	Product Name	Load Capacity N/pc: Vertical Use (100 200 300 400 500)	Load Capacity N/pc: Horizontal Use (100 200 300 400 500)	Page
Mini Guide Rails	Aluminium Alloy	MRS15 	30	100	P.594
		MRS-20 	175	300	P.595
		MRS-30 	305	520	P.596
		MRS40 	490	700	P.597

Type	Material	Product Name	Load Capacity N/pc: Vertical Use (pair) (100 200 300 400 500)	Load Capacity N/pc: Horizontal Use (pair) (100 200 300 400 500)	Page
Linear Slides	Aluminium Alloy	ARL2-16 	20~49	8~18	P.562
	Stainless Steel	SCRL2 	177~235		P.565
		SCRL2-15S 	177~235		P.565
	Aluminium Alloy	MLG20 	40	40	P.591
		LGB30 		294	P.598
	Stainless Steel	ESR9 For Light Weight ※Suitable for 2 slides use and door weight below 5kg. 			P.602
		TSSL 			P.602

INDEX (Others)

Type	Material	Product Name	Load Capacity N/pc (100 200 300 400 500)	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Others	Stainless Steel	ESR2 Under-mount Type 	49~78	2 Members			○	○					P.603

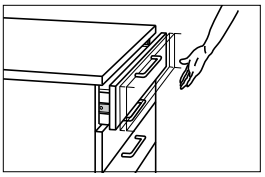
FULL EXTENSION SOFT-CLOSE SLIDE 3670

LOAD CAPACITY 147 N,196 N/pair | L=R | DETACH | BUMPER | CATCH | INSTRUCTION

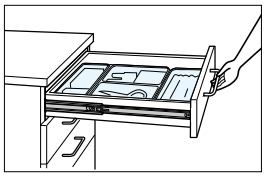


- Full extension (3 members).
- The drawer can be fully pulled out for slide length 300mm or above.
- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- The maximum width of the drawer is the slide length ＋200mm.
- Sliding smoothly even with some deflection of cabinet due to shock absorbing effect of the outer member installation part.
- The drawer is detachable by lifting the lever.
- Type 4670 with slide width 45.5mm, load capacity 15~40kgf / pair (black chromate: 1, clear zinc chromate 2) also available.

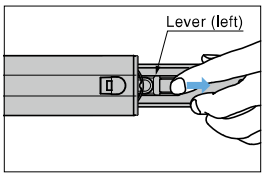
[Soft Closing]



[Full Extension (3 Members)]



[Easy to Detach]



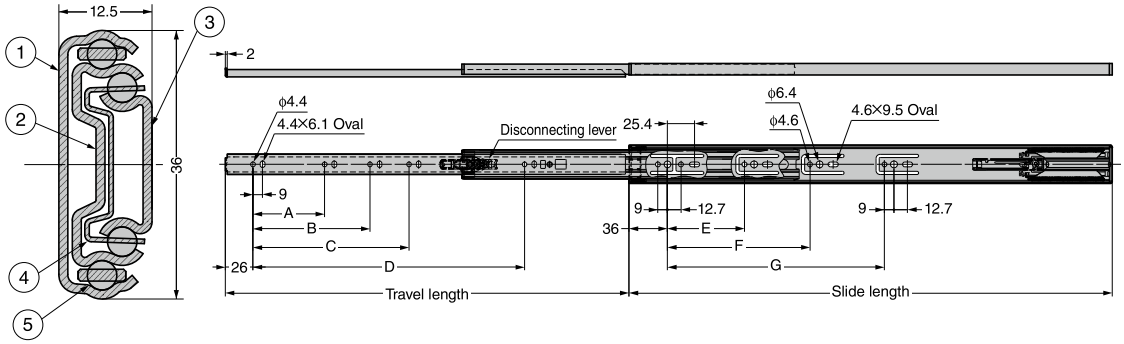
Move the left and right levers towards you at the same time.

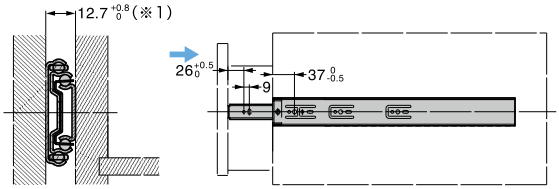
[Remarks]

- Be sure to read the “Cautions” 3.
- Gap between drawer and cabinet beyond the range below may cause unexpected damage to the slide. ※1 in the drawing
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.

[Parts Included]

- Truss head tapping screw 4x12





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

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-027-543	3670-250	250	200	124	–	–	–	87	–	–	147	15	0.54	20	–
G	3D	190-027-544	3670-300	300	300	174				119					0.66	20	–
G	3D	190-027-545	3670-350	350	350	96	224				183				0.78	10	–
G	3D	190-027-546	3670-400	400	400	160	256				199		196	20	0.9	10	–
G	3D	190-027-547	3670-450	450	450	96	192	306			247				1.02	10	–
G	3D	190-027-548	3670-500	500	500			356			215	295			1.12	10	–
G	3D	190-027-549	3670-550	550	550	128	224	352	406			343			1.24	10	–
G	3D	190-027-550	3670-600	600	600			384	456		247	375			1.38	10	–

Refer to 1 : P.555, 2 : P.554, 3 : P.549

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

FULL EXTENSION SOFT-CLOSE SLIDE 3670 Black

L=R INSTRUCTION

Silent & Soft Closing

Soft Closing



- 3-member Soft-Close Slide.
- Smooth sliding even with some cabinet distortion due to the shock absorbing effect of the outer member installation part.
- The inner member is detachable by lifting the lever.

[Specifications]

- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- The maximum width of the drawer is the slide length + 200mm.

[Other]

- Type 1 with slide height 45.5mm, load capacity 15 - 40kgf/pair (black chromate) also available.

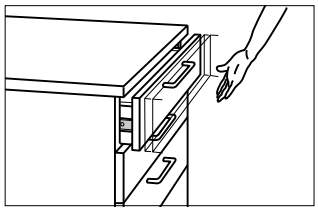
[Parts Included]

- Truss head tapping screw 4×12 (black chromate)

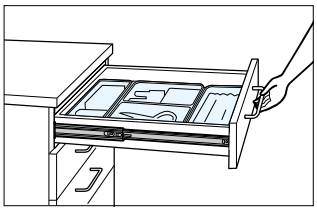
[Remarks]

- Be sure to read the "Cautions" 2.
- Do not push forcefully when the soft-closing mechanism is operating. Otherwise, it may cause oil leakage.
- Handle with care, as scratches stand out on black.

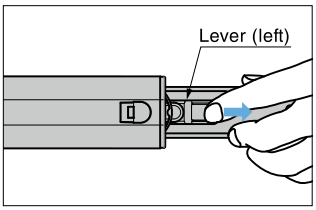
[Soft Closing]



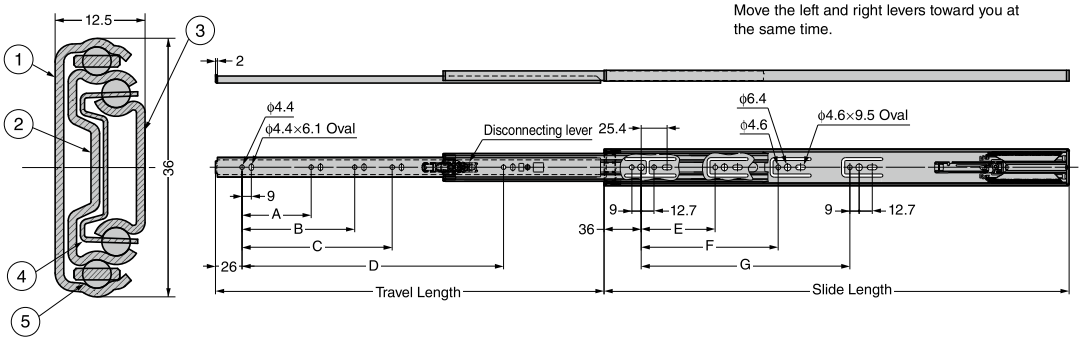
[3-member Type]



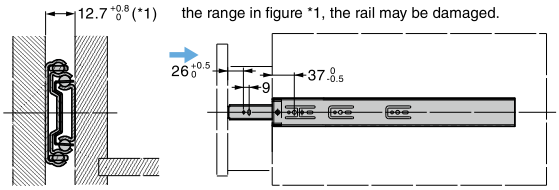
[Easy to Detach]



Move the left and right levers toward you at the same time.



If the clearance between the drawers and the cabinet exceeds the range in figure *1, the rail may be damaged.



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

Sold in pairs (2 pcs).

RoHS	CAD	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)	Box (pairs)	Carton (pairs)
G	3D	190-048-809	3670-250BL	250	200	124	–	–	–	87	–	–	147	15	540	20	–
G	3D	190-048-810	3670-300BL	300	300	174				119					660	20	–
G	3D	190-048-811	3670-350BL	350	350	96	224				183				780	10	–
G	3D	190-048-812	3670-400BL	400	400	160	256				199		196	20	900	10	–
G	3D	190-048-813	3670-450BL	450	450	96	192	306			247				1020	10	–
G	3D	190-048-814	3670-500BL	500	500	128	224	356			215	295			1120	10	–
G	3D	190-048-815	3670-550BL	550	550			352	406			343			1240	10	–
G	3D	190-048-816	3670-600BL	600	600			384	456		247	375			1380	10	–

Refer to 1: P.555, 2: P.549

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

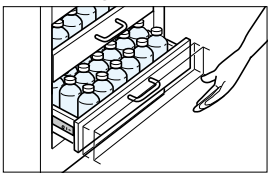
FULL EXTENSION SOFT-CLOSE SLIDE 4670

LOAD CAPACITY 147~392 N/pair | L=R | DETACH | BUMPER | CATCH | INSTRUCTION

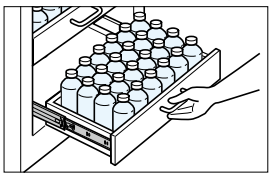


- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- With soft closing mechanism built-in, easy to install as with conventional slides.
- Full extension (3 members).
- The drawer can be pulled out beyond the slide length for slide length above 350mm.
- The maximum width of the drawer is the slide length +200mm.
- Sliding smoothly even with some deflection of cabinet due to shock absorbing effect of the outer member installation part.
- The drawer is detachable by lifting the lever.

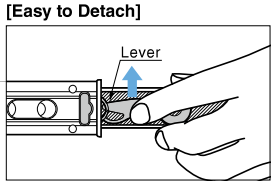
[Soft Closing]



[Full Extension (3 Members)]



[Easy to Detach]



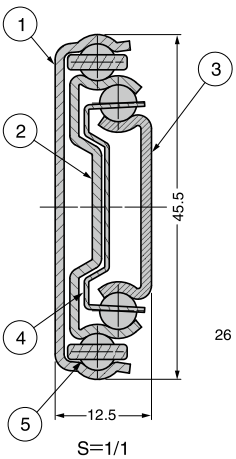
Simultaneously move the left lever upwards and the right lever downwards.

[Remarks]

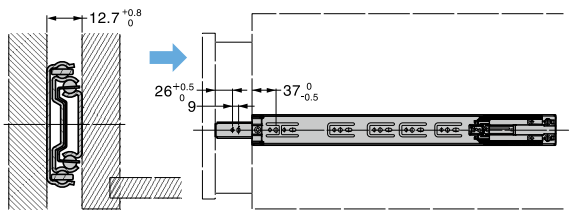
- Be sure to read the "Cautions" 1.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.

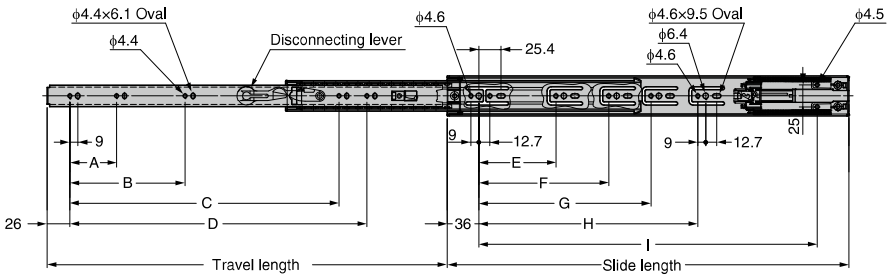
[Parts Included]

- Truss head tapping screw 4x12



S=1/1





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

Sold in pairs (2 pcs).

RoHS	CAD	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 (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-021-265	4670-250	250	175	–	–	124	–	87	–	–	–	179	147	15	0.71	10	–
G	3D	190-021-266	4670-300	300	275			174		119				229	196	20	0.85	10	–
G	3D	190-021-267	4670-350	350	353	96	–	224	–		183	–	–	279	245	25	0.99	10	–
G	3D	190-021-268	4670-400	400	404			254			199			329			1.13	10	–
G	3D	190-021-269	4670-450	450	455	128		294			247			379	294	30	1.27	10	–
G	3D	190-021-270	4670-500	500	505	96	160	344			295			429	343	35	1.44	10	–
G	3D	190-021-271	4670-550	550	556			394						479	392	40	1.59	6	–
G	3D	190-021-272	4670-600	600	606	128	192	444			215	343		529	294	30	1.77	6	–
G	3D	190-021-273	4670-650	650	653		224	416	494				439	579			1.92	6	–
G	3D	190-021-274	4670-700	700	704			480	544				487	629			2.07	6	–

Refer to 1 : P.549

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

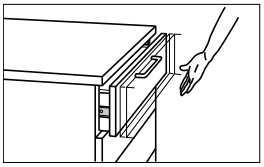
FULL EXTENSION SOFT-CLOSE SLIDE 4670 Black

LOAD CAPACITY 147~392 N/pair | L=R | DETACH | BUMPER | CATCH | INSTRUCTION

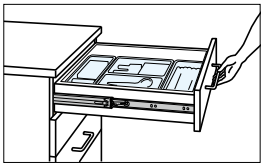


- Full extension (3 members).
- Black version of slide 4670 1.
- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- With soft closing mechanism built-in, easy to install as with conventional slides.
- The drawer can be fully pulled out for slide length 350mm or above.
- The maximum width of the drawer is the slide length +200mm.
- Sliding smoothly even with some deflection of cabinet due to shock absorbing effect of the outer member installation part.
- The drawer is detachable by lifting the lever.

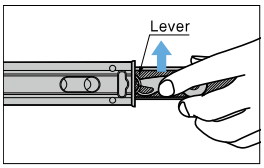
[Soft Closing]



[Full Extension (3 Members)]



[Easy to Detach]



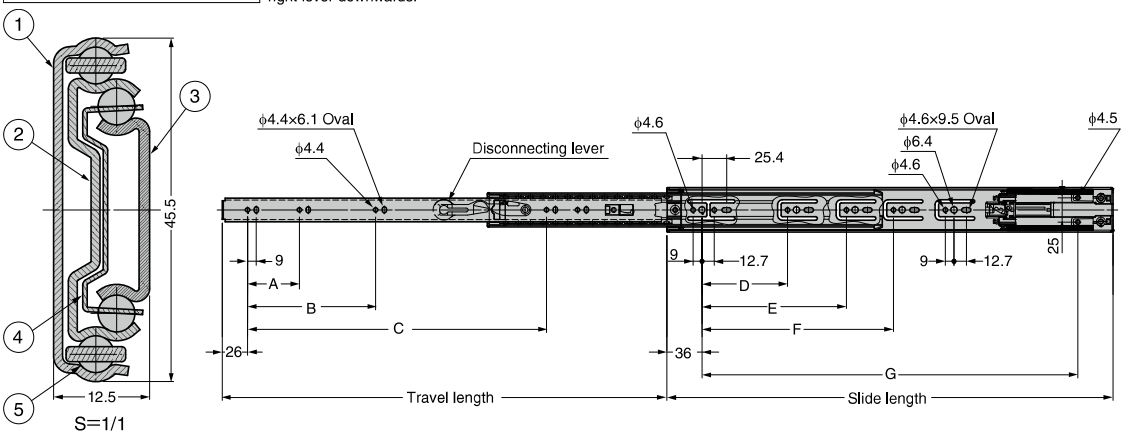
Simultaneously move the left lever upwards and the right lever downwards.

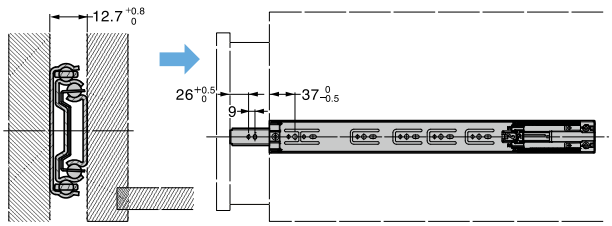
[Remarks]

- Be sure to read the "Cautions" 2.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.
- Noted that scratch is conspicuous on black surface.

[Parts Included]

- Truss head tapping screw 4x12 (black chromate)





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

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-028-947	4670-250BL	250	175	–		124	87	–		179	147	15	0.71	10	–
G	3D	190-028-948	4670-300BL	300	275			174				229	196	20	0.85	10	–
G	3D	190-028-949	4670-350BL	350	353	96	–	224		183	–	279	245	25	0.99	10	–
G	3D	190-028-950	4670-400BL	400	404			254		199		329			1.13	10	–
G	3D	190-028-951	4670-450BL	450	455	128		294	119	247		379	294	30	1.27	10	–
G	3D	190-028-952	4670-500BL	500	505	96	160	344		295		429	343	35	1.44	10	–
G	3D	190-028-953	4670-550BL	550	556			394		215	343	479	392	40	1.59	6	–
G	3D	190-028-954	4670-600BL	600	606	128	192	444				529	294	30	1.77	6	–

Refer to 1 : P.554, 2 : P.549

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

FULL EXTENSION SOFT-CLOSE SLIDE ESR4670 Stainless steel

LOAD CAPACITY 157~343 N/pair | L=R | DETACH | HOLD CLOSED | CATCH | INSTRUCTION | SUS



- 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 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.

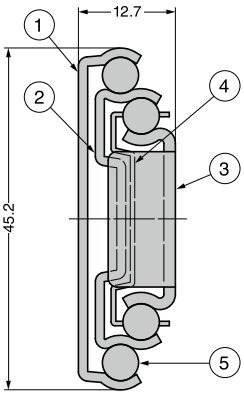
[Remarks]

- Be sure to read the "Cautions" 1.
- 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.

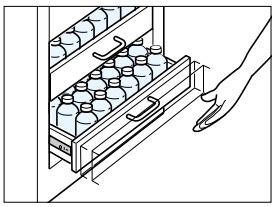
[Recommended Screws]

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

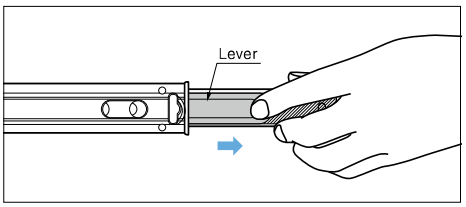
- Slide cross section S=1/1



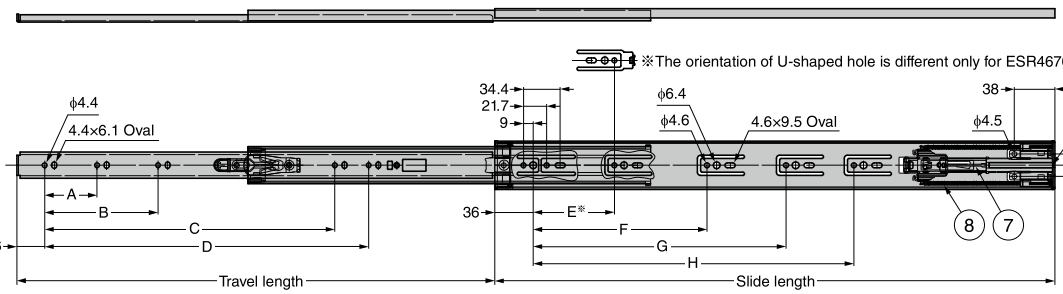
[Soft Closing]



[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).

RoHS	CAD	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)
G	3D	190-033-964	ESR4670-12	300	265	–	–	–	174	145	–	–	–	157	16	0.78	10	–
G	3D	190-033-965	ESR4670-14	350	340				224	151						0.93	10	–
G	3D	190-033-966	ESR4670-16	400	400	96			256	167				196	20	1.07	10	–
G	3D	190-033-967	ESR4670-18	450	450	128			306	119	215			294	30	1.21	10	–
G	3D	190-033-968	ESR4670-20	500	500	96	160		344		279			343	35	1.36	10	–
G	3D	190-033-969	ESR4670-22	550	550				394		215	311				1.46	10	–
G	3D	190-033-970	ESR4670-24	600	600	128	192		444		247	375				1.66	10	–
G	3D	190-033-971	ESR4670-26	650	650		224	416	494		215	311	407			1.81	10	–
G	3D	190-033-972	ESR4670-28	700	700			480	544			343	471			1.96	10	–

Refer to 1 : P.549

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

SOFT-CLOSE SLIDE 5370 For Heavy Duty

LOAD CAPACITY 784~980 N/pair



Soft Closing

- 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]

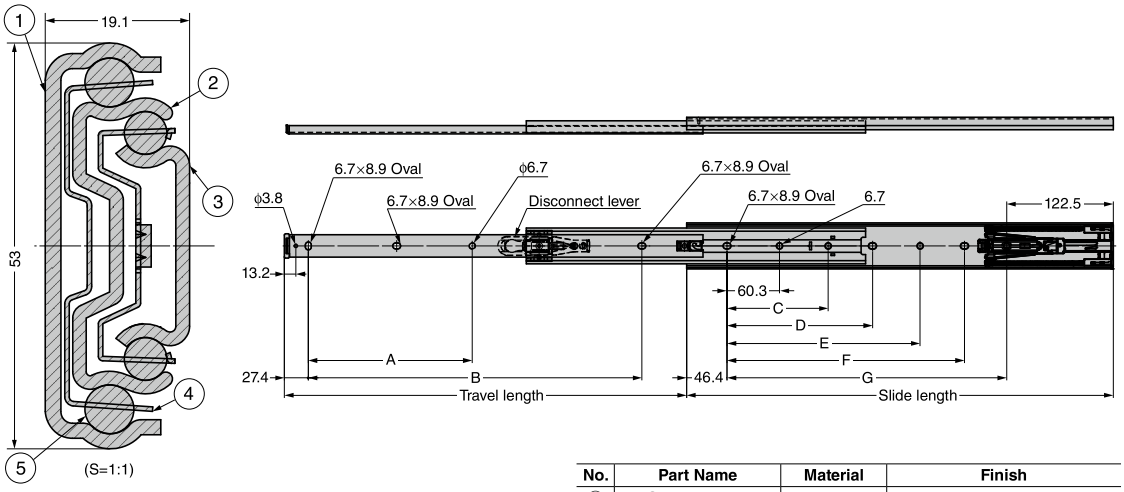
- Soft-closes at 55 mm distance from closed position.

[Remarks]

- Be sure to read the "Cautions" 1.
- Install a stopper to prevent the slide from being pushed in too far when stored.

[Recommended Screws]

- M5 flat head screws



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

[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.

Sold in pairs (2 pcs).

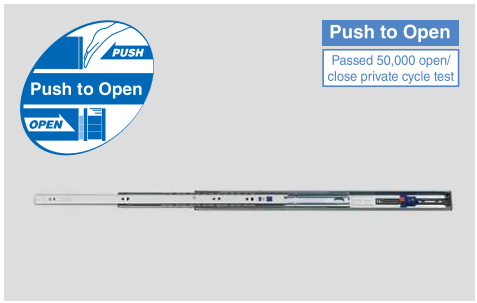
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pair)
G	3D	190-045-778	5370-400	400	375	–	317.5	–	–	127	177.8	231.2	784	80	2150
G	3D	190-045-779	5370-450	450	450		355.6			177.8	228.6	281.2	882	90	2450
G	3D	190-045-780	5370-500	500	500	228.6	406.4			228.6	279.4	331.2	931	95	2750
G	3D	190-045-781	5370-550	550	550		457.2			279.4	330.4	381.2	980	100	3050
G	3D	190-045-782	5370-600	600	600		508			330.2	381	431.2	882	90	3350
G	3D	190-045-783	5370-650	650	650		558.8	228.6	279.4	381	431.8	481.2			3650
G	3D	190-045-784	5370-700	700	700		584.2			431.8	482.6	531.2			3930

Refer to 1 : P.549

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

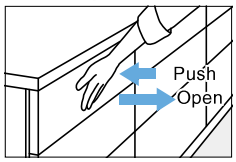
FULL EXTENSION PUSH-TO-OPEN SLIDE 3660

LOAD CAPACITY 147 N,196 N/pair | L=R | DETACH | BUMPER | INSTRUCTION | HEX KEY

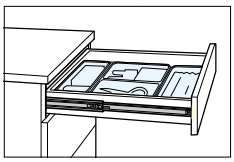


- Push-to-open mechanism. No handle or knobs required for a sleek, modern look.
- The drawer is easily opened by slightly pushing the front plate.
- Full extension (3 members).
- New mechanism PPD (pull protection device) minimises damage to slide.
- Our patented new mechanism PAE (push area expander, see※1 below) may reduce swing during close, and the drawer can be opened even though the push position of front board (push area, see※2 below) is slightly staggered with the centre.
- Passed 50,000 open/close private cycle test.
- The drawer is detachable by lifting the lever.
- Type 4660 with slide width 45.5mm, load capacity 15~45kgf / pair also available. Refer to 1.

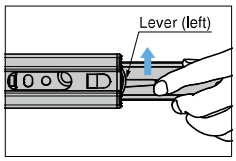
[Push to Open]



[Full Extension (3 Members)]



[Easy to Detach]



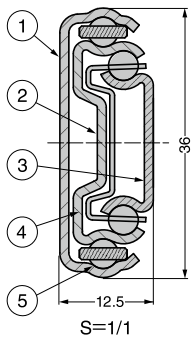
Simultaneously move the left lever upwards and the right lever downwards.

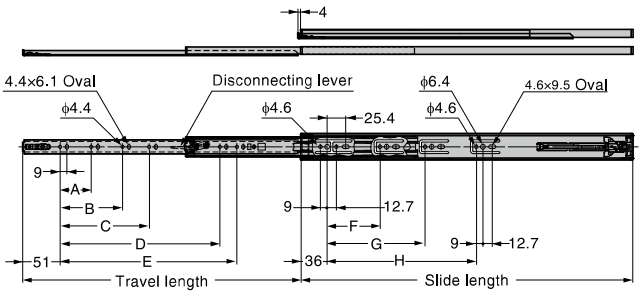
[Remarks]

- Be sure to read the "Cautions" 2.
- Do not apply strong shock. Otherwise, the drawer may be opened unexpectedly.
- PPD is not for routine use.
- Operate the push-to-open mechanism by pushing the centre part of the front plate. To widening the push area, adjust the gap with PAE.
- PAE has no effect if the gap between drawer and cabinet is beyond the range※3 shown below.
- The gap between drawer and cabinet beyond the range※3 shown below may cause unexpected damage to the slide.

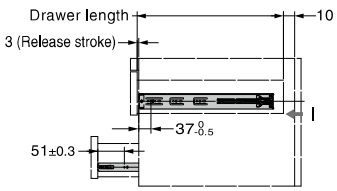
[Parts Included]

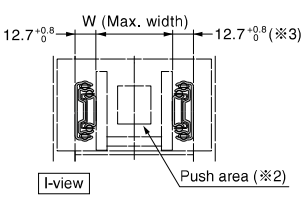
- Truss head tapping screw 4x12
- Hex key



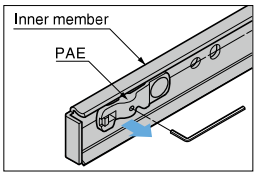


No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Clear Zinc Chromate (Trivalent)
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–





[PAE (Push Area Expander) ※1]



Turning the hex key (included) clockwise will cause the PAE to bulge in the direction of the arrow, which may reduce rattling when closed and expand the push-to-open area.

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	W	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-027-551	3660-250	250	250	–	103	167	199	121	87	119	215	450	196	20	0.56	20	–
G	3D	190-027-552	3660-300	300	300	71	–	295	327	171	119	247	295	500	196	20	0.68	20	–
G	3D	190-027-553	3660-350	350	350	103	–	167	199	221	119	183	–	550	196	20	0.80	10	–
G	3D	190-027-554	3660-400	400	400	103	231	295	327	271	119	199	215	600	196	20	0.92	10	–
G	3D	190-027-555	3660-450	450	450	103	263	295	327	321	119	247	295	650	196	20	1.04	10	–
G	3D	190-027-556	3660-500	500	500	103	167	295	327	371	119	247	295	700	196	20	1.16	10	–
G	3D	190-027-557	3660-550	550	550	103	199	327	391	421	119	247	345	750	196	20	1.28	10	–
G	3D	190-027-558	3660-600	600	600	103	199	327	391	471	119	247	375	800	196	20	1.40	10	–

Refer to 1 : P.560, 2 : P.549

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

FULL EXTENSION PUSH-TO-OPEN SLIDE 4638

LOAD CAPACITY 265~441 N/pair | L=R | DETACH | HOLD OPENED



- Push-to-open mechanism. No handle or knobs required for a sleek, modern look.
- The drawer is easily opened by slightly pushing the front plate.
- With push-to-open mechanism built-in, easy to install as with conventional slides.
- Full extension (3 members).
- The drawer can be held in fully opened position. Release by pressing the front plate.
- The drawer is detachable by lifting the lever.
- High load capacity due to sequential mechanism.

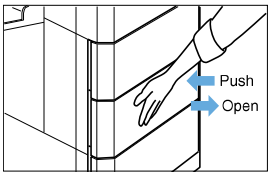
[Remarks]

- Be sure to read the "Cautions" 1.
- When the drawer is closed, pressing the front plate may unexpectedly open the drawer.
- Do not apply strong shock. Otherwise, the drawer may be opened unexpectedly.
- Do not pull the drawer strongly in closed position. Otherwise, the slide may be damaged.

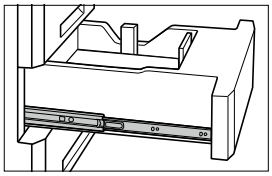
[Recommended Screws]

- M4 round head screw, nominal 4 or M4 binding head screw , nominal 4 or M4 truss head screw.

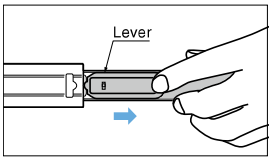
[Push to Open]



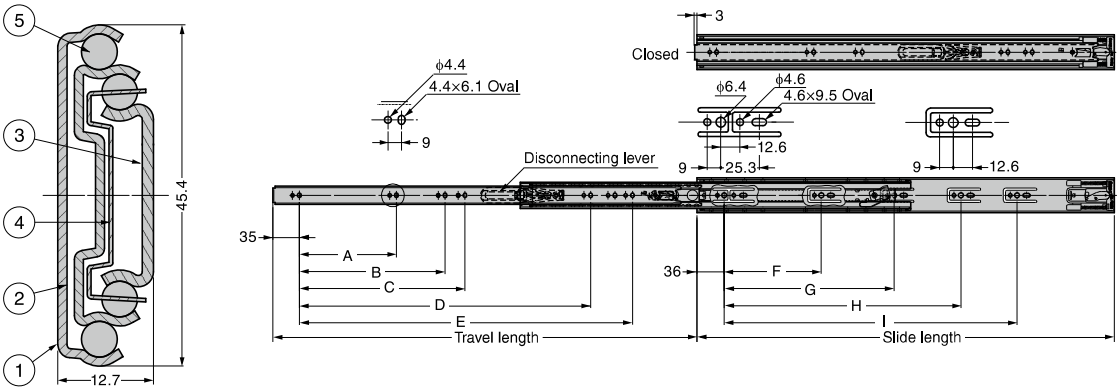
[Full Extension (3 Members)]



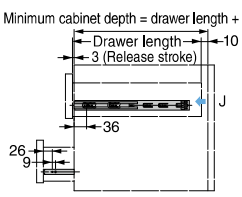
[Easy to Detach]

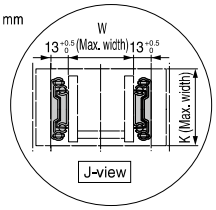


The drawer can be detached by pulling the lever in the direction of the arrow.

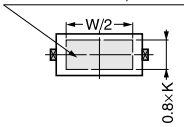


Minimum cabinet depth = drawer length + 7 mm





Push effective area (area where the push-to-open mechanism works)



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

Sold in pairs (2 pcs).

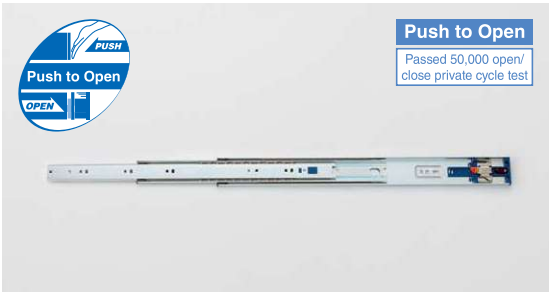
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Max. Drawer Length W	Max. Drawer Length K	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-012-468	4638-14	350	356	–				224	128	–	–	224	550	215	441	45	1	20	–
G	3D	190-012-469	4638-16	400	406				–	288		256			600	250	422	43	1.14	20	–
G	3D	190-012-470	4638-18	450	457		–			320	–		320	–	650	280	392	40	1.28	10	–
G	3D	190-012-471	4638-20	500	508			–		384		224	352		700	310	373	38	1.42	10	–
G	3D	190-012-472	4638-22	550	559	128			192	416	128		320	416	750	340	353	36	1.56	10	–
G	3D	190-012-473	4638-24	600	610				416	480		–	352	448	800	375	333	34	1.7	10	–
G	3D	190-012-474	4638-26	650	660		224			512				512	850	405	304	31	1.84	10	–
G	3D	190-012-475	4638-28	700	711			448	512	576				544	900	435	265	27	1.98	10	–

Refer to 1 : P.549

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

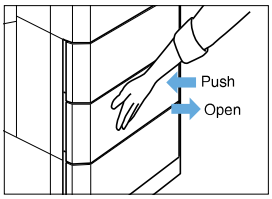
FULL EXTENSION PUSH-TO-OPEN SLIDE 4660

LOAD CAPACITY 147~441 N/pair | L=R | DETACH | BUMPER | INSTRUCTION | HEX KEY

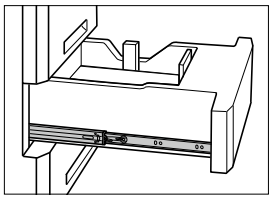


- Push-to-open mechanism. No handle or knobs required for a sleek, modern look.
- The drawer is easily opened by slightly pushing the front plate.
- New mechanism PPD (pull protection device) minimises damage to slide.
- Our patented new mechanism PAE (push area expander, see ※2 below) may expand the front plate pushing area when opening the drawer (push area, see ※3 below).
- Plastic spring reduces the metal-to-metal noise at the end of the course.
- Passed 50,000 open/close private cycle test.
- The drawer is detachable by lifting the lever.

[Push to Open]



[Full Extension (3 Members)]

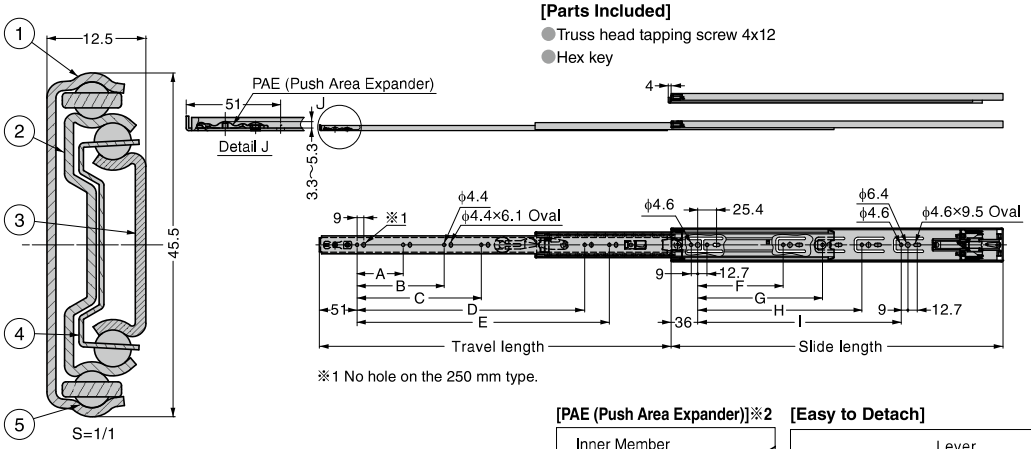


[Remarks]

- Be sure to read the "Cautions" 1.
- Do not apply strong shock. Otherwise, the drawer may be opened unexpectedly.
- PPD is not for routine use.
- Operate the push-to-open mechanism by pushing the centre part of the front plate. To widening the push area, adjust the gap with PAE.
- PAE has no effect if the gap between drawer and cabinet is beyond the range ※4 shown below.
- The gap between drawer and cabinet beyond the range ※4 shown below may cause unexpected damage to the slide.

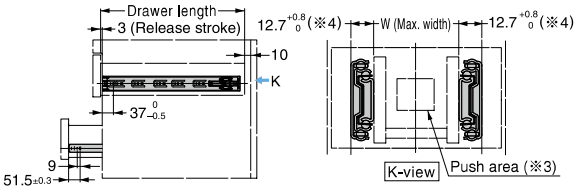
[Parts Included]

- Truss head tapping screw 4x12
- Hex key

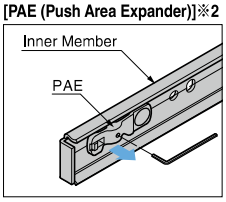


※1 No hole on the 250 mm type.

Minimum cabinet depth = drawer length +10 mm

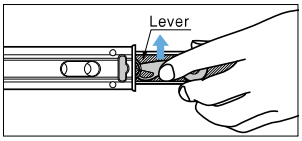


[PAE (Push Area Expander)]※2



Turning the hex key (included) clockwise will cause the PAE to bulge in the direction of the arrow, which may reduce rattling when closed and expand the push-to-open area.

[Easy to Detach]



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

Sold in pairs (2 pcs).

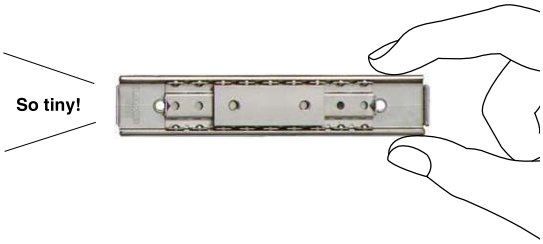
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	W	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-021-275	4660-250	250	200	–	–	–	117	–	87	–	–	–	450	147	15	0.72	10	–
G	3D	190-021-276	4660-300	300	296				167						500	196	20	0.86	10	–
G	3D	190-021-277	4660-350	350	348	71	–		217	–		183	–		550	245	25	1.01	10	–
G	3D	190-021-278	4660-400	400	406	103			267			215		–	600	294	30	1.16	10	–
G	3D	190-021-279	4660-450	450	458	71	135	–	317			279			650	343	35	1.31	10	–
G	3D	190-021-280	4660-500	500	509				327	367	119		335		700	392	40	1.46	10	–
G	3D	190-021-281	4660-550	550	560	103	167		359	417		215		343	750	441	45	1.62	6	–
G	3D	190-021-282	4660-600	600	611				391	467					800	343	35	1.78	6	–
G	3D	190-021-283	4660-650	650	661		199		441	517					850			1.94	10	–
G	3D	190-021-284	4660-700	700	712			263	491	567				535	900			2.11	6	–

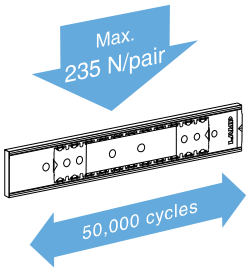
Refer to 1 : P.549

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

COMPACT SLIDE RAIL – SERIES DIGEST

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





16
15.5
(mm)

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		

ALUMINIUM MINI SLIDE (FULL EXTENSION) AR3-16

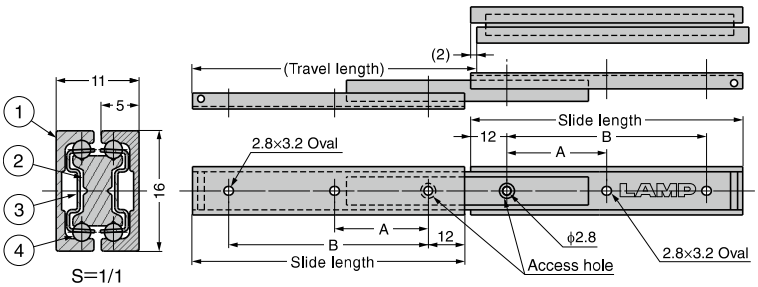
LOAD CAPACITY 20~39 N/pair L=R



- Full extension (3 members).
- Only 16mm in height, suitable for various places.
- Light weight outer and inner members made of aluminium alloy extruded material.

[Remarks]
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.5 low head screw



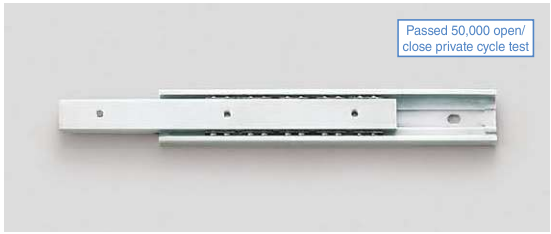
No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Retainer	Steel (SECC)	(Zinc Chromate Steel)
④	Balls	Steel (SWCH)	–

Sold by piece.

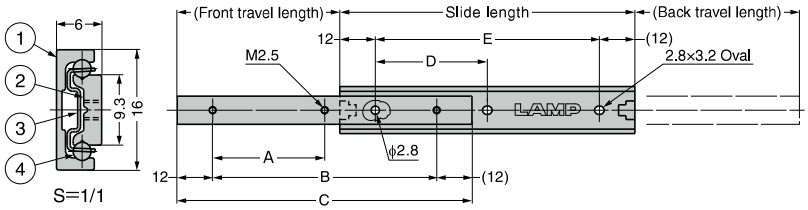
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-012-581	AR3-16-80	80	77	–	56	20	2	31.44	50	–
G	3D	190-012-582	AR3-16-100	100	117	38	76	29	3	35.6	50	–
G	3D	190-012-583	AR3-16-150	150	151	63	126	39	4	54.3	50	–

ALUMINIUM MINI SLIDE (2-WAY) ARW2-16

LOAD CAPACITY 11~69 N/pair | L=R | 2-WAYS



- 3/4 extension (2 members).
- Retainer allows smooth movement.
- Only 16mm in height with small deflection, suitable for various places.
- Light weight outer and inner members made of aluminium alloy extruded material.



[Remarks]

- Load capacity varies depending on installation method (vertical/horizontal) Refer to the table below.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]

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

Slide Installation Direction



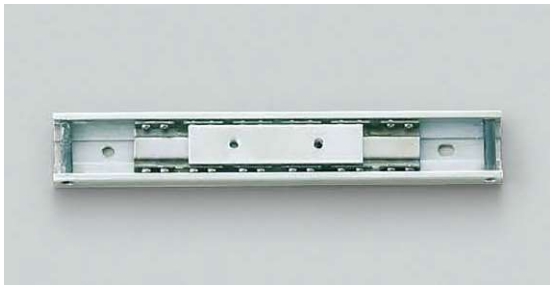
No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Retainer	Steel (SECC)	(Zinc Chromate Steel)
④	Balls	Steel (SWCH)	–

Sold by piece.

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

ALUMINIUM MINI GUIDE ARL2-16

LOAD CAPACITY 8~49 N/pair | L=R



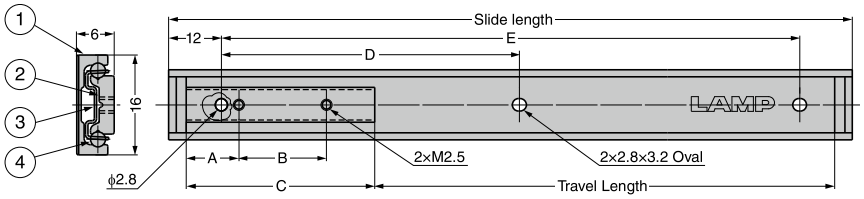
- Only 16mm in height, suitable for various places.
- Light weight outer and inner members made of aluminium alloy extruded material.

[Remarks]

- Load capacity varies depending on installation method (vertical/horizontal) Refer to the table below.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]

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



Slide Installation Direction



No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Retainer	Steel (SECC)	(Zinc Chromate Steel)
④	Balls	Steel (SWCH)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	Vertical Installation		Horizontal Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
											Load Capacity N/pair	Load Capacity kgf/pair	Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-012-584	ARL2-16-70	70	30	5	18	28	–	46	20	2	8	0.8	13.37	100	–
G	3D	190-012-585	ARL2-16-100	100	52	10	19	39	38	76	49	5	18	1.8	17.98	100	–
G	3D	190-012-586	ARL2-16-150	150	96				63	126					23.28	100	–

STAINLESS STEEL MINI SLIDE (FULL EXTENSION) SCR3

LOAD CAPACITY 98~118 N/pair L=R

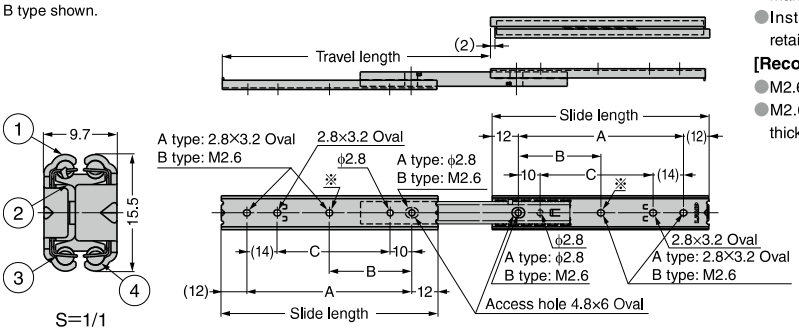


B type shown.

- Full extension (3 members).
- Little change in operating force due to mechanism hardly causing ball creep 1.
- Only 15.5mm in height with small deflection, suitable for various places.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for A type)
- M2.6 screw (for B type) Screw length = Panel thickness + Max. 1.7 mm



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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Holes	Slide Length	Travel Length	A	B	C	Vertical Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
										Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-026-614	SCR3-15-80A	A Type (Through Hole)	80	97	56	–	32	98	10	36	50	200
G	3D	190-026-615	SCR3-15-100A		100	125	76	38	52	108	11	45	50	200
G	3D	190-026-616	SCR3-15-150A		150	177	126	63	102	118	12	70	50	200
G	3D	190-026-617	SCR3-15-80B	B Type (Screw Hole)	80	97	56	–	32	98	10	36	50	200
G	3D	190-026-618	SCR3-15-100B		100	125	76	38	52	108	11	45	50	200
G	3D	190-026-619	SCR3-15-150B		150	177	126	63	102	118	12	70	50	200

Refer to 1 : P.550

ALL STAINLESS STEEL MINI SLIDE (FULL EXTENSION) SCR3-15S

LOAD CAPACITY 98~118 N/pair L=R SUS

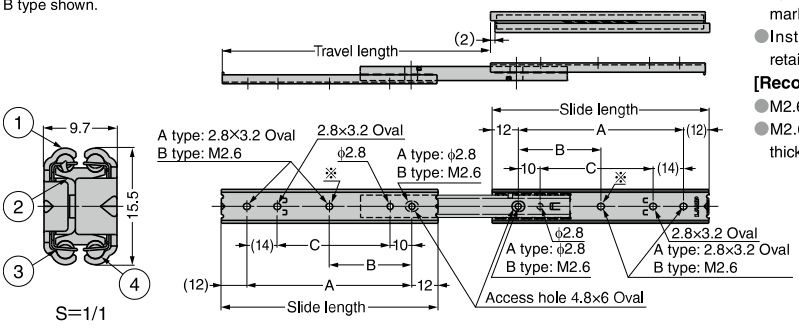


B type shown.

- Full extension (3 members).
- Little change in operating force due to mechanism hardly causing ball creep 1.
- Only 15.5mm in height with small deflection, suitable for various places.
- Grease (NSF H1 Registered Food Grade Lubricants) for food machinery is used.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for A type)
- M2.6 screw (for B type) Screw length = Panel thickness + Max. 1.7 mm



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Stainless Steel (SUS440)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Holes	Slide Length	Travel Length	A	B	C	Vertical Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
										Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-034-800	SCR3-15S-80A	A Type (Through Hole)	80	97	56	–	32	98	10	36	–	–
G	3D	190-034-801	SCR3-15S-100A		100	125	76	38	52	108	11	45	–	–
G	3D	190-034-802	SCR3-15S-150A		150	177	126	63	102	118	12	70	–	–
G	3D	190-034-803	SCR3-15S-80B	B Type (Screw Hole)	80	97	56	–	32	98	10	36	–	–
G	3D	190-034-804	SCR3-15S-100B		100	125	76	38	52	108	11	45	–	–
G	3D	190-034-805	SCR3-15S-150B		150	177	126	63	102	118	12	70	–	–

Refer to 1 : P.550

STAINLESS STEEL MINI SLIDE (2-WAY) SCRW2

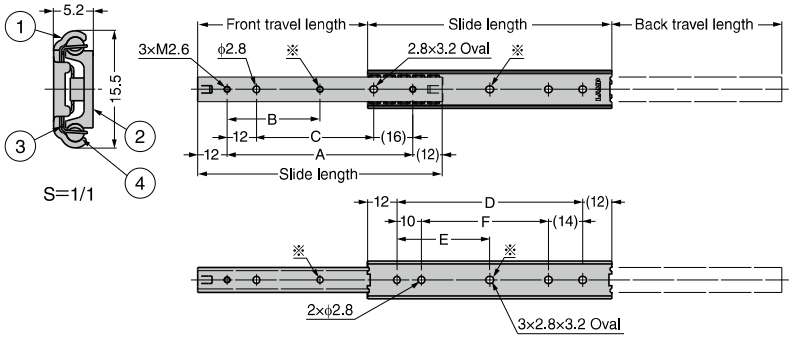
LOAD CAPACITY 137~177 N/pair | L=R | 2-WAYS



- 3/4 extension (2 members).
- Only 15.5mm in height with small deflection, suitable for various places.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm



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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length Front	Travel Length Back	A	B	C	D	E	F	Vertical Installation Load Capacity N/pair	Vertical Installation Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-026-620	SCRW2-15-80A	80	48.5	48.5	56	–	28	56	–	32	137	14	21	200	400
G	3D	190-026-621	SCRW2-15-100A	100	68.5	68.5	76	38	48	76	38	52	157	16	26	200	400
G	3D	190-026-622	SCRW2-15-150A	150	94.5	94.5	126	63	98	126	63	102	177	18	41	100	200

ALL STAINLESS STEEL MINI SLIDE (2-WAY) SCRW2-15S

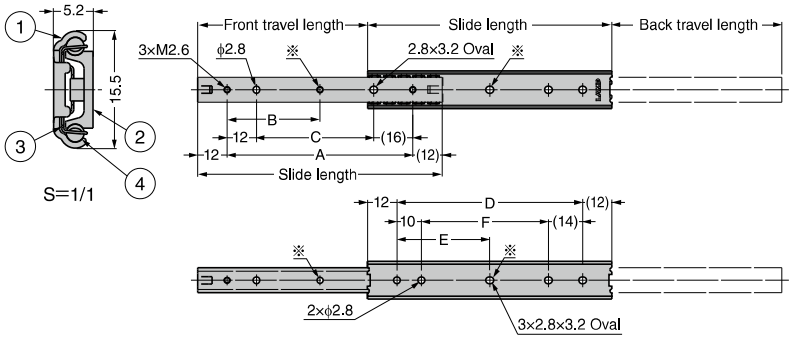
LOAD CAPACITY 137~177 N/pair | L=R | 2-WAYS | SUS



- 3/4 extension (2 members).
- Only 15.5mm in height with small deflection, suitable for various places.
- Grease (NSF H1 Registered Food Grade Lubricants) for food machinery is used.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm



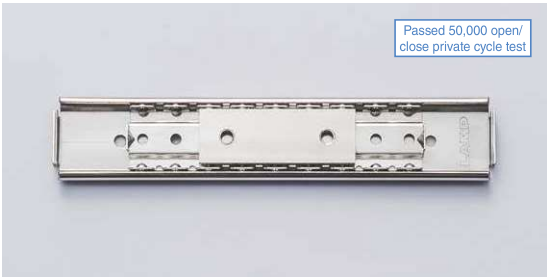
No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Stainless Steel (SUS440)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length Front	Travel Length Back	A	B	C	D	E	F	Vertical Installation Load Capacity N/pair	Vertical Installation Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-034-806	SCRW2-15S-80A	80	48.5	48.5	56	–	28	56	–	32	137	14	21	–	–
G	3D	190-034-807	SCRW2-15S-100A	100	68.5	68.5	76	38	48	76	38	52	157	16	26	–	–
G	3D	190-034-808	SCRW2-15S-150A	150	94.5	94.5	126	63	98	126	63	102	177	18	41	–	–

STAINLESS STEEL MINI GUIDE SCRL2

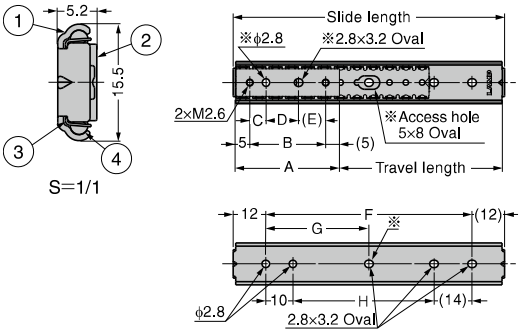
LOAD CAPACITY 177~235 N/pair L=R



- Only 15.5mm in height with small deflection, suitable for various places.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm



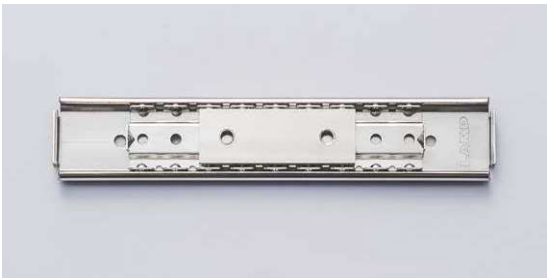
No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Steel (SUJ)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Vertical Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
														Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-026-623	SCRL2-15-80A	80	49	28	18	–	–	–	56	–	32	177	18	16	200	400
G	3D	190-026-624	SCRL2-15-100A	100	59	38	28	6	12	10	76	38	52	206	21	20	200	400
G	3D	190-026-625	SCRL2-15-150A	150	109						126	63	102			29	100	200
G	3D	190-026-626	SCRL2-15-200A	200	149	48	38	10	14	14	176	88	152	235	24	38	100	200

ALL STAINLESS STEEL MINI GUIDE SCRL2-15S

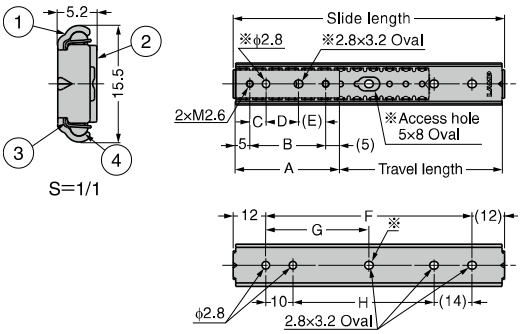
LOAD CAPACITY 177~235 N/pair L=R SUS



- Only 15.5mm in height with small deflection, suitable for various places.
- Grease (NSF H1 Registered Food Grade Lubricants) for food machinery is used.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Stainless Steel (SUS440)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Vertical Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
														Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-034-809	SCRL2-15S-80A	80	49	28	18	–	–	–	56	–	32	177	18	16	–	–
G	3D	190-034-810	SCRL2-15S-100A	100	59	38	28	6	12	10	76	38	52	206	21	20	–	–
G	3D	190-034-811	SCRL2-15S-150A	150	109						126	63	102			29	–	–
G	3D	190-034-812	SCRL2-15S-200A	200	149	48	38	10	14	14	176	88	152	235	24	38	–	–

FULL EXTENSION SLIDE ESR-DC4513

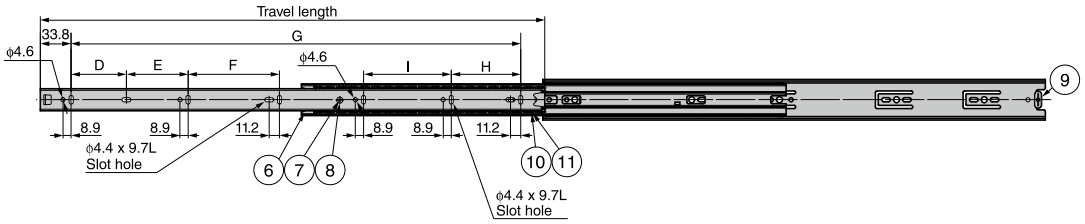
LOAD CAPACITY 40~54 kgf | DETACH | HOLD CLOSED | L=R | SUS

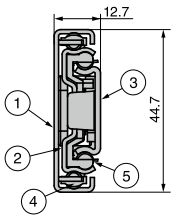


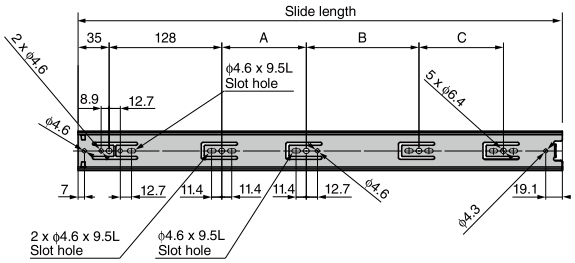
- Full extension.
- Front disconnect.
- Positive stop.
- Hold-in detent.
- Non-handed.

[Recommended Screws]

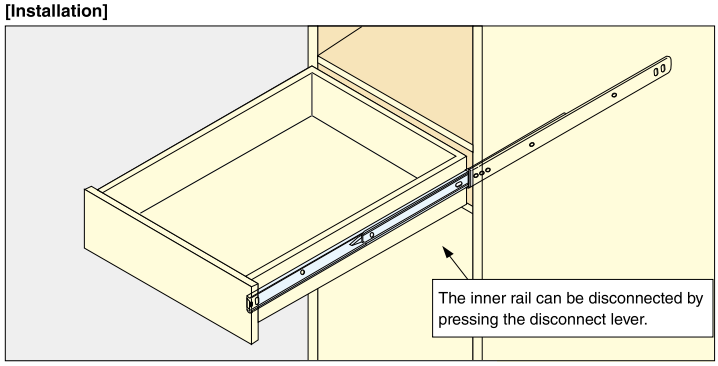
- M4 or #8 Binding, or Pan head screws







[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

RoHS	CAD	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)
–	3D	190-043-692	ESR-DC4513-8	200	200	–			–			142			529	54	447	10
–	3D	190-035-153	ESR-DC4513-10	250	250		–			–		192			510	52	603	10
–	3D	190-035-154	ESR-DC4513-12	300	300							242	–		490	50	754	10
–	3D	190-035-155	ESR-DC4513-14	350	350			–			–	292		–	480	49	919	10
–	3D	190-035-156	ESR-DC4513-16	400	400		96					342			461	47	1064	10
–	3D	190-035-157	ESR-DC4513-18	450	450		128		60.5			392	72		451	46	1228	10
–	3D	190-035-158	ESR-DC4513-20	500	500	96	192			67.5		442	122		431	44	1373	10
–	3D	190-035-159	ESR-DC4513-22	550	550			96				492	76	96	421	43	1528	10
–	3D	190-035-160	ESR-DC4513-24	600	600		128	128				542	126	–	412	42	1687	10
–	3D	190-035-161	ESR-DC4513-26	650	650			192			96	592	48	128	402	41	1854	10
–	3D	190-035-162	ESR-DC4513-28	700	700							642	98		392	40	2020	10

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

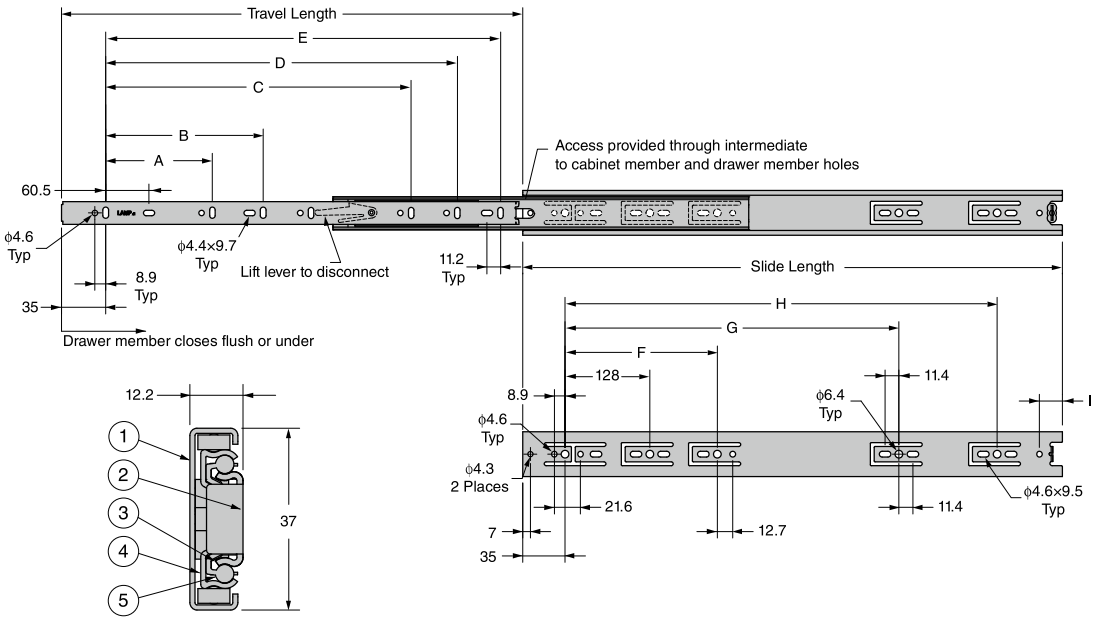
FULL EXTENSION SLIDE ESR-3813

LOAD CAPACITY 29~45 kgf | DETACH | HOLD CLOSED | L=R | SUS

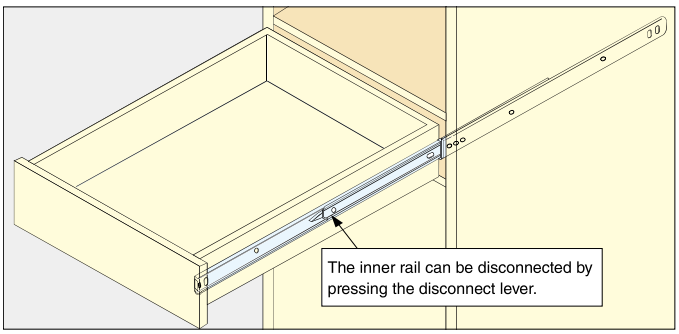


- Full extension.
- Front disconnect.
- Positive stop.
- Hold-in detent.
- Non-handed.

* Mount with M4 or #8 Binding, Pan, or Truss head screws.



[Installation]



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

Sold in pairs.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Rating (kgf/pair)	Weight (kg/pair)	Box (pairs)	Carton (pairs)
–	3D	190-118-877	ESR-3813-8	200	200	–				142	–			–	45	0.40	10	–
–	3D	190-118-878	ESR-3813-10	250	243					192		–			42	0.53	10	–
–	3D	190-118-879	ESR-3813-12	300	305			–		242					42	0.63	10	–
–	3D	190-118-880	ESR-3813-14	350	355		–		–	292			–		38	0.72	10	–
–	3D	190-118-881	ESR-3813-16	400	406					342		320			36	0.81	10	–
–	3D	190-118-882	ESR-3813-18	450	457	128				392	224	352		19.1	34	0.91	10	–
–	3D	190-118-883	ESR-3813-20	500	508			320		442		416			33	1	10	–
–	3D	190-118-884	ESR-3813-22	550	559				416	492		352	448		31	1.09	10	–
–	3D	190-118-885	ESR-3813-24	600	610		224	416	–	542			480		29	1.18	10	–

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

3/4 EXTENSION SLIDE ESR2021

LOAD CAPACITY 108~157 N/pair | L=R | SUS



- 3/4 extension (2 members).

[Others]

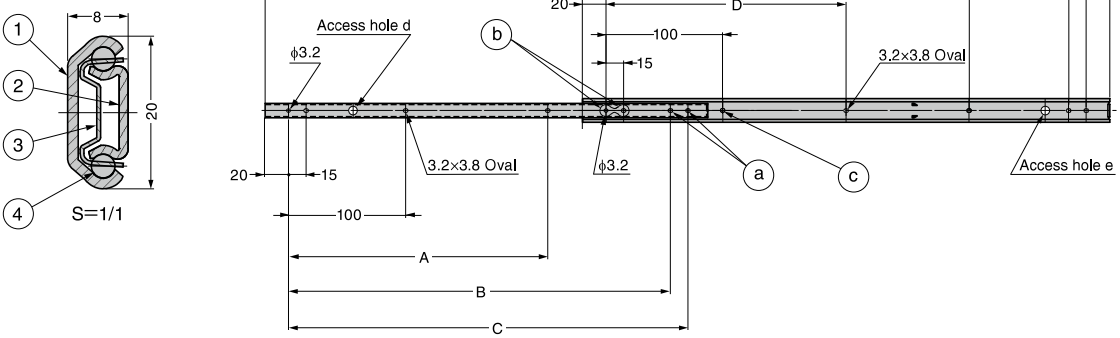
- When fixing the mounting hole ⓑ, move the inner member backwards and use access hole "e".
- When fixing the mounting hole ⓒ for slides above 450mm, move the inner member backwards and use access hole "d".
- Mounting hole ⓐ is unnecessary in normal installation.

[Remarks]

- Be sure to read the "Cautions" 1.

[Recommended Screws]

- M3 screw with binding or truss head



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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-011-649	ESR2021-200	200	134	–	145	160	–	–	145	160	127	13	0.10	200	–
G	3D	190-011-650	ESR2021-250	250	184	150	195	210			195	210	147	15	0.13	100	–
G	3D	190-011-651	ESR2021-300	300	224	190	245	260	–	160	245	260	157	16	0.15	100	–
G	3D	190-011-652	ESR2021-350	350	244		295	310		210	295	310			0.18	100	–
G	3D	190-011-653	ESR2021-400	400	294	265	345	360		260	345	360	147	15	0.20	100	–
G	3D	190-011-654	ESR2021-450	450	334	300	395	410	205	310	395	410	127	13	0.23	100	–
G	3D	190-011-655	ESR2021-500	500	384	337	445	460	230	360	445	460	108	11	0.25	100	–

Refer to 1 : P.549

FULL EXTENSION SLIDE ESR2031

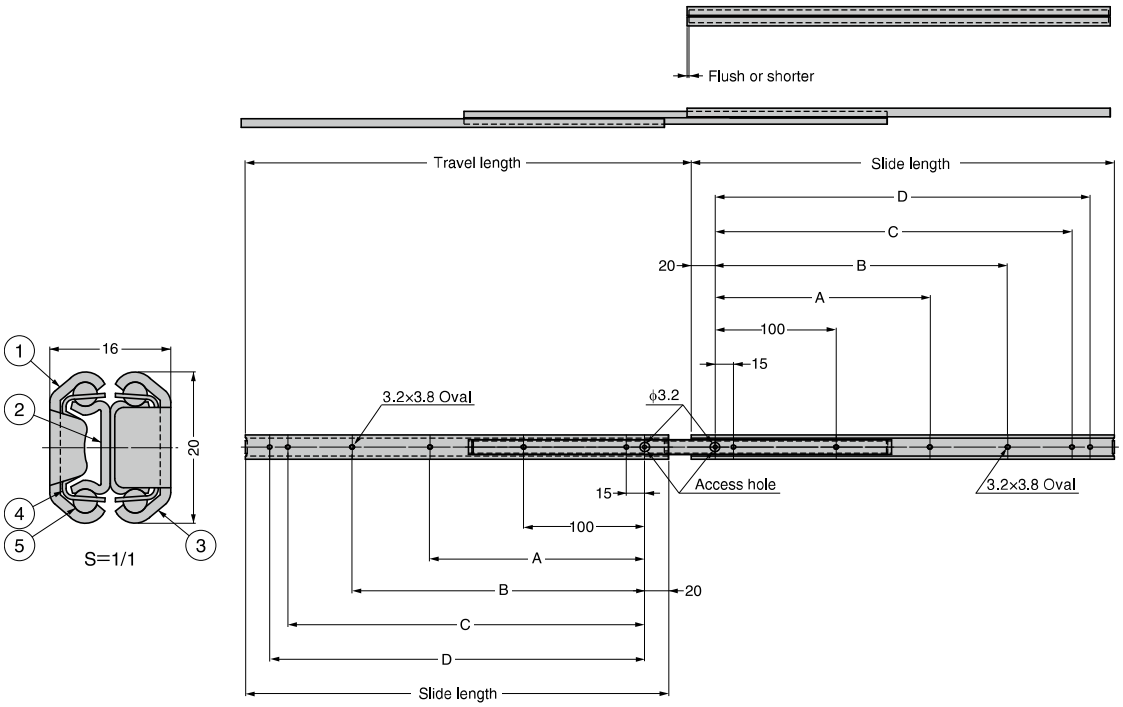
LOAD CAPACITY 127~167 N/pair | L=R | SUS



- Full extension (3 members).

[Remarks]
- Be sure to read the "Cautions" 1.

[Recommended Screws]
- M3 screw with binding or truss head



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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-011-656	ESR2031-200	200	229	–	–	145	160	167	17	0.20	96	–
G	3D	190-011-657	ESR2031-250	250	269			195	210			0.25	48	–
G	3D	190-011-658	ESR2031-300	300	329		160	245	260			0.30	48	–
G	3D	190-011-659	ESR2031-350	350	369		210	295	310			0.35	48	–
G	3D	190-011-660	ESR2031-400	400	429		260	345	360			0.40	48	–
G	3D	190-011-661	ESR2031-450	450	469	205	310	395	410	157	16	0.45	48	–
G	3D	190-011-662	ESR2031-500	500	529	230	360	445	460	127	13	0.50	48	–

Refer to 1 : P.549

3/4 EXTENSION SLIDE SNS27S

LOAD CAPACITY 176~255 N/pair | L=R | SUS



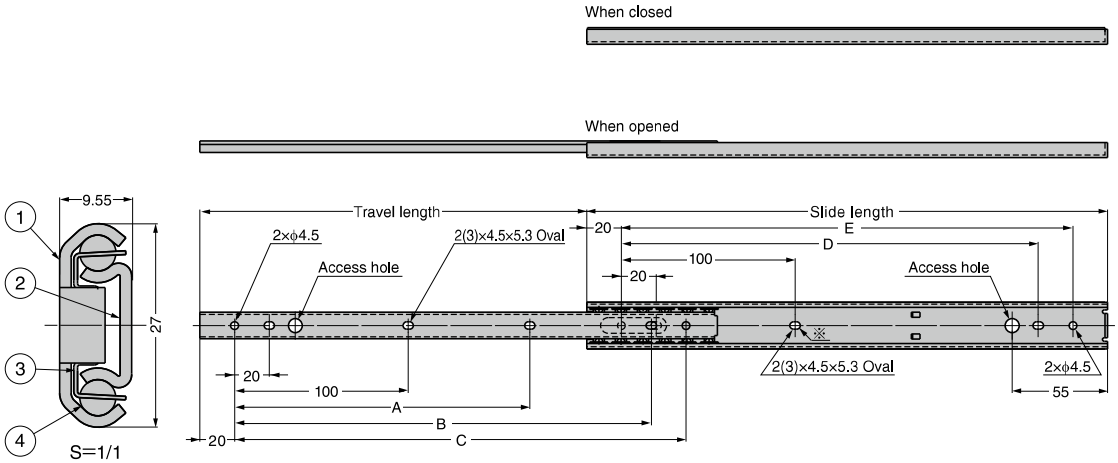
●3/4 extension (2 members).

[Remarks]

●Be sure to read the “Cautions” 1.

[Recommended Screws]

●M4 pan head screw or nominal 4 pan head tapping screw



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

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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-177	SNS27S-20	200	135	–	140	160	140	160	255	26	0.17	40	–
G	3D	190-110-178	SNS27S-25	250	185	150	190	210	190	210	235	24	0.21	40	–
G	3D	190-110-179	SNS27S-30	300	222	190	240	260	240	260			0.25	40	–
G	3D	190-110-180	SNS27S-35	350	260	225	290	310	290	310	225	23	0.29	40	–
G	3D	190-110-181	SNS27S-40	400	297	265	340	360	340	360	206	21	0.33	40	–
G	3D	190-110-182	SNS27S-45	450	334	300	390	410	390	410	196	20	0.37	40	–
G	3D	190-110-183	SNS27S-50	500	371	337	440	460	440	460	176	18	0.41	40	–

Refer to 1 : P.549

FULL EXTENSION SLIDE SNS27D

LOAD CAPACITY 275~373 N/pair | L=R | SUS



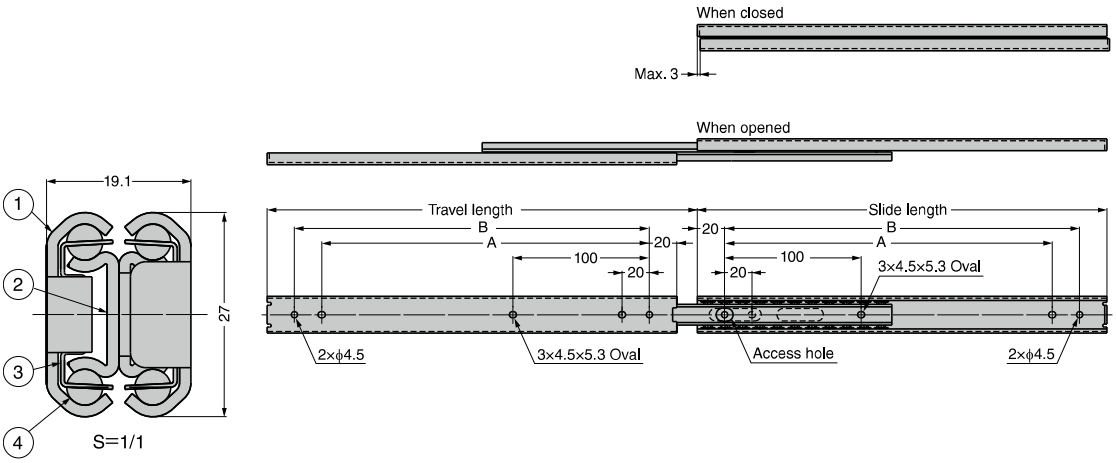
- Full extension (3 members).

[Remarks]

- Be sure to read the "Cautions" 1.

[Recommended Screws]

- M4 pan head screw or nominal 4 pan head tapping screw



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

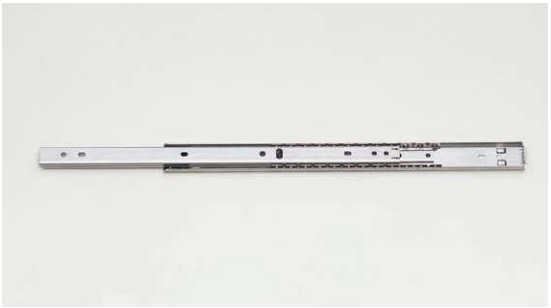
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-184	SNS27D-20	200	216.8	140	160	373	38	0.34	20	–
G	3D	190-110-185	SNS27D-25	250	266	190	210	363	37	0.42	20	–
G	3D	190-110-186	SNS27D-30	300	315.2	240	260	353	36	0.50	20	–
G	3D	190-110-187	SNS27D-35	350	364.4	290	310	333	34	0.58	20	–
G	3D	190-110-188	SNS27D-40	400	413.6	340	360	313	32	0.66	20	–
G	3D	190-110-189	SNS27D-45	450	462.8	390	410	294	30	0.74	20	–
G	3D	190-110-190	SNS27D-50	500	512	440	460	275	28	0.82	20	–

Refer to 1 : P.549

3/4 EXTENSION SLIDE 272SL

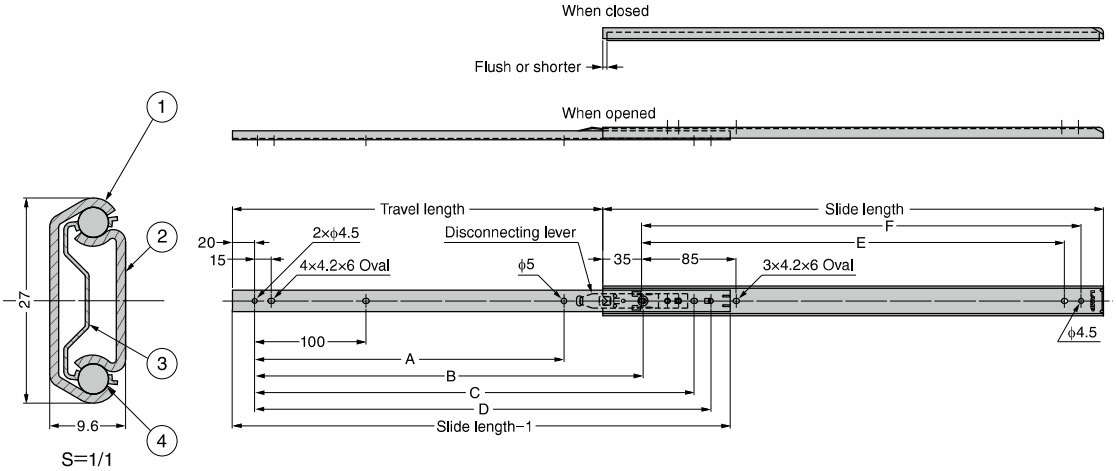
LOAD CAPACITY 137~177 N/pair | L=R | DETACH | SUS



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

[Remarks]

- Be sure to read the "Cautions" 1.
- Polyamide is used inside the slide.
- Noted that contact noise may be produced when the disconnecting lever passes over the leaf spring on the outer member.



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

Sold in pairs (2pcs)

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-116-707	272SL-300	300	220	165	236	–	–	230	245	177	18	0.43	20	–
G	3D	190-116-708	272SL-350	350	261	206	277			280	295	167	17	0.5	20	–
G	3D	190-116-709	272SL-400	400	301	246	317		362.5	330	345	157	16	0.56	20	–
G	3D	190-116-710	272SL-450	450	333	278	349	395	410	380	395	147	15	0.65	20	–
G	3D	190-116-711	272SL-500	500	373	318	389	445	460	430	445	137	14	0.7	20	–

Refer to 1 : P.549

FULL EXTENSION SLIDE 273SL

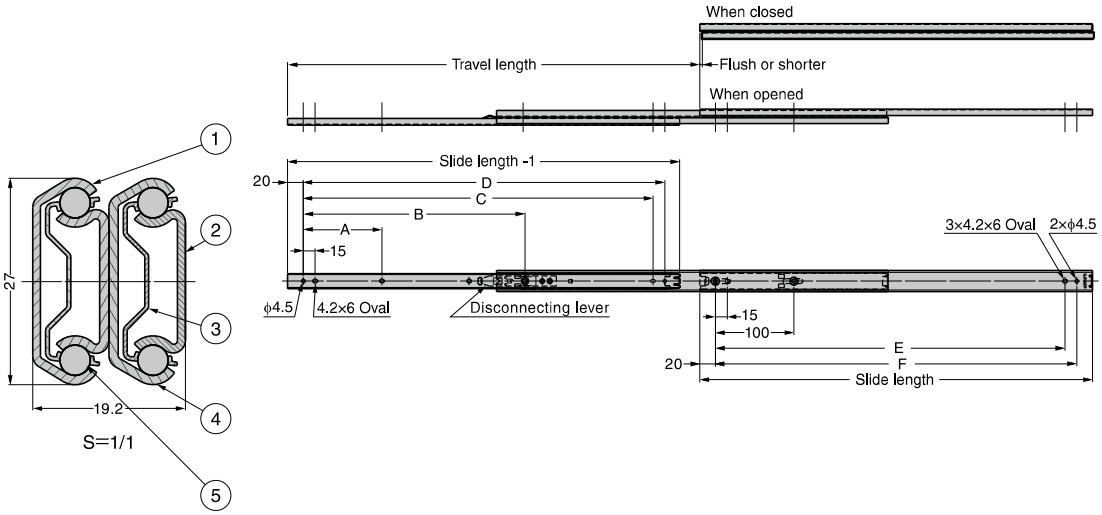
LOAD CAPACITY 118~177 N/pair | L=R | DETACH | SUS



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

[Remarks]

- Be sure to read the "Cautions" 1.
- Polyamide is used inside the slide.
- Noted that contact noise may be produced when the disconnecting lever passes over the leaf spring on the outer member.



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

Sold in pairs (2pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-116-712	273SL-200	200	221	–	135	–	–	145	160	177	18	0.6	10	–
G	3D	190-116-713	273SL-250	250	280		143.5	195	210	195	210	167	17	0.7	10	–
G	3D	190-116-714	273SL-300	300	327	100	188	245	260	245	260	157	16	0.8	10	–
G	3D	190-116-715	273SL-350	350	376		211.5	295	310	295	310	147	15	1	10	–
G	3D	190-116-716	273SL-400	400	426		236	345	360	345	360	137	14	1.1	10	–
–	3D	190-116-717	273SL-450	450	478		261.5	395	410	395	410	128	13	1.2	10	–
G	3D	190-116-718	273SL-500	500	524		282	445	460	445	460	118	12	1.4	10	–

Refer to 1 : P.549

3/4 EXTENSION SLIDE SNS35S

LOAD CAPACITY 245~481 N/pair | L=R | SUS



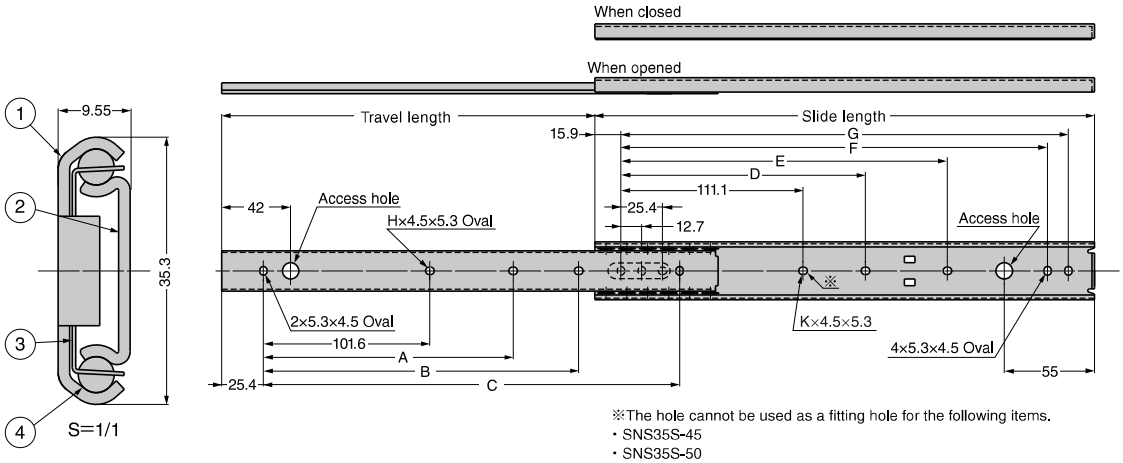
●3/4 extension (2 members).

[Remarks]

●Be sure to read the “Cautions” 1.

[Recommended Screws]

●M4 pan head screw or nominal 4 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 Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

RoHS	CAD	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 (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-191	SNS35S-30	304.8	228.6	–	152.4	254	–	149.2	260.3	273	2	3	481	49	0.31	40	–
G	3D	190-110-192	SNS35S-35	355.6	279.4		203.2	304.8		200	311.1	323.8			461	47	0.36	40	–
G	3D	190-110-193	SNS35S-40	406.4	304.8		254	355.6		250.8	361.9	374.6			422	43	0.41	40	–
G	3D	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	41	0.46	40	–
G	3D	190-110-195	SNS35S-50	508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2			363	37	0.51	40	–
G	3D	190-110-196	SNS35S-55	558.8	406.4	254	406.4	508	263.5	403.2	514.3	527			333	34	0.56	40	–
G	3D	190-110-197	SNS35S-60	609.6	431.8	279.4	457.2	558.8	288.9	454	565.1	577.8			294	30	0.61	40	–
G	3D	190-110-198	SNS35S-65	660.4	482.6	304.8	508	609.6	314.3	504.8	615.9	628.6			265	27	0.66	40	–
G	3D	190-110-199	SNS35S-70	711.2	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4			245	25	0.71	40	–

Refer to 1 : P.549

FULL EXTENSION SLIDE SNS35D

LOAD CAPACITY 441~588 N/pair | L=R | SUS



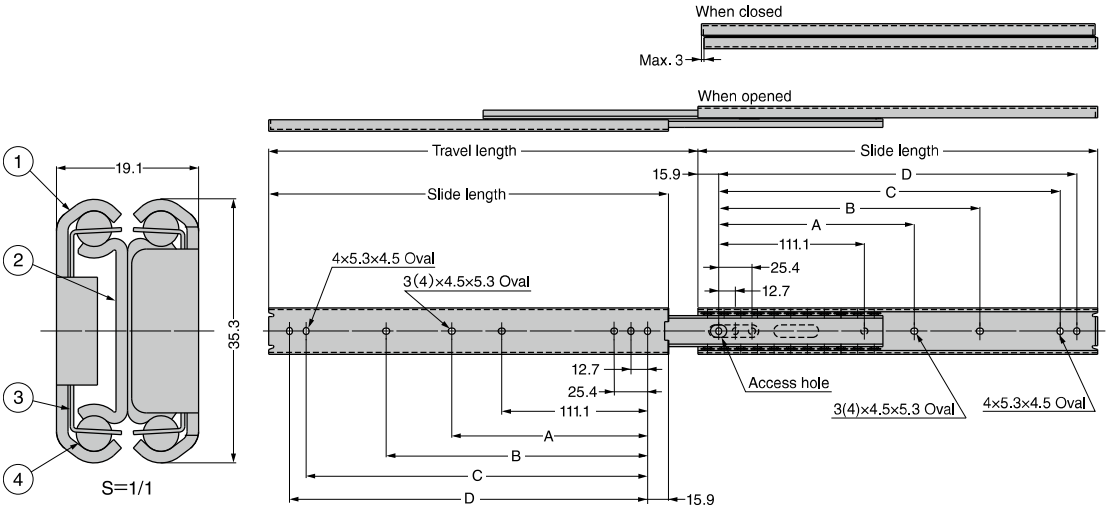
●Full extension (3 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 pan head screw or nominal 4 pan head tapping screw



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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-200	SNS35D-30	304.8	327.2	–	149.2	260.3	273	588	60	0.62	10	–
G	3D	190-110-201	SNS35D-35	355.6	377.9		200	311.1	323.8	579	59	0.72	10	–
G	3D	190-110-202	SNS35D-40	406.4	428.7		250.8	361.9	374.6	559	57	0.82	10	–
G	3D	190-110-203	SNS35D-45	457.2	479.5	212.7	301.6	412.7	425.4	549	56	0.92	10	–
G	3D	190-110-204	SNS35D-50	508	530.3	238.1	352.4	463.5	476.2	530	54	1.03	10	–
G	3D	190-110-205	SNS35D-55	558.8	580.3	263.5	403.2	514.3	527	500	51	1.13	10	–
G	3D	190-110-206	SNS35D-60	609.6	631.9	288.9	454	565.1	577.8	481	49	1.23	10	–
G	3D	190-110-207	SNS35D-65	660.4	682.7	314.3	504.8	615.9	628.6	461	47	1.33	10	–
G	3D	190-110-208	SNS35D-70	711.2	733.5	339.7	555.6	666.7	679.4	441	45	1.43	10	–

Refer to 1 : P.549

FULL EXTENSION SLIDE SNS35W

LOAD CAPACITY 355~623 N/pair | L=R | DETACH | HOLD OPENED | SUS



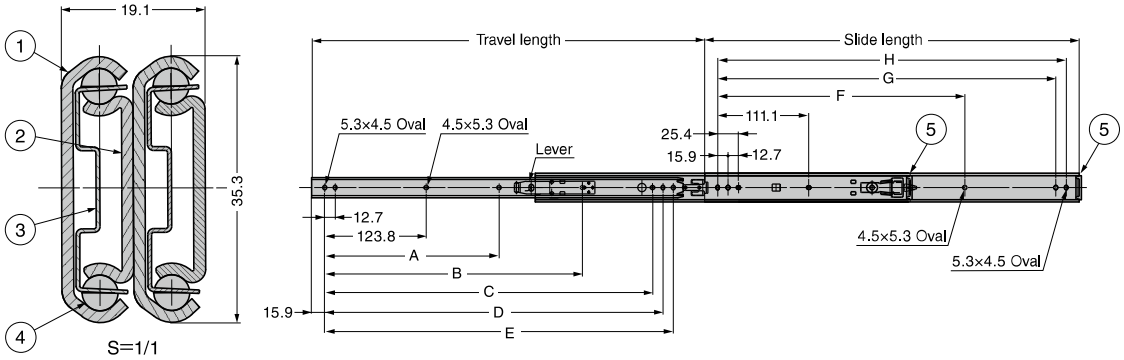
- Full extension (3 members).
- The drawer is detachable by lifting the lever.
- The drawer can be held in fully opened position.

[Remarks]

- Be sure to read the “Cautions” 1.
- Some parts of this product are made of plastic.

[Recommended Screws]

- M4 pan head screw or nominal 4 pan head tapping screw



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

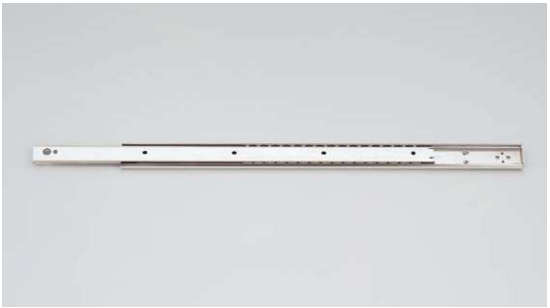
Sold by piece.

RoHS	CAD	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/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-231	SNS35W-30	304.8	327.2	–	–	–	260.3	273	–	260.3	273	623	62	0.78	10	–
G	3D	190-112-232	SNS35W-35	355.6	377.9			298.4	311.1	323.8		311.1	323.8	586	59	0.903	10	–
G	3D	190-112-233	SNS35W-40	406.4	428.7			349.2	361.9	374.6	250.8	361.9	374.6	555	56	1.028	10	–
G	3D	190-112-234	SNS35W-45	457.2	479.5	212.7		400	412.7	425.4	301.6	412.7	425.4	516	52	1.151	10	–
G	3D	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	48	1.275	10	–
G	3D	190-112-236	SNS35W-55	558.8	581.2	263.5	415.9	501.6	514.3	527	403.2	514.3	527	444	44	1.399	10	–
G	3D	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	41	1.523	10	–
G	3D	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	38	1.647	10	–
G	3D	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	36	1.77	10	–

Refer to 1 : P.549

3/4 EXTENSION SLIDE ESR1

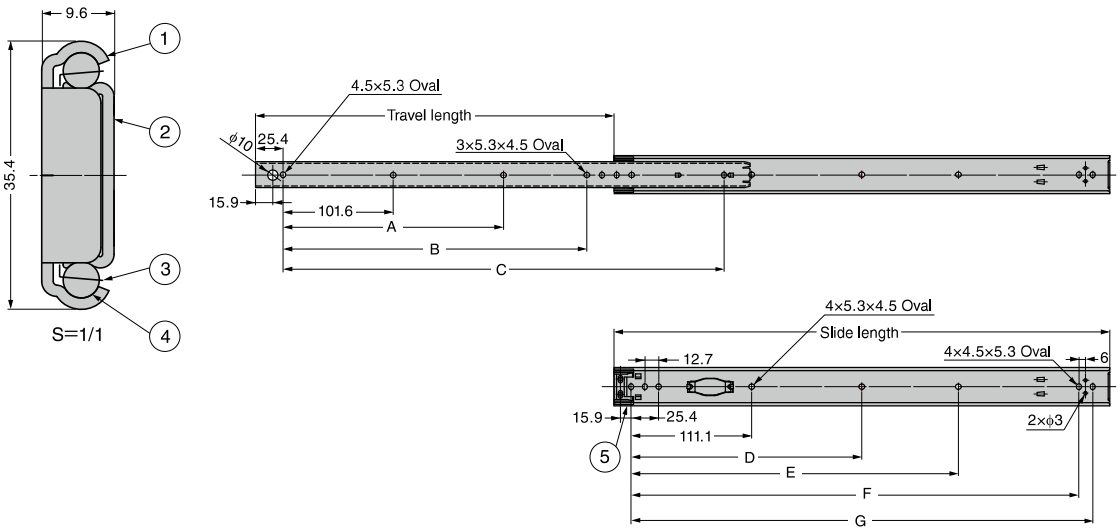
LOAD CAPACITY 245~481 N/pair | L=R | FRICTION | DETACH | SUS



- 3/4 extension (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.

[Remarks]
- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

[Recommended Screws]
- M4 binding head screw or M4 truss head screw



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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-301	ESR1-12	304.8	228.6	–	152.4	254	–	149.2	260.3	273	481	49	0.33	30	–
G	3D	190-111-302	ESR1-14	355.6	279.4		203.2	304.8		200	311.1	323.8	461	47	0.38	30	–
G	3D	190-111-303	ESR1-16	406.4	304.8		254	355.6		250.8	361.9	374.6	422	43	0.44	30	–
G	3D	190-111-304	ESR1-18	457.2	330.2	203.2	304.8	406.4	212.7	301.6	412.7	425.4	402	41	0.49	30	–
G	3D	190-111-305	ESR1-20	508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	363	37	0.55	30	–
G	3D	190-111-306	ESR1-22	558.8	406.4	254	406.4	508	263.5	403.2	514.3	527	333	34	0.60	30	–
G	3D	190-111-307	ESR1-24	609.6	432.8	279.4	457.2	558.8	288.9	454	565.1	577.8	294	30	0.65	30	–
G	3D	190-111-308	ESR1-26	660.4	482.6	304.8	508	609.6	314.3	504.8	615.9	628.6	265	27	0.71	30	–
G	3D	190-111-309	ESR1-28	711.2	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	245	25	0.77	30	–

Refer to 1 : P.549

3/4 EXTENSION SLIDE ESR13

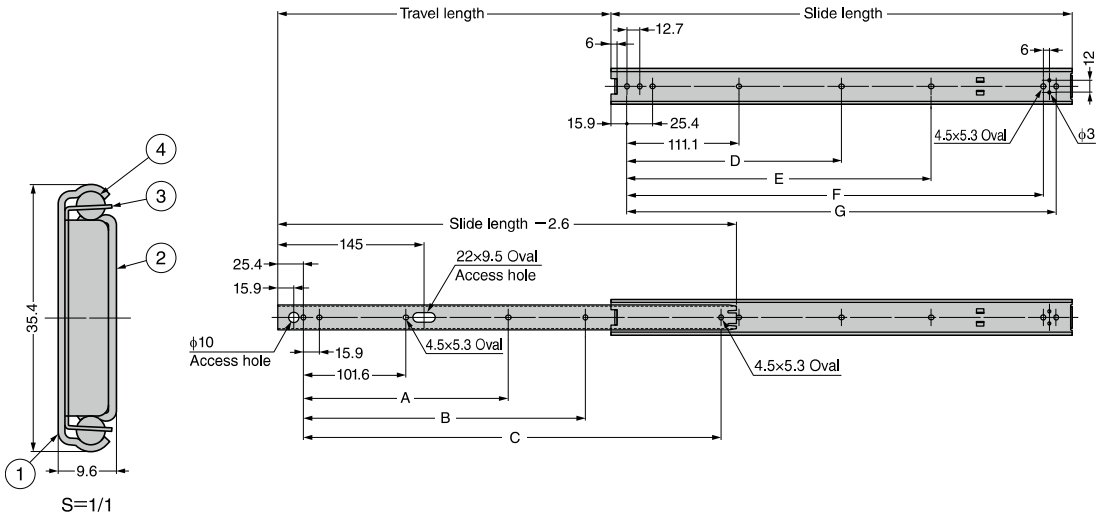
LOAD CAPACITY 245~481 N/pair | L=R | HOLD CLOSED | SUS



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

[Remarks]

- Be sure to read the “Cautions” 1.



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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-345	ESR13-12	304.8	228.6	–	177.8	258	–	149.2	260.3	273	481	49	0.33	30	–
G	3D	190-111-346	ESR13-14	355.6	279.4		228.6	308.8		200	311.1	323.8	461	47	0.38	30	–
G	3D	190-111-347	ESR13-16	406.4	304.8		254	359.6		250.8	361.9	374.6	422	43	0.42	30	–
G	3D	190-111-348	ESR13-18	457.2	330.2	203.2	279.4	410.4	212.7	301.6	412.7	425.4	402	41	0.49	30	–
G	3D	190-111-349	ESR13-20	508	381	228.6	330.2	461.2	238.1	352.4	463.5	476.2	363	37	0.54	30	–
G	3D	190-111-350	ESR13-22	558.8	406.4		355.6	512	263.5	403.2	514.3	527	333	34	0.59	30	–
G	3D	190-111-351	ESR13-24	609.6	431.8	254	381	562.8	288.9	454	565.1	577.8	294	30	0.63	30	–
–	3D	190-111-352	ESR13-26	660.4	482.6		431.8	613.6	314.3	504.8	615.9	628.6	265	27	0.68	30	–
–	3D	190-111-353	ESR13-28	711.2	508	279.4	457.2	664.4	339.7	555.6	666.7	679.4	245	25	0.75	30	–

Refer to 1 : P.549

3/4 EXTENSION SLIDE ESR8

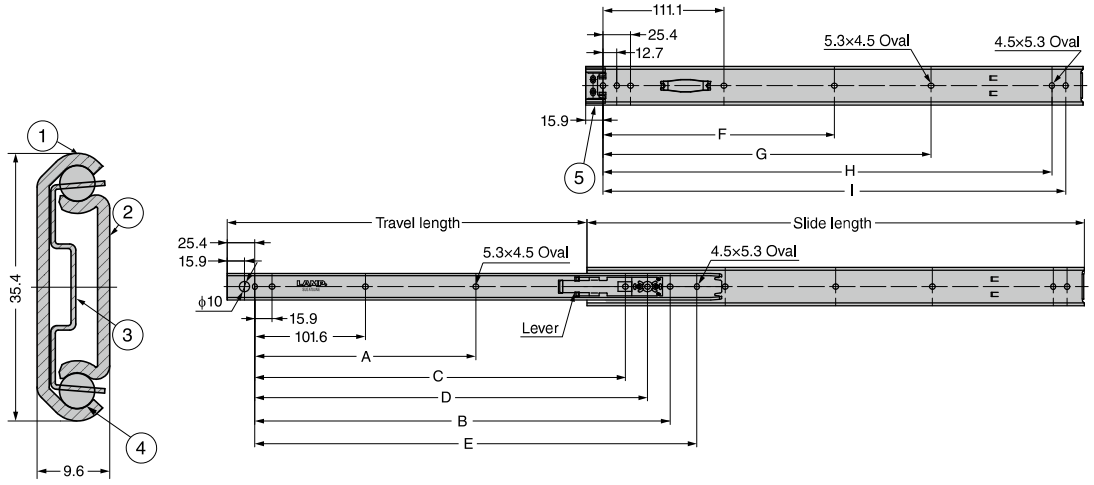
LOAD CAPACITY 245~481 N/pair | L=R | LOCK OPENED | DETACH | SUS



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

[Remarks]

- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.



Side view (S=1/1)

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

Sold by piece.

RoHS	CAD	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 (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-327	ESR8-12	304.8	228.6	152.4	–	–	259.5	–	–	149.2	260.3	273	481	49	0.3	30	–
G	3D	190-111-328	ESR8-14	355.6	279.4	203.2			310.3			200	311.1	323.8	461	47	0.4	30	–
G	3D	190-111-329	ESR8-16	406.4	304.8				335.7	355.6		250.8	361.9	374.6	422	43	0.4	30	–
G	3D	190-111-330	ESR8-18	457.2	330.2			340.7	366.1	406.4	212.7	301.6	412.7	425.4	402	41	0.5	30	–
G	3D	190-111-331	ESR8-20	508	381	228.6		391.5	411.9	457.2	238.1	352.4	463.5	476.2	363	37	0.5	30	–
G	3D	190-111-332	ESR8-22	558.8	406.4	254		416.9	437.3	508	263.5	403.2	514.3	527	333	34	0.6	30	–
G	3D	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	30	0.6	30	–
–	3D	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	27	0.7	30	–
G	3D	190-111-335	ESR8-28	711.2	508	330.2	558.9	538.9	558.8	660.4	339.7	555.6	666.7	679.6	245	25	0.7	30	–

Refer to 1 : P.549

FULL EXTENSION SLIDE ESR7

LOAD CAPACITY 355~623 N/pair | L=R | LOCK OPENED | DETACH | SUS



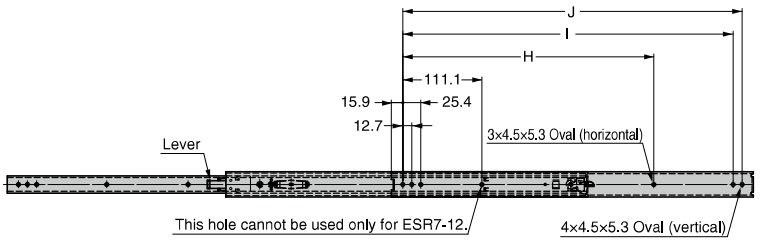
- Full extension (3 members).
- The drawer can be held in fully opened position. Released by lever operation.
- The drawer is detachable by lifting the lever.

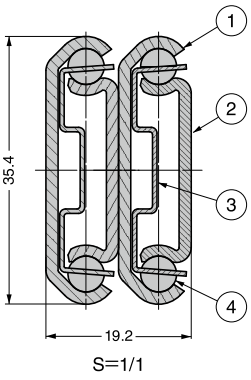
[Remarks]

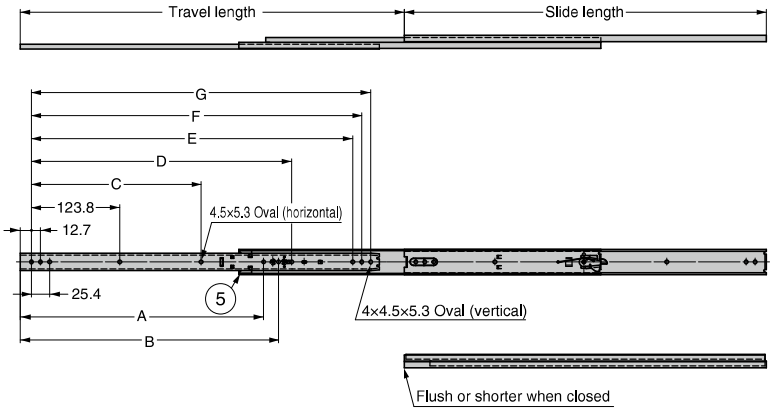
- Be sure to read the “Cautions” 1.
- Some parts of this product are made of plastic.

[Recommended Screws]

- M4 binding head screw or M4 truss head screw







For mounting holes of inner and outer members, the first and second from both ends are vertical oval holes. The rest are horizontal oval holes.

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

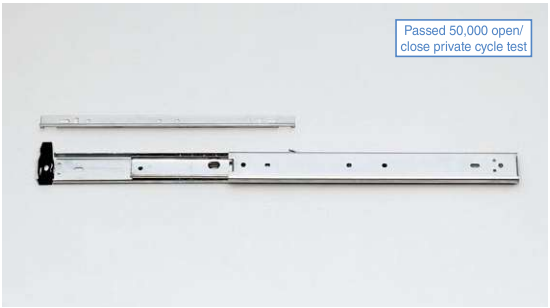
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	J	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-318	ESR7-12	304.8	336	228	248.4	–	–	–	260.3	273	–	260.3	273	623	63.5	0.62	16	–
G	3D	190-111-319	ESR7-14	355.6	386.8	278.8	299.2				311.1	323.8		311.1	323.8	586	59.8	0.73	16	–
G	3D	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	56.6	0.84	16	–
G	3D	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	52.6	0.94	16	–
G	3D	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	48.5	1.06	16	–
G	3D	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	45.3	1.17	16	–
G	3D	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	42.1	1.27	16	–
G	3D	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	39	1.38	16	–
G	3D	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	36.2	1.49	16	–

Refer to 1 : P.549

FULL EXTENSION SLIDE ESR3

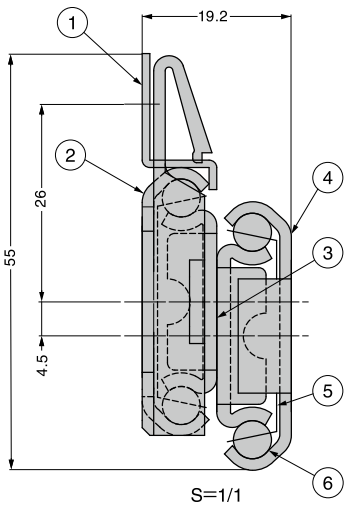
LOAD CAPACITY 422~637 N/pair | DETACH | BUMPER | SUS

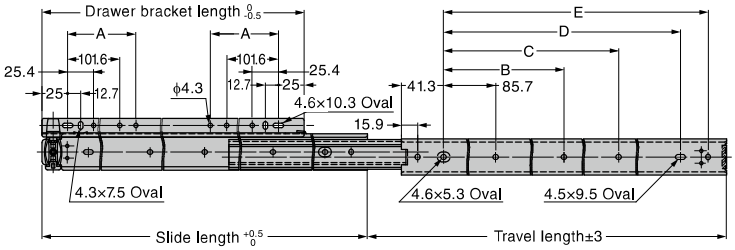


- Full extension (3 members).
- The drawer can be easily detached by using drawer bracket.

[Remarks]
- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

[Recommended Screws]
- M4 binding head screw





Right-handed shown.

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

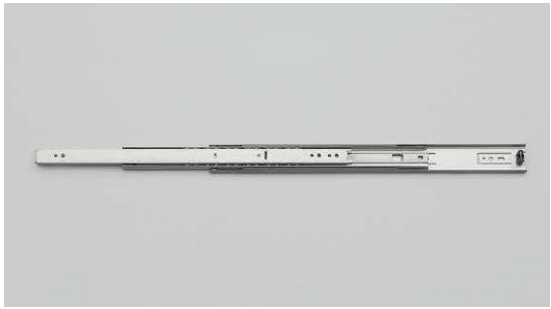
Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	Drawer Bracket Length	A	B	C	D	E	Outer Member Holes	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-115-206	ESR3-12	304.8	348.4	273	–	–	123.1	218.3	245.3	6	637	65	1.35	6	–
G	3D	190-115-207	ESR3-14	355.6	399.2				173.9	269.1	296.1		598	61	1.56	6	–
G	3D	190-115-208	ESR3-16	406.4	450	375			224.7	319.9	346.9				1.83	6	–
G	3D	190-110-413	ESR3-18	457.2	500.8			187.3	275.5	370.7	397.7	7	549	56	2.05	6	–
G	3D	190-115-210	ESR3-20	508	551.6			212.7	326.3	421.5	448.5		510	52	2.25	6	–
G	3D	190-115-211	ESR3-22	558.8	602.4	527	177.8	238.1	377.1	472.3	499.3				2.57	6	–
G	3D	190-115-212	ESR3-24	609.6	653.2			263.5	427.9	523.1	550.1		471	48	2.76	6	–
G	3D	190-110-417	ESR3-26	660.4	704	575.3		288.9	478.7	573.9	600.9		422	43	2.99	6	–
G	3D	190-115-214	ESR3-28	711.2	754.8			314.3	529.5	624.7	651.7				3.19	6	–

Refer to 1 : P.549

FULL EXTENSION SLIDE ESR4658

LOAD CAPACITY 314~490 N/pair | L=R | DETACH | HOLD CLOSED | SUS



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

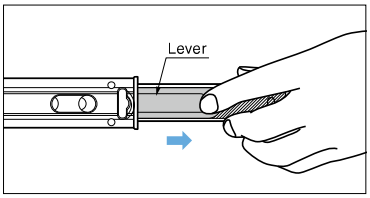
[Remarks]

- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

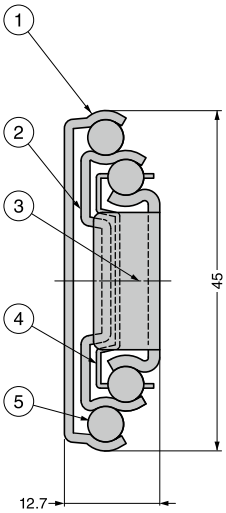
[Recommended Screws]

- For metal: M4 screw (except for countersunk head)
- For wood: nominal 4 tapping screw (except for countersunk head)

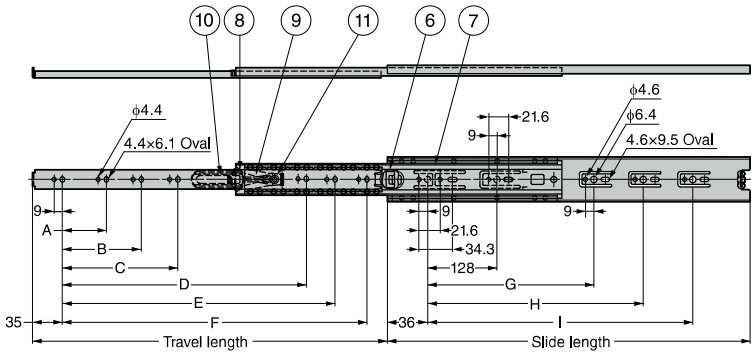
[Easy to Detach]



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



S=1/1



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

Sold in pairs (2 pcs).

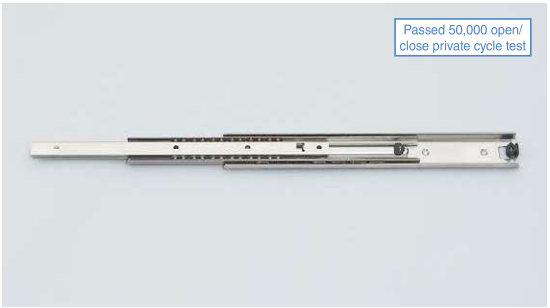
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-110-706	ESR4658-14	350	356	–		–			292		–		490	50	0.99	10	–
G	3D	190-110-707	ESR4658-16	400	406			320	–		342		320	–	470	48	1.13	10	–
G	3D	190-110-708	ESR4658-18	450	457	128	–			–	392		352		441	45	1.28	10	–
G	3D	190-110-709	ESR4658-20	500	508			352			442	224	416		421	43	1.42	10	–
G	3D	190-110-710	ESR4658-22	550	559						492			448	402	41	1.57	10	–
G	3D	190-110-711	ESR4658-24	600	610			–	416		542		352	480	382	39	1.71	10	–
G	3D	190-110-712	ESR4658-26	650	660		224			544	592			544	353	36	1.86	10	–
G	3D	190-110-713	ESR4658-28	700	711				448		642				314	32	2	10	–

Refer to 1 : P.549

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

FULL EXTENSION SLIDE 5302S For Heavy Duty

LOAD CAPACITY 627~1137 N/pair | L=R | HOLD CLOSED | SUS



- Full extension (3 members).
- The drawer can be held in fully closed position.

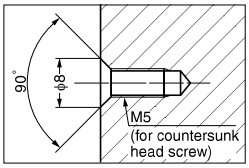
[Remarks]

- Some parts of this product are made of plastic.
- The head of mounting screw (countersunk head screw) may protrude from the slide. Please make countersink processing as shown below.

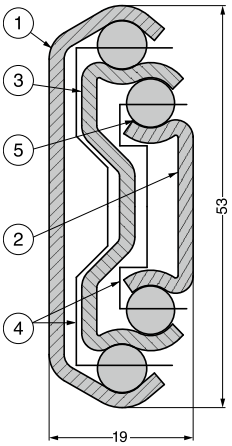
[Recommended Screws]

- nominal 5 countersunk head tapping screw or M5 countersunk head screw

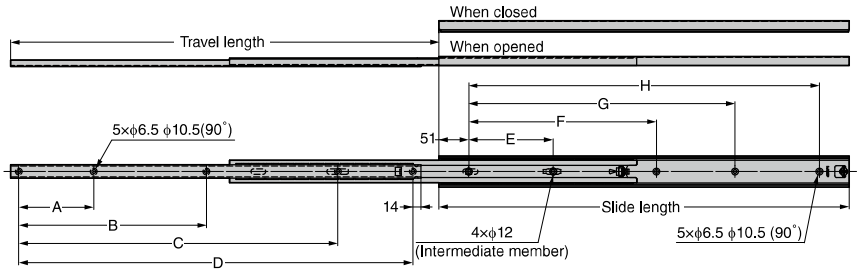
[Cut Out Dimensions]



The same processing for outer member and inner member.



S=1/1



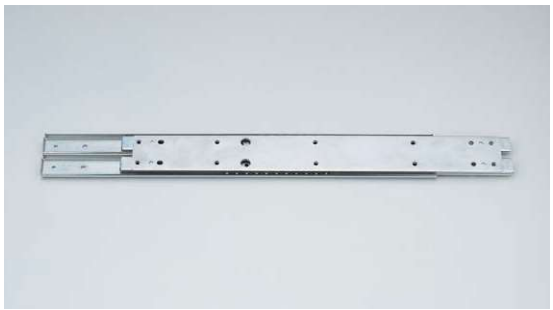
No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Intermediate Member		
④	Retainer		
⑤	Balls		–

Sold by piece.

RoHS	CAD	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/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-730	5302S-300	300	334	128	256	–	–	112	192	–	–	1137	116	0.86	20	–
G	3D	190-112-731	5302S-350	350	384	160	320			144	240			1088	111	1	20	–
G	3D	190-112-732	5302S-400	400	433		256	352			224	304		970	99	1.14	16	–
G	3D	190-112-733	5302S-450	450	482	128	288	416	–	80	272	352	–	941	96	1.28	16	–
G	3D	190-112-734	5302S-500	500	532			448		112		384		902	92	1.43	10	–
G	3D	190-112-735	5302S-550	550	580	192	320	512			288	448		843	86	1.57	10	–
G	3D	190-112-736	5302S-600	600	630	208	336	544			336	496		794	81	1.71	10	–
G	3D	190-112-737	5302S-650	650	677	128	288	480	608		272	416	544	745	76	1.85	10	–
G	3D	190-112-738	5302S-700	700	728		336	544	672	144	304	448	592	696	71	2	8	–
G	3D	190-112-739	5302S-750	750	777	192	370	530	722	176	336	496	648	666	68	2.14	8	–
G	3D	190-112-740	5302S-800	800	826	224	388	548	772	192	384	576	688	627	64	2.28	8	–

3/4 EXTENSION SLIDE ESR5 For Heavy Duty

LOAD CAPACITY 785~1118 N/pair | L=R | SUS



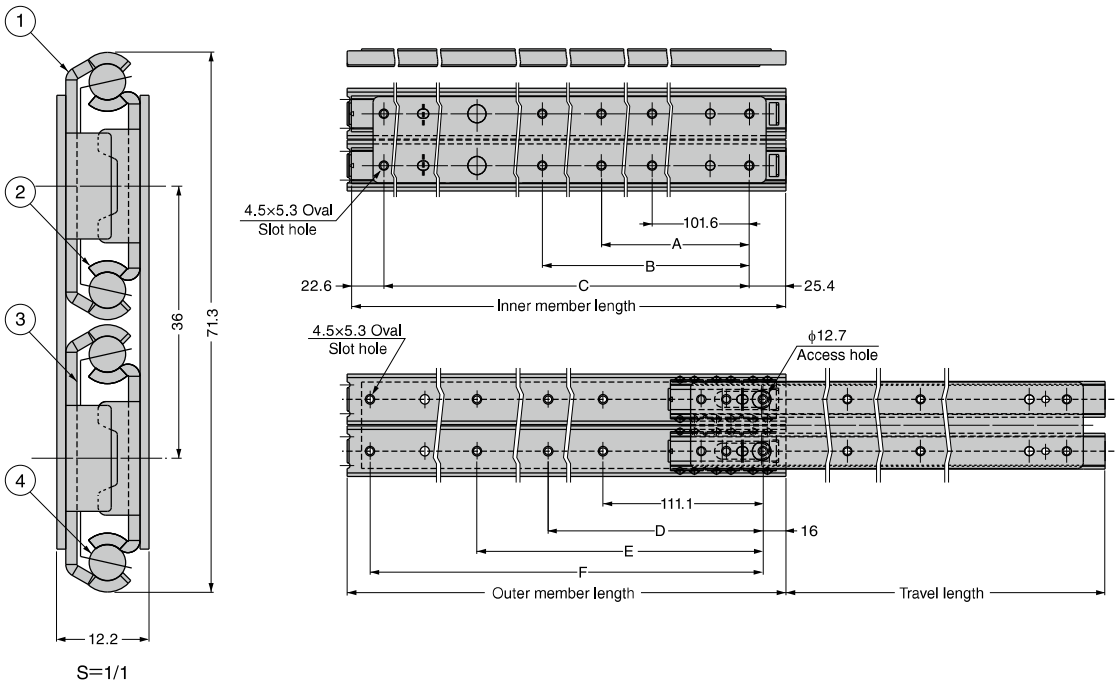
●3/4 extension (2 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 binding head screw or M4 truss head screw



S=1/1

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

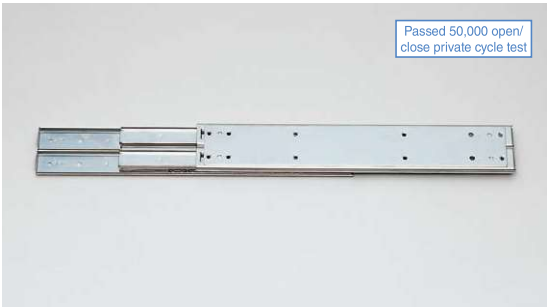
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Holes: Inner Member	Holes: Outer Member	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)
G	3D	190-110-428	ESR5-12	305	221.8	–	152.4	254	–	149.2	273	6	8	1118	114	0.9	12
G	3D	190-110-429	ESR5-14	355.8	259.9		203.2	304.8		200	323.8			1069	109	1	12
G	3D	190-110-430	ESR5-16	406.6	298		254	355.6		250.8	374.6			1020	104	1.2	12
G	3D	190-110-431	ESR5-18	457.4	348.8	203.2	304.8	406.4	212.7	301.6	425.4		10	1000	102	1.3	12
G	3D	190-110-432	ESR5-20	508.2	361.5	228.6	355.6	457.2	238.1	352.4	476.2			971	99	1.6	12
G	3D	190-110-433	ESR5-22	559	425	254	406.4	508	263.5	403.2	527			922	94	1.7	12
G	3D	190-110-434	ESR5-24	609.8	450.4	279.4	457.2	558.8	288.9	454	577.8			873	89	1.8	12
G	3D	190-110-435	ESR5-26	660.6	463.1	304.8	508	609.6	314.3	504.8	628.6			843	86	1.9	12
G	3D	190-110-436	ESR5-28	711.4	501.2	330.2	558.8	660.4	339.7	555.6	679.4			785	80	2.1	12

Refer to 1 : P.549

FULL EXTENSION SLIDE ESR10 For Heavy Duty

LOAD CAPACITY 1785~2667 N/pair | L=R | SUS



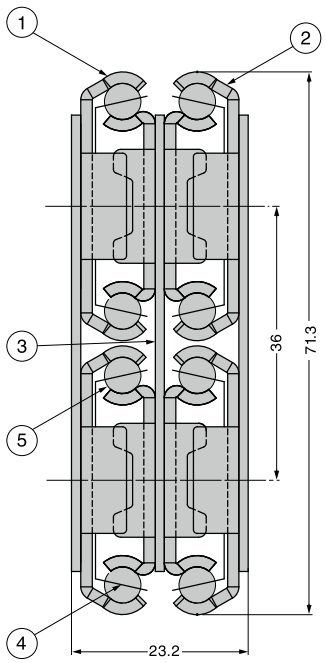
- Full extension (3 members).

[Remarks]

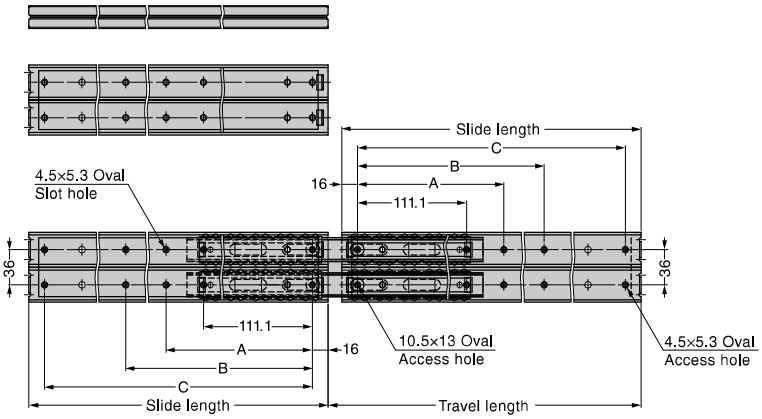
- Be sure to read the "Cautions" 1.

[Recommended Screws]

- M4 round head screw



S=1/1



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

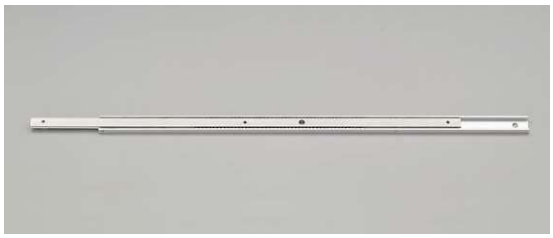
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-419	ESR10-12	305	319	–	149.2	273	2667	272	1.7	8	–
G	3D	190-110-420	ESR10-14	355.8	369.8		200	323.8	2628	268	1.9	8	–
G	3D	190-110-421	ESR10-16	406.6	420.6		250.8	374.6	2540	259	2.4	6	–
G	3D	190-110-422	ESR10-18	457.4	471.4	212.7	301.6	425.4	2452	250	2.5	6	–
G	3D	190-110-423	ESR10-20	508.2	522.2	238.1	352.4	476.2	2363	241	2.8	6	–
G	3D	190-110-424	ESR10-22	559	573	263.5	403.2	527	2246	229	3.1	6	–
G	3D	190-110-425	ESR10-24	609.8	623.8	288.9	454	577.8	2118	216	3.5	4	–
G	3D	190-110-426	ESR10-26	660.6	674.6	314.3	504.8	628.6	1961	200	3.8	4	–
G	3D	190-110-427	ESR10-28	711.4	725.4	339.7	555.6	679.4	1785	182	4	4	–

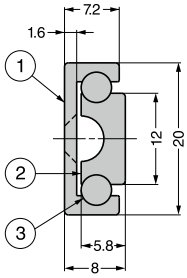
Refer to 1 : P.549

3/4 EXTENSION SLIDE AR2 For Light Weight

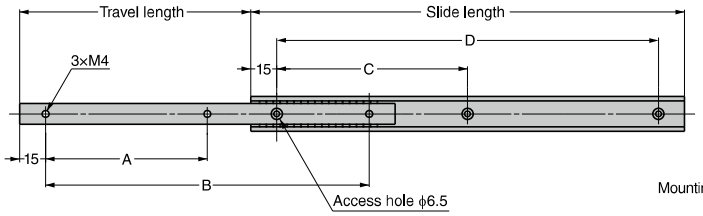
LOAD CAPACITY 80~150 N/pair L=R



- 3/4 extension (2 members).
- Small size and light weight.



S=1/1





Mounting hole of the outer member

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Balls	Steel (SWCH)	–

Sold by piece.

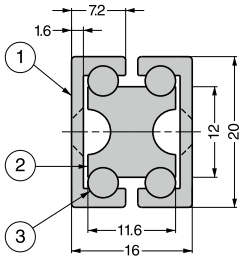
RoHS	CAD	Item Code	Item Name	Slide length	Travel length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-119-533	AR2-100	100	60	–	70	–	70	150	15.3	31	1000	–
G	3D	190-119-534	AR2-200	200	120	85	170	85	170	120	12.2	63	500	–
G	3D	190-119-535	AR2-300	300	180	135	270	135	270	100	10.2	76	250	–
G	3D	190-119-536	AR2-400	400	240	185	370	185	370	90	9.2	129	200	–
G	3D	190-119-537	AR2-500	500	300	235	470	235	470	80	8.2	161	200	–

FULL EXTENSION SLIDE AR3 For Light Weight

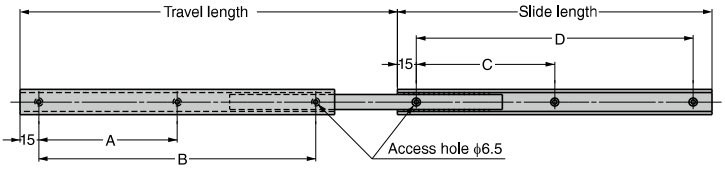
LOAD CAPACITY 30~110 N/pair L=R



- Full extension (3 members).
- Small size and light weight.



S=1/1





Mounting hole of the outer member

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Balls	Steel (SWCH)	–

Sold by piece.

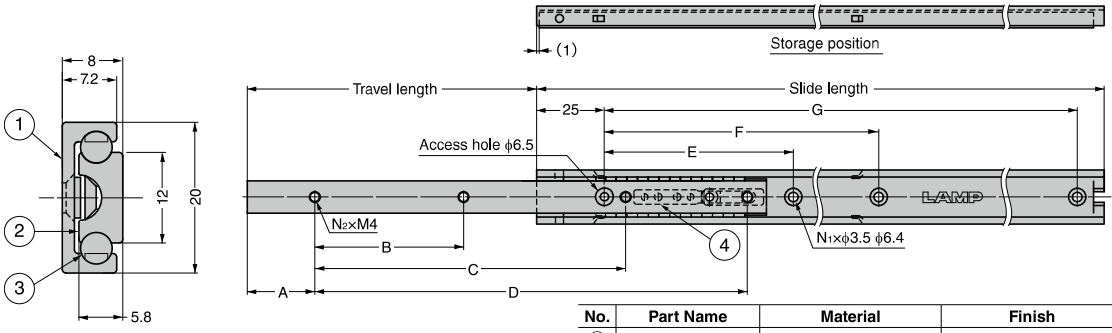
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-119-538	AR3-100	100	100	–	70	–	70	110	11.2	63	500	–
G	3D	190-119-539	AR3-200	200	223	85	170	85	170	90	9.2	128	250	–
G	3D	190-119-540	AR3-300	300	345	135	270	135	270	70	7.1	194	125	–
G	3D	190-119-541	AR3-400	400	460	185	370	185	370	50	5.1	260	100	–
G	3D	190-119-542	AR3-500	500	576	235	470	235	470	30	3.1	325	100	–

3/4 EXTENSION SLIDE AR2-K With Hold-out Detent

LOAD CAPACITY 85~125 N/pair | HOLD OPENED | L=R



- 3/4 extension (2 members).
- The drawer can be held in fully opened position.
- Small size and light weight.



S=1/1

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

Sold by piece.

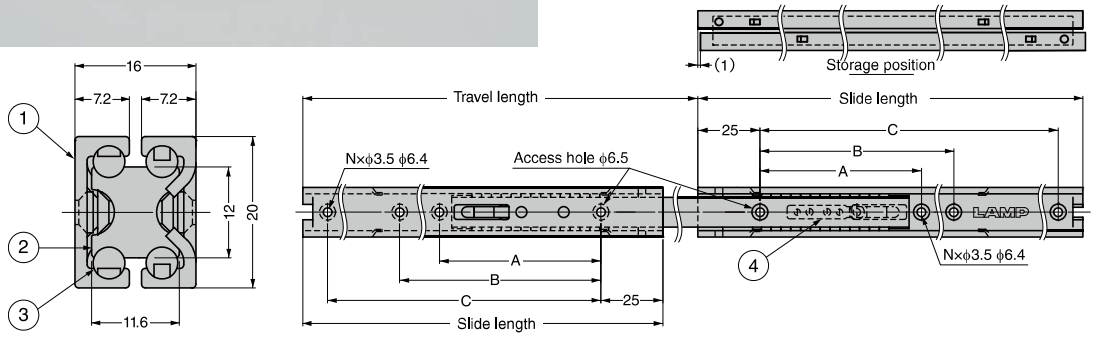
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	N_1	N_2	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-251	AR2-K200	200	110	25	60	160	–	150	–	–	2	3	125	12.7	64	500	–
G	3D	190-112-252	AR2-K300	300	170	45	100	230		130	250		3		110	11.2	97	250	–
G	3D	190-112-253	AR2-K400	400	230		150	270	330		280	350	4	4	95	9.7	130	200	–
G	3D	190-112-254	AR2-K500	500	290		190	340	430			450			85	8.7	162	200	–

FULL EXTENSION SLIDE AR3-K With Hold-out Detent

LOAD CAPACITY 85~105 N/pair | HOLD OPENED | L=R



- Full extension (3 members).
- The drawer can be held in fully opened position.
- Small size and light weight.



S=1/1

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

Sold by piece.

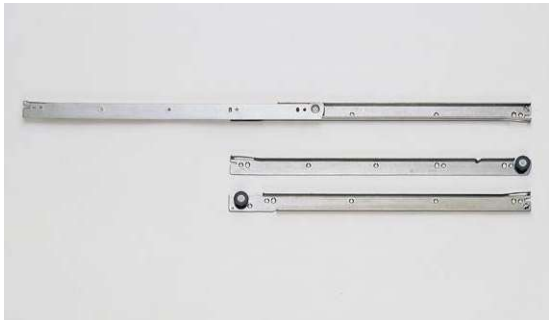
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	N	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-255	AR3-K200	200	214	150	–	–	2	105	10.7	130	250	–
G	3D	190-112-256	AR3-K300	300	314		250		3	100	10.2	198	125	–
G	3D	190-112-257	AR3-K400	400	414	130		350		90	9.2	263	100	–
G	3D	190-112-258	AR3-K500	500	514		280	450	4	85	8.7	304	100	–

3/4 EXTENSION SLIDE RKA5

LOAD CAPACITY 147 N/pair

DETACH

CATCH



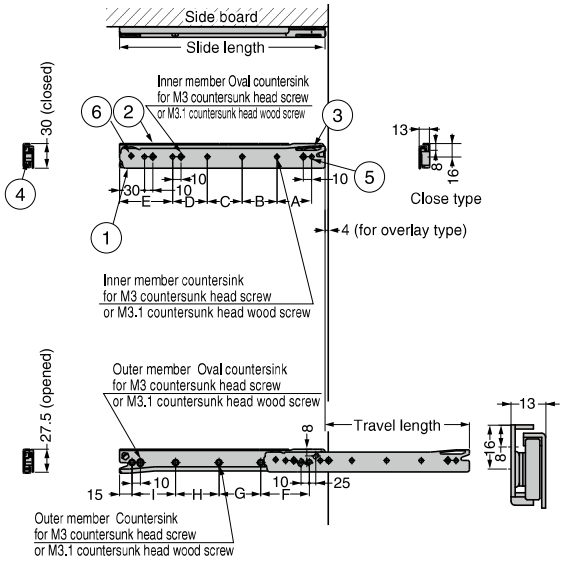
- 3/4 extension (2 members).
- R-shaped (inclined) slide ends allow complete closing.
- Urethane roller provides silent and smooth movement.
- Reduced in left and right backlash of the drawer.

[Remarks]

- Be sure to read the “Cautions” 1.

[Recommended Screws]

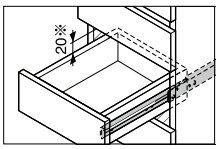
- M3/M3.5 countersunk head tapping screw or M3/M3.5 countersunk head screw



Right-handed shown.
(Right inner member: Close type)

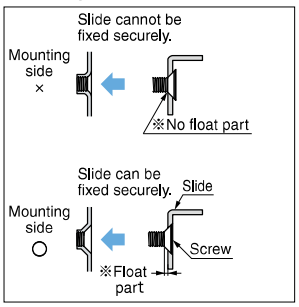
Side view of left slide shown.
(Left inner member: Open type)

[Application Example]



Dimension marked with ※ is that required for drawer attaching/detaching.

[Installing to Metal]



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

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	Inner Member A	Inner Member B	Inner Member C	Inner Member D	Inner Member E	Inner Member Holes	Outer Member F	Outer Member G	Outer Member H	Outer Member I	Outer Member Holes	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	–	190-110-170	RKA5-300 (SUS430)	296	205	165	–	–	–	115	6	112.5	112.5	–	–	6	147	15	0.48	20	–
G	3D	190-110-171	RKA5-350 (SUS430)	346	250	105	105			120	7	91.5	92	91.5		7			0.57	20	–
G	–	190-110-172	RKA5-400 (SUS430)	396	295	127.5	127.5			125		108.5	108	108.5					0.65	20	–
G	3D	190-110-173	RKA5-450 (SUS430)	446	340	100	100	100		130		125	125	125					0.7	10	–
G	3D	190-110-174	RKA5-500 (SUS430)	496	380	113	114	113		140	8	106	106.5	106.5	106	8			0.82	10	–
G	3D	190-110-175	RKA5-550 (SUS430)	546	420	126.5	127	126.5		150		119	118.5	118.5	119				0.9	10	–
G	3D	190-110-176	RKA5-600 (SUS430)	596	460	105	105	105	105	160	9	131.5	131	131	131.5				0.98	10	–

Refer to 1 : P.549

TWO-WAY CATCH FOR SLIDES JC-30TW



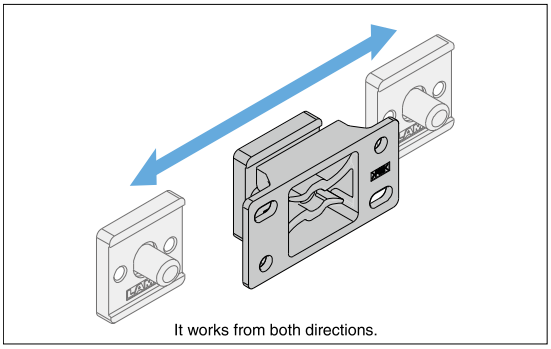
- Holds a slide in position from both directions.
- Retaining force can be adjusted by rotating the strike.
- Designed to be used with a two-way travel slide, holding it in the center.
- Can be used with slides between 19 and 21 mm in thickness.

[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.

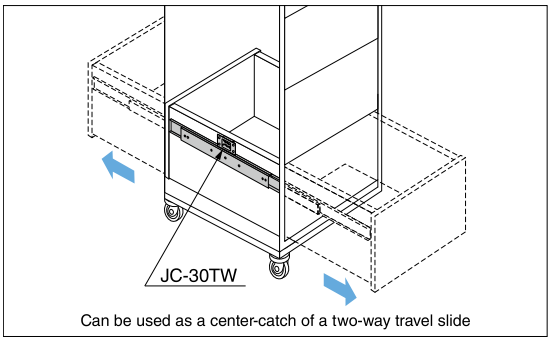
[Parts Included]
- Truss head tapping tapping screw 4 × 16

[Recommended Screw]
- M4 binding head screw, M4 truss head screw



It works from both directions.

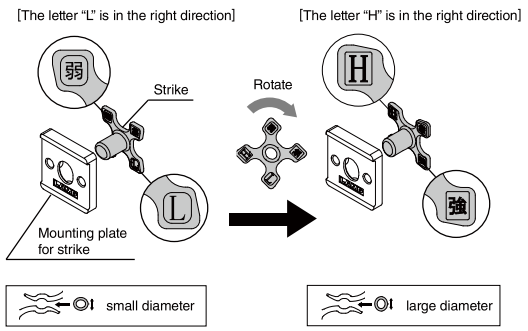
[Application Example]

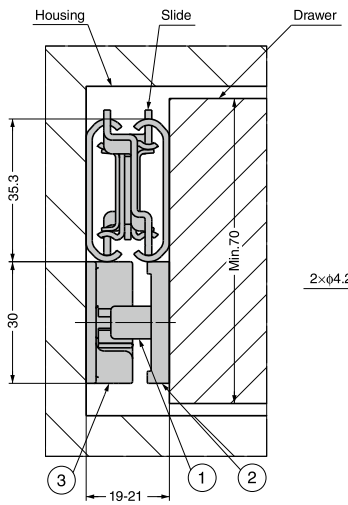


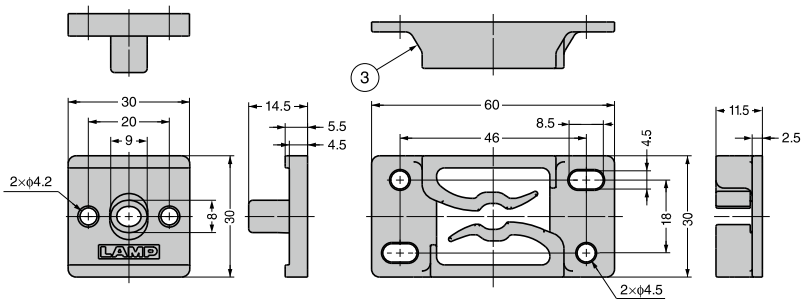
Can be used as a center-catch of a two-way travel slide

[Adjusting Retaining Force]

Rotate the strike to change retaining force.







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	POM	
③	Strike plate		

RoHS	CAD	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			
GT	3D	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

MULTI-ROLLER LINEAR SLIDE SYSTEM MLG Mini Type

Passed 300,000 open/close private cycle test



Compact | Vertical | Radial | Thrust









- Allows for smooth movement with the unique mechanism called "multi-roller".

[Application]
- Medical equipment, food machine, amusement machine, analytical instruments.

[Recommended Bolt]
- Hexagon socket bolt M4 (for the rail)

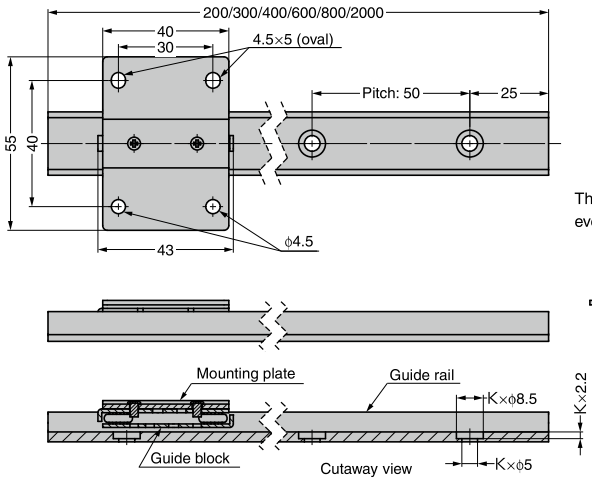
[Remarks]
- Please use with stoppers.
- The finish of the mounting holes and the rail edge is plain.

[Parts Included]
- #0-1 pan head screw M2.6 × 4 (for the mounting plate)

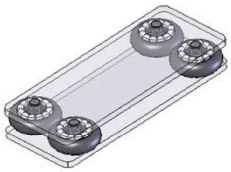
[Recommended Screw]
- Hexagon socket bolt M4 (for the rail)
- Screw M2.6 × 4 (Max. length: sheet thickness + 4 mm)
- Screw M4 (for the plate)

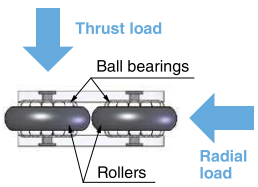
[Combination Drawings]

The guide rail, guide block, and mouting plate are used.

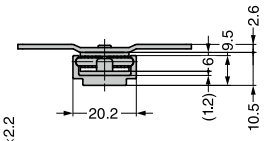


[The Unique Mechanism]





The multi-roller mechanism makes it possible to have smooth movements even with loads applied in radial or thrust directions.



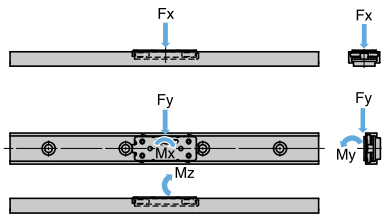
[Rated Load Reference Values] The rated load refers to the load limit .

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

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

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

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

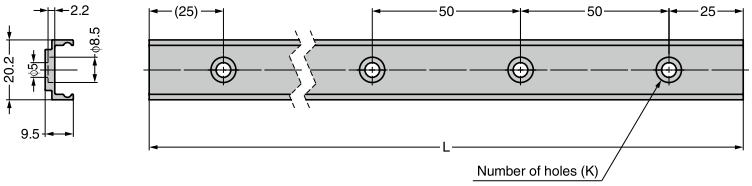


The calculation formula above is for reference purpose only.
Please comfirm with the actual item before use.

GUIDE RAIL MLG20 MLG Series



[Recommended Screw]
●Hexagon socket bolt M4

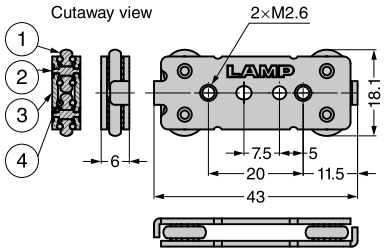


RoHS	CAD	Item Code	Item Name	Length (L)	Number of Holes (K)	Material	Finish	Weight (g)	Box (pcs)
G	3D	190-045-763	MLG20-200	200	4	Aluminium Alloy	Anodised Silver	36	200
G	3D	190-045-764	MLG20-300	300	6			54	100
G	3D	190-045-765	MLG20-400	400	8			72	100
G	3D	190-050-438	MLG20-600	600	12			108	20
G	3D	190-050-439	MLG20-800	800	16			144	20
G	3D	190-050-440	MLG20-2000	2000	40			359	20

MULTI-ROLLER GUIDE BLOCK MLG-20C MLG Series



[Recommended Screw]
●Screw M2.6 (Max. length: sheet thickness + 4 mm)



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

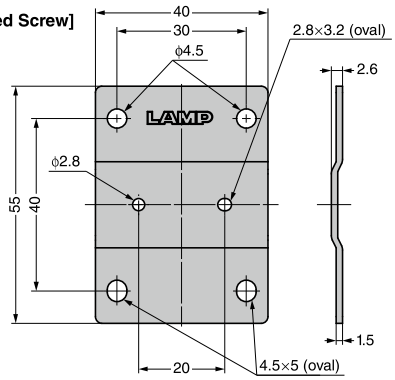
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)
G	3D	190-045-762	MLG-20C	13	200

MOUNTING PLATE MLG-20-P55-40 MLG Series



[Parts Included]
●#0-1 pan head screw M2.6 × 4

[Recommended Screw]
●Screw M4



RoHS	CAD	Item Code	Item Name	Material	Weight (g)	Box (pcs)
G	3D	190-045-766	MLG20-P55-40	Stainless Steel (SUS304)	26	100

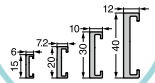
MINI GUIDE RAIL MRS

Simple
Ideal when precision is not required.

Greaseless



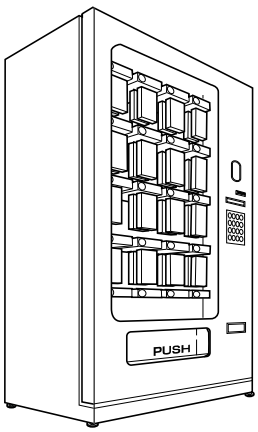
Compact

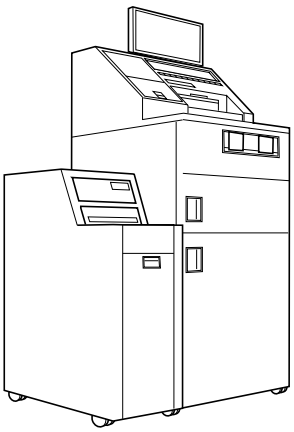


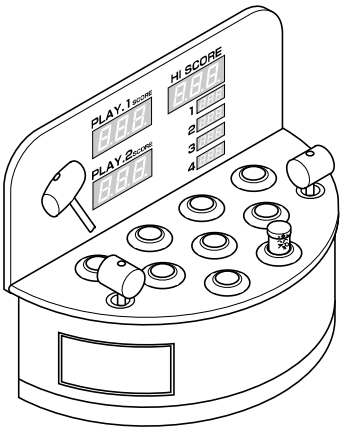


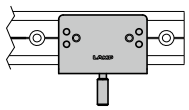
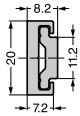
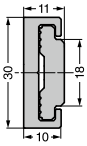
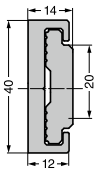
- No grease or oil application required, thanks to the use of special polyethylene resin with excellent sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- Frame resistance (UL94HB).
- Recyclable.
- Preload type carriage with minimal gap is also available (MRS-20, 30,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

[Installation Image]







Item Name	Size	Slide Length	Max. Load Capacity Guidelines*	Preload Type	Options	Page
MRS 15		100 ~ 1200	No moment load Approx. 1.2 kg Approx. 0.6 kg with vibration/impact	×	  Temporary retaining and positioning clamps are available.	P.594
MRS 20		100 ~ 2000	Approx. 5.3 kg Approx. 3.5 kg with vibration/impact	○		P.595
MRS 30		100 ~ 2000	Approx. 12.4 kg Approx. 6.2 kg with vibration/impact	○		P.596
MRS 40		400 ~ 2000	Approx. 20 kg Approx. 10k g with vibration/impact	○	×	P.597

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

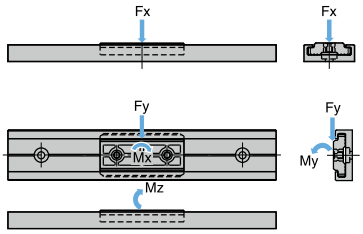
[Rated Load Guidelines] The rated load indicates the limit load.

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

Usage Conditions	Static Safety Coefficient	Dynamic Safety Coefficient
Low 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		Vertical static rated moment load Mx	
	N	kgf	N	kgf	N·m	kgf·cm
MR-15CS	100	10.2	30	3.0	-	-
MR-20CS	300	30.6	175	17.8	3	30.6
MR-30CS	520	53.0	305	31.1	5	51.0
MR-40CS	700	71.4	490	50.0	7	71.4

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



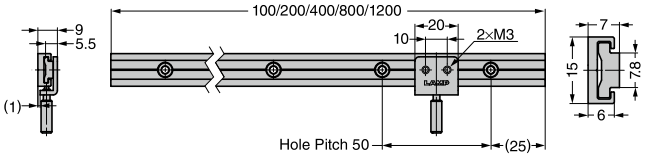
The above formulae are guidelines.
Confirm with the actual product for use.
Use MR-15CS so that moment load is not applied.

MINI GUIDE RAIL MRS15



- 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.
- Frame resistance (UL94HB).
- Recyclable.

Combination Dimensions for Guide Rail, Carriage, & Clamp



[Recommended Mounting Screws]

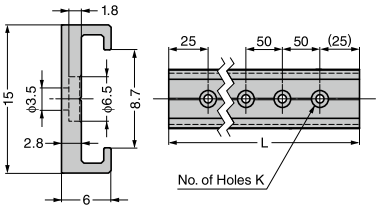
- (Rail) M3 hexagon socket button head screw or M3 pan head machine screw

[Remarks]

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

[MINI GUIDE RAIL MRS15]

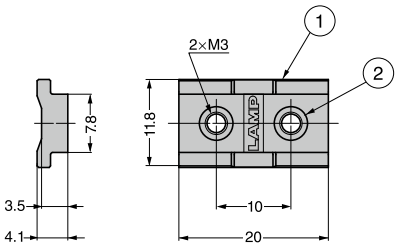




RoHS	CAD	Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
G	3D	190-027-331	MRS15-100	100	2	Aluminium Alloy	Silver Anodised	14.5
G	3D	190-027-332	MRS15-200	200	4			29
G	3D	190-027-333	MRS15-400	400	8			58
G	3D	190-027-334	MRS15-800	800	16			117
G	3D	190-046-490	MRS15-1200	1200	24			174

[MINI GUIDE CARRIAGE MR-15CS]





[Specifications]

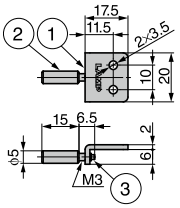
- Operating temperature: 0˚ C ~ 40˚ C

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-027-335	MR-15CS	1

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

[MINI GUIDE CLAMP MR-15CLP]





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

[Remarks]

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

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

RoHS	CAD	Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
G	3D	190-035-310	MR-15CLP	7 or below	0.05 or below	8.6

Refer to 1 : P.593

MINI GUIDE RAIL MRS-20



- 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.
- Frame resistance (UL94HB).
- Preload type carriage with minimal gap is also available.
- Recyclable.

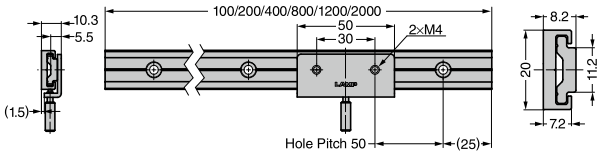
[Recommended Mounting Bolts]

- (Rail) M4 hexagon socket button head screws

[Remarks]

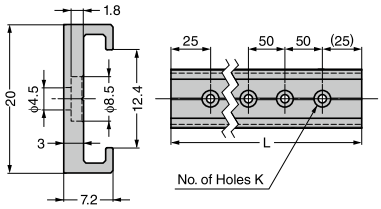
- When combined with a clamp, use under moment load is not possible.
- The rail mounting holes and ends are plain.
- The preload type carriage does not fix the slider. Do not use the MINI GUIDE RAIL in a vertical or diagonal position, as it will lead to danger when the slider falls.

Combination Dimensions for Guide Rail, Carriage, & Clamp



[MINI GUIDE RAIL MRS-20]

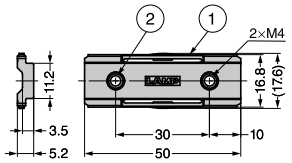




RoHS	CAD	Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
G	3D	190-111-491	MRS20-100	100	2	Aluminium Alloy	Silver Anodised	20
G	3D	190-111-492	MRS20-200	200	4			40
G	3D	190-111-493	MRS20-400	400	8			80
G	3D	190-111-494	MRS20-800	800	16			160
G	3D	190-046-491	MRS20-1200	1200	24			240
G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

[MINI GUIDE CARRIAGE MR-20CNB Preload Type]





[Specifications]

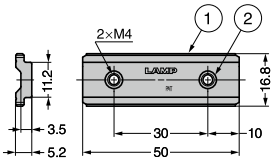
- Operating temperature: 0˚C ~ 40˚C

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

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

[MINI GUIDE CARRIAGE MR-20CS]





[Specifications]

- Operating temperature: 0˚C ~ 40˚C

[Remarks]

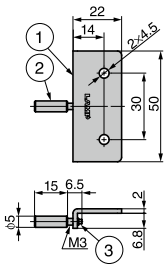
- The carriage unit working force changes depending on the operating temperature.

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

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

[MINI GUIDE CLAMP MR-20CLP]





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

[Remarks]

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

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

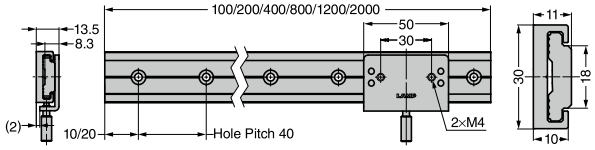
RoHS	CAD	Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
G	3D	190-035-311	MR-20CLP	7 or below	0.05 or below	22.6

MINI GUIDE RAIL MRS-30



- 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.
- Frame resistance (UL94HB).
- Preload type carriage with minimal is also available.
- Recyclable.

Combination Dimensions for Guide Rail, Carriage, & Clamp



[Recommended Mounting Bolts]

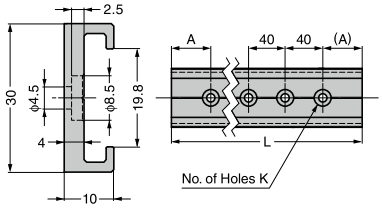
- (Rail) M4 hexagon socket button head screws

[Remarks]

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

[MINI GUIDE RAIL MRS-30]

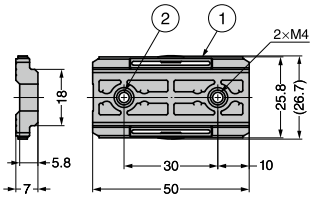




RoHS	CAD	Item Code	Item Name	L	A	No. of Holes K	Material	Finish	Weight (g)
G	3D	190-112-860	MRS30-100	100	10	3	Aluminium Alloy	Silver Anodised	39
G	3D	190-112-861	MRS30-200	200		5			79
G	3D	190-112-862	MRS30-400	400		10			159
G	3D	190-112-863	MRS30-800	800	20	20			312
G	3D	190-046-492	MRS30-1200	1200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

[MINI GUIDE CARRIAGE MR-30CNB Preload Type]





[Specifications]

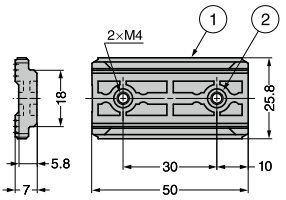
- Operating temperature: 0° C ~ 40° C

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

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

[MINI GUIDE CARRIAGE MR-30CS]





[Specifications]

- Operating temperature: 0° C ~ 40° C

[Remarks]

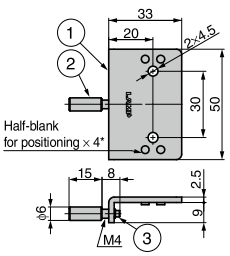
- The carriage unit working force changes depending on the operating temperature.

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

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

[MINI GUIDE CLAMP MR-30CLP]





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

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

[Remarks]

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

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

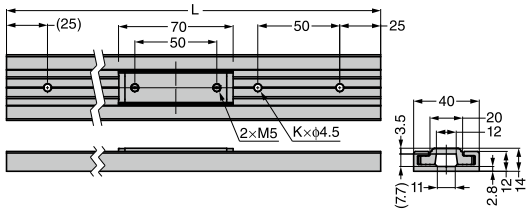
RoHS	CAD	Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
G	3D	190-035-312	MR-30CLP	14 or below	0.1 or below	40.8

MINI GUIDE RAIL MRS40



- 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.
- Frame resistance (UL94HB).
- Preload type carriage with minimal is also available.
- Recyclable.

Combination Dimensions for Guide Rail & Carriage



[Recommended Mounting Screws]

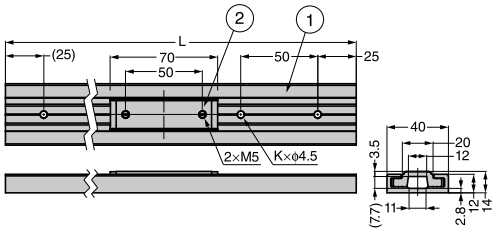
- (Rail) M4 hexagon socket button head screw, M4 hexagon socket low head bolt, or M4 binding machine screw

[Remarks]

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

[MINI GUIDE RAIL MRS40]

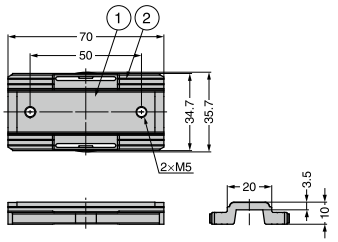




RoHS	CAD	Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
G	3D	190-037-686	MRS40-400	400	8	Aluminium Alloy	Silver Anodised	236
G	3D	190-037-687	MRS40-800	800	16			472
G	3D	190-043-711	MRS40-1200	1200	24			708
G	3D	190-037-688	MRS40-2000	2000	40			1180

[MINI GUIDE CARRIAGE MR-40CNB Preload Type]





[Specifications]

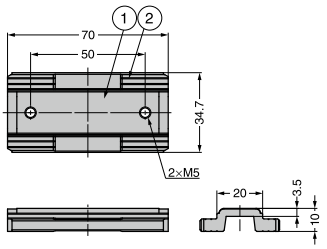
- Operating temperature: 0˚C ~ 40˚C

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

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-041-093	MR-40CNB	40

[MINI GUIDE CARRIAGE MR-40CS]





[Specifications]

- Operating temperature: 0˚C ~ 40˚C

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

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-041-092	MR-40CS	41

LINEAR ROLLER GUIDE RAIL LGB30



Guide rail, guide block and stopper are used in combination.
For combination drawings, refer to 1.



Mounting plate is available. Refer to 2 for details.

Refer to 1 : P.601, 2 : P.600, 3 4 : P.599

- Bearing roller used in guide block allows for smooth movement.
- LGB-30CM guide block features a noise-reducing design bearing roller using with plastic outer ring.
- Clearance between guide rail and guide block provides versatility.

[Applications]

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



Guide rail LGB30 3



Guide block LGB-30CM 4



Stopper LGB30-ST 2



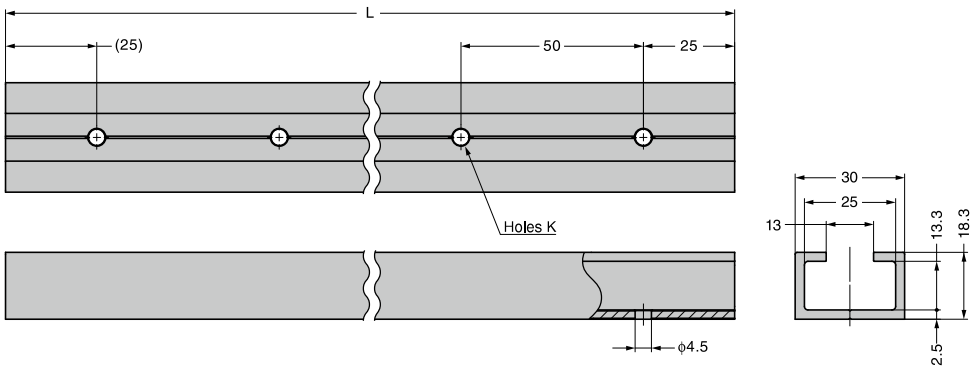
Mounting plate LGB30-P65-100 2

GUIDE RAIL LGB30



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

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



RoHS	CAD	Item Code	Item Name	L	K	Material	Finish	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-036-273	LGB30-400	400	8	Aluminium Alloy	Anodised Silver	195	50	–
G	3D	190-036-274	LGB30-800	800	16			390	25	–
G	3D	190-036-275	LGB30-2000	2000	40			875	10	–

GUIDE BLOCK LGB-30CM Silent Type

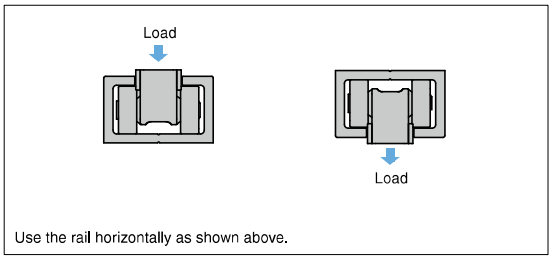
LOAD CAPACITY Max. 294 N

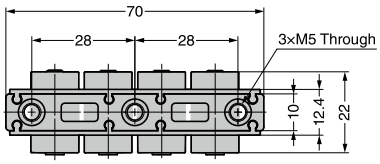


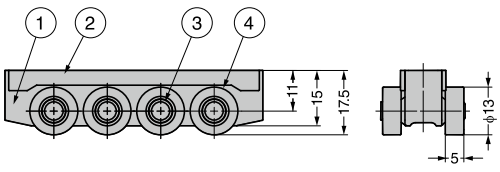
- Bearing roller used in guide block allows for smooth movement.
- Plastic outer ring type bearing roller.
- For guide rail LGB30 1 only.

[Remarks]
- Do not 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

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-036-158	LGB-30CM	Max. 294	Max. 30	76	200	2000

Refer to 1 : P.598

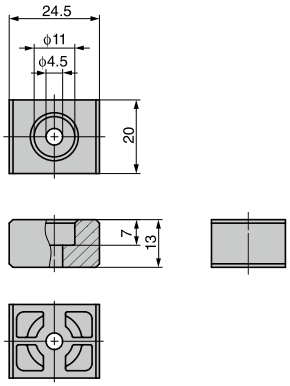
STOPPER LGB30-ST



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

[Remarks]

- Do not use for stopping guide block collision.



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

Refer to 1 : P.599, 2 : P.598

MOUNTING PLATE LGB30-P65-100



- Install to guide block LGB-30CM 1 with supplied screws.

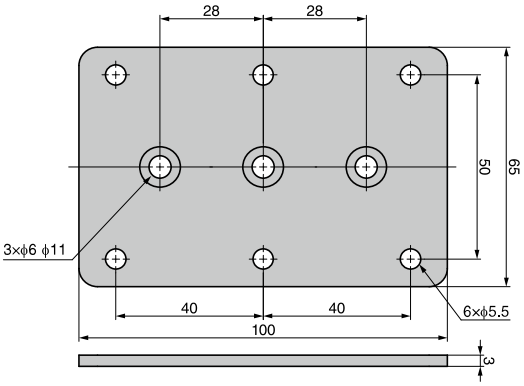
[Parts Included]

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

[Installation]



[Dimensions]



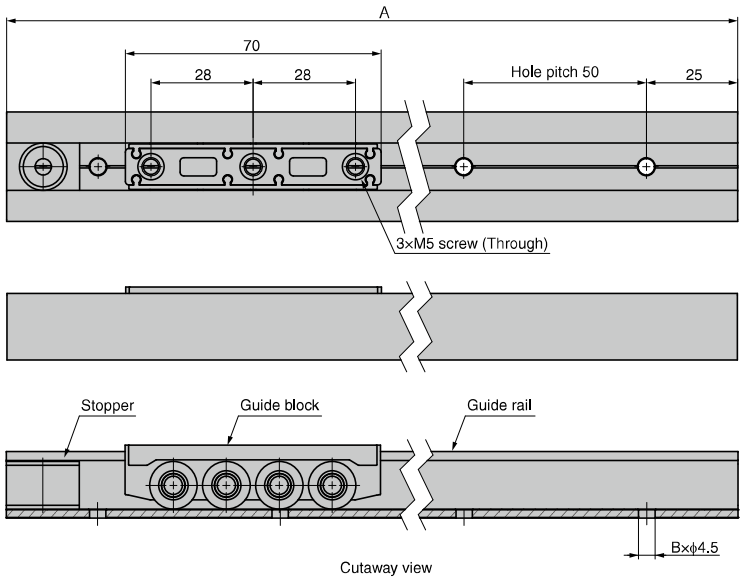
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-036-465	LGB30-P65-100	Stainless Steel (SUS304)	Barrel Polished	137	50	–

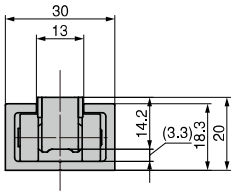
Refer to 1 : P.599

[Combination Drawings of Linear Roller Guide Rail LGB30]

Combination dimensions of guide rail, guide block and stopper

Combination example: Guide rail LGB30 1, guide block LGB-30CM 2 and stopper LGB30-ST 3





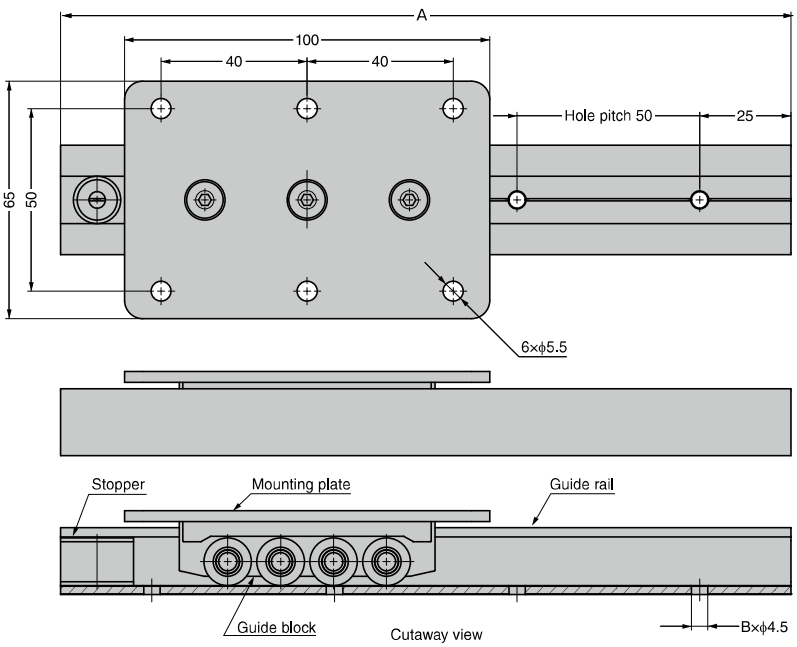
Guide rail

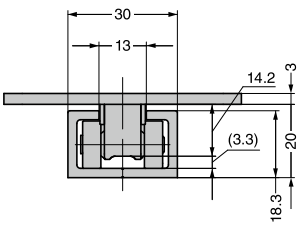
Item Name	Slide Length A	Holes B
LGB30-400	400	8
LGB30-800	800	16
LGB30-2000	2000	40

Refer to 1 : P.598, 2 : P.599, 3 : P.600

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

Combination example: Guide rail LGB30 1, guide block LGB-30CM 2, stopper LGB30-ST and mounting plate LGB30-P65-100 3





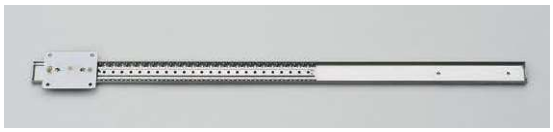
Guide rail

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

Refer to 1 : P.598, 2 : P.599, 3 : P.600

LINEAR BALL BEARING GUIDE ESR9 For Light Weight

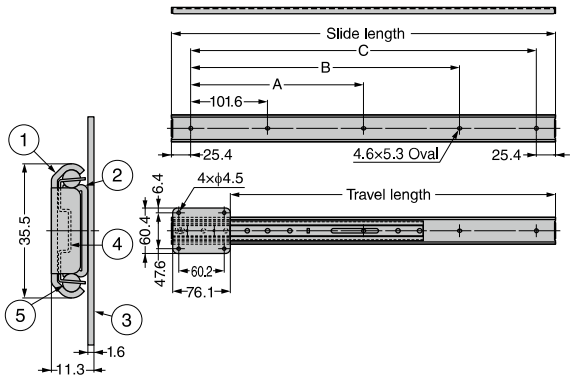
L=R SUS



- Inner member is located inside the retainer for precise movement.
- Ideal for doors of small cabinets. 2 slides can support up to 5 kg.

[Remarks]

- Outer member cannot be used in full stroke since the erected parts at its both ends are low in strength against strong shock and continuous movement. Install a stopper with a space from the erected part.
- Ball retainer may shift depending on inner member movement frequency and other conditions. In this case, correct by moving the inner member left or right to the end.
- Retainer may shift downwards In case of moving in the vertical direction.



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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-336	ESR9-12	304.8	225	–	152.4	254	0.14	24	–
G	3D	190-111-337	ESR9-14	355.6	276		203.2	304.8	0.16	24	–
G	3D	190-111-338	ESR9-16	406.4	327		254	355.6	0.17	24	–
G	3D	190-111-339	ESR9-18	457.2	378	203.2	304.8	406.4	0.19	24	–
G	3D	190-111-340	ESR9-20	508	428	228.6	355.6	457.2	0.20	24	–
G	3D	190-111-341	ESR9-22	558.8	479	254	406.4	508	0.22	24	–
G	3D	190-111-342	ESR9-24	609.6	530	279.4	457.2	558.8	0.24	24	–
G	3D	190-111-343	ESR9-26	660.4	581	304.8	508	609.6	0.25	22	–
G	3D	190-111-344	ESR9-28	711.2	632	330.2	558.8	660.4	0.27	24	–

LINEAR BALL BEARING GUIDE TSSL

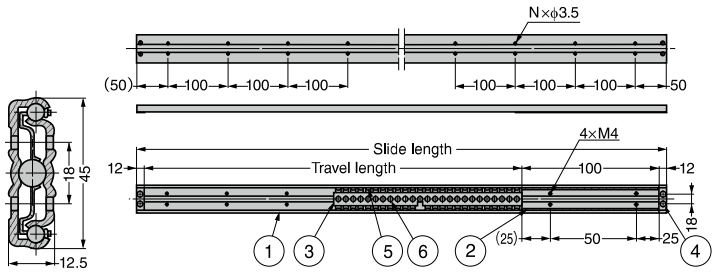
SUS



- Inner and outer members are supported with 3 steel balls for smooth movement.
- Inner member is located inside the retainer for precise movement.

[Remarks]

- Movement is affected by the use environment. Please check with actual item.
- Do not use for vertical movement.



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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	Holes N	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-600	TSSL-300-100	300	176	6	0.44	12	–
G	3D	190-110-601	TSSL-400-100	400	276	8	0.57	12	–
G	3D	190-110-602	TSSL-500-100	500	376	10	0.68	12	–
G	3D	190-110-603	TSSL-600-100	600	476	12	0.82	12	–
G	3D	190-110-604	TSSL-800-100	800	676	16	1.04	12	–
G	3D	190-110-605	TSSL-1000-100	1000	876	20	1.33	12	–

3/4 EXTENSION SLIDE ESR2 Under-mount Type

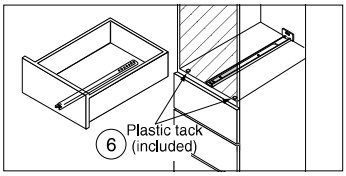
LOAD CAPACITY 49~78 N/pc | L=R | FRICTION | DETACH | SUS

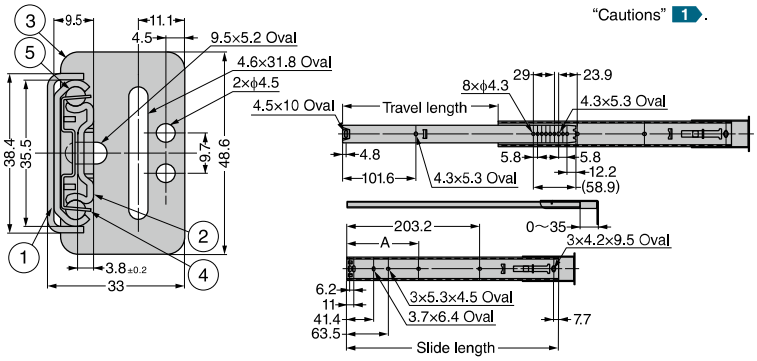


- 3/4 extension (2 members).
- Installed to the bottom of the drawer.
- The drawer can be stopped at any position by the resistance of the ball retainer. The drawer can be detached by pulling outward.

[Remarks]
- Be sure to read the "Cautions" 1.

[Application Example]





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

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide length	Travel length	A	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg/pc)	Box (pcs)	Carton (pcs)
–	3D	190-111-310	ESR2-12	323.8	215.9	109.9	78	8	0.4	20	–
–	3D	190-111-311	ESR2-14	374.6	266.7	160.7	74	7.5	0.43	20	–
–	3D	190-111-312	ESR2-16	425.4	304.8	–	69	7	0.48	20	–
–	3D	190-111-313	ESR2-18	476.2	317.5	262.3			0.53	20	–
–	3D	190-111-314	ESR2-20	527	368.3	313.1	64	6.5	0.57	20	–
–	3D	190-111-315	ESR2-22	577.8	419.1	363.9	59	6	0.62	20	–
–	3D	190-111-316	ESR2-24	628.6	444.5	414.7	54	5.5	0.66	20	–
–	3D	190-111-317	ESR2-26	679.4	495.3	465.5	49	5	0.71	20	–

Refer to 1 : P.549

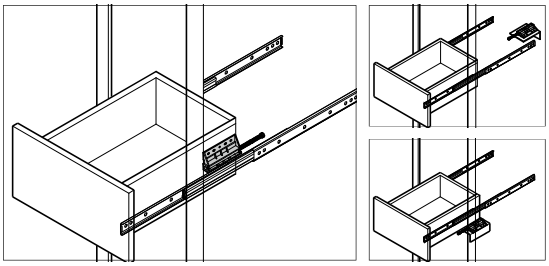
DRAWER DAMPER GDSR144-R



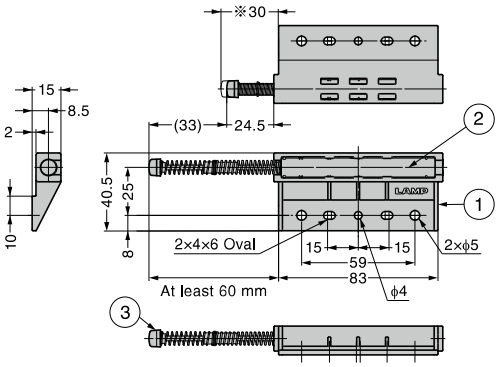
- Used with the slide to reduce the shock when closing the drawer.

[Remarks]
- Latch is required to hold the drawer in closed position.
- It is an oil damper. Noted that oil leak may occur due to failure.
- Conduct verification before use.
- Noted that the dimension marked with ※ below shall be 30mm or more.
- This product is right type. For left type, please contact local representatives.
- Use with the slide to ensure straight contact with the damper.

[Installation]



With a damper, drawers in the kitchen and office can be soft-closed.



No.	Part Name	Material	Colour
①	Bracket	ABS	Light Grey
②	Body	POM	Grey
③	Bumper	PUR	Red

RoHS	CAD	Item Code	Item Name	Reaction Force N	Reaction Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-118-835	GDSR144-R	20	2	24	240	–

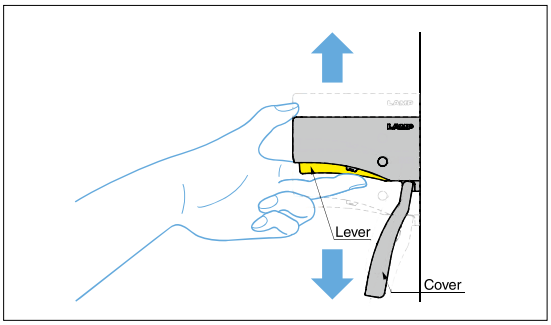
ADJUSTABLE MOUNT FSL-V36

INSTRUCTION HEX KEY



- Holds at any height on aluminium frames.
- The cover prevents unintentional lock release.
- Designed for use with the FSL-L, an aluminium frame.
  Can also be used with other companies' aluminium frames that are over 40 mm in width. Please see the drawing below for details.
- The locking mechanism prevents only downward motion.
- Can be installed to an aluminium frame that is already assembled.
- A monitor can be mounted on the FSL-V36 when used with the FSL-MB, an optional monitor-mounting bracket.

[Holds at any height]



[Application]
- Control panels, monitors

[Remarks]
- It is recommended to use one per frame.
- Please use only with vertical sliding applications.

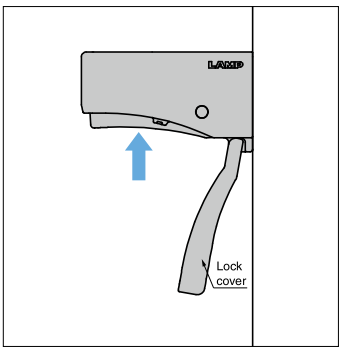
[Parts Included]
- Hex bar spanner (nominal 2.5)

[Optional Parts]
- FSL-MB, Monitor Mounting Bracket
- FSL-L, Aluminium Frame

[Recommended Screw]
- M5 screws

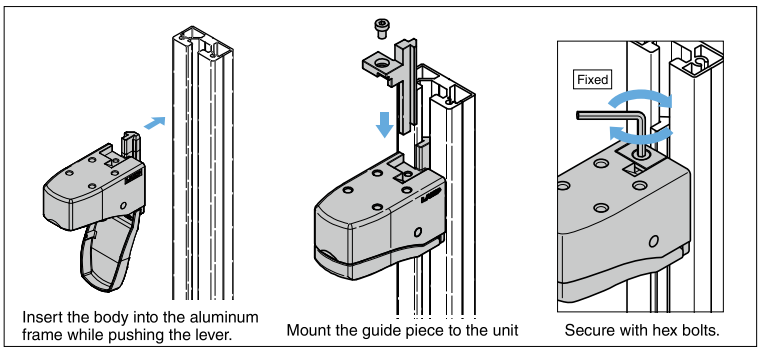
Video Link

[Operation]



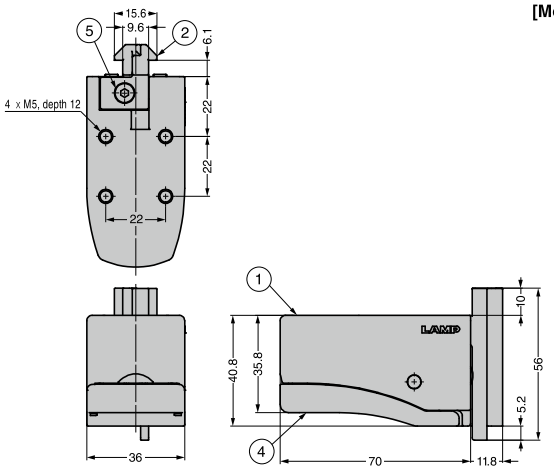
Open the cover and push the lever to move the unit up or down. The unit stops where the lever is released.

[Installation]

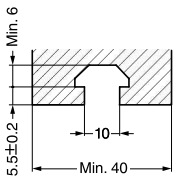


Insert the body into the aluminum frame while pushing the lever. | Mount the guide piece to the unit | Secure with hex bolts.

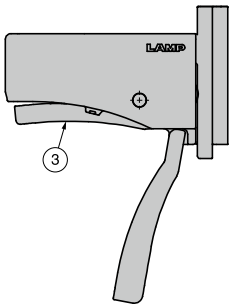
Can be installed to an aluminium frame that is already assembled. (see the instruction manual for details)



[Mountable Aluminium Frame]



[When cover is opened]



No.	Part Name	Material	Finish/Colour
①	Main Body	Zinc Alloy (ZDC)	Satin Chrome Plating
②	Guide Piece		
③	Lever		
④	Lock Cover	ABS Resin	White
⑤	Hexagonal socket cap low head bolt M4×6	Stainless Steel	Plain

RoHS	CAD	Item Code	Item Name	Vertical Load Capacity N	Vertical Load Capacity kgf	Allowable Moment N·m	Allowable Moment kgf-cm	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-042-160	FSL-V36	117	12	20	204	310	1	18

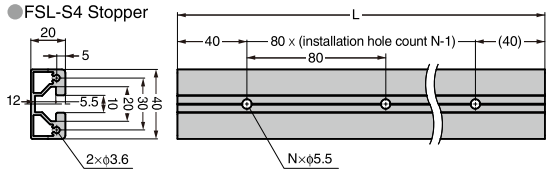
ALUMINIUM FRAME FSL-L



Video Link

[Optional Parts]

- FSL-EC End Cap
- FSL-S4 Stopper



RoHS	CAD	Item Code	Item Name	L	Installation Hole Count N	Material	Finish	Weight (g)	Box (pcs)
G	3D	190-042-162	FSL-L400	400	5	Aluminium Alloy	Silver Anodising	333	30
G	3D	190-042-163	FSL-L800	800	10			665	15
G	3D	190-042-164	FSL-L1200	1200	15			998	9
G	3D	190-042-165	FSL-L2000	2000	25			1663	6

END CAP FSL-EC

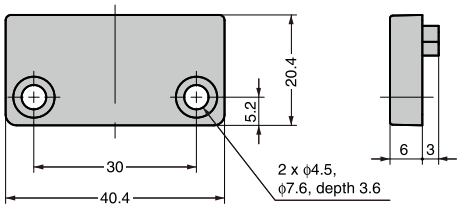


Video Link

- End cap for the FSL-L Aluminium Frame.

[Parts Included]

- Size 4 x 8 cross-recessed pan head tapping screws



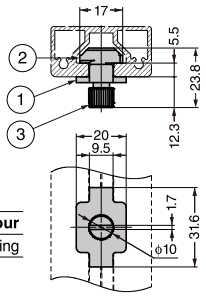
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)
G	3D	190-042-166	FSL-EC	ABS Resin	Grey	3.1	200

STOPPER FSL-S4



Video Link

- A stopper for the FSL-L Aluminium Frame.
- Can also be used with other companies' aluminium frames that are over 40 mm in width. Please see the drawing of the FSL-V36 for details.



No.	Part Name	Material	Finish/Colour
①	Body	SPCC	Chrome Plating
②	AS Nut	Stainless Steel (SUS316)	Barrel Polished
③	Knurled Knob	Steel	Nickel Plating

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)
G	3D	190-042-167	FSL-S4	22	200

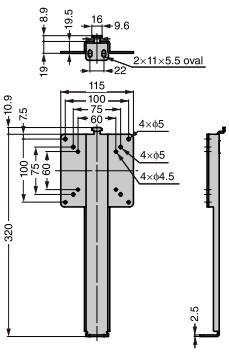
MONITOR MOUNTING BRACKET FSL-MB



[Application]



Used with FSL-V36 and KA-T100S50



- Enables mounting of monitors with hole pitch compliant with the VESA standard (75 x 75 mm, 100 x 100 mm).
- The KA-T100S50, a monitor mount can also be mounted to the FSL-V36, an adjustable mount.

[Sold Separately]

- KA-T100S50, Monitor Mount



*Angle adjustment: 180° swiveling, and 40° tilting

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)
G	3D	190-042-161	FSL-MB	Steel (SPCC)	Enamel Silver	566	20

BRACKET FOR SENSOR MR-30BKT



Horizontal Mount Type　　Vertical Mount Type

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

[Application]

- Production line, test equipment

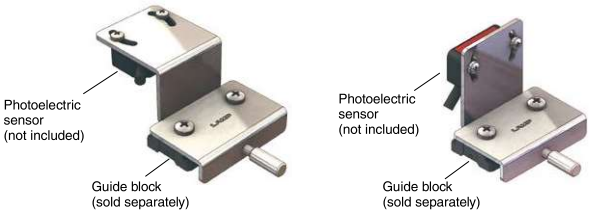
[Remarks]

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

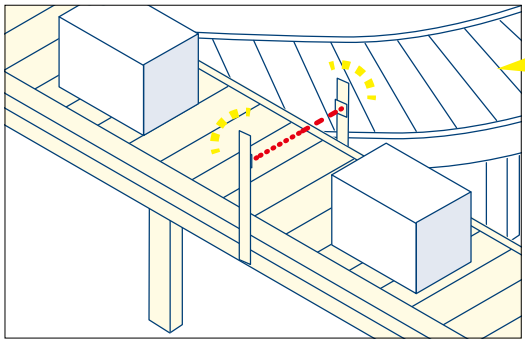
[Included Parts]

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

[With a Photoelectric Sensor]

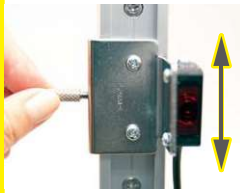


[Application]



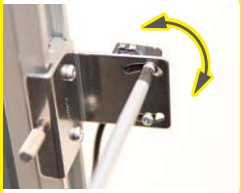
Easy Position Adjustments

[Height]



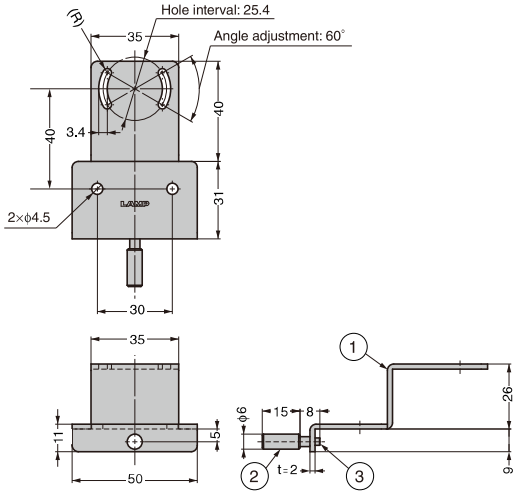
Turn the knob to adjust the height of the photoelectric sensor.

[Angle]

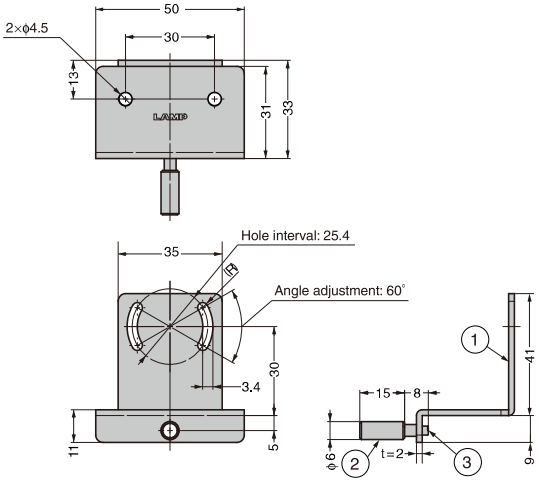


Turn the screws to adjust the angle of the photoelectric sensor.

[Horizontal Mount Type]



[Vertical Mount Type]



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

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