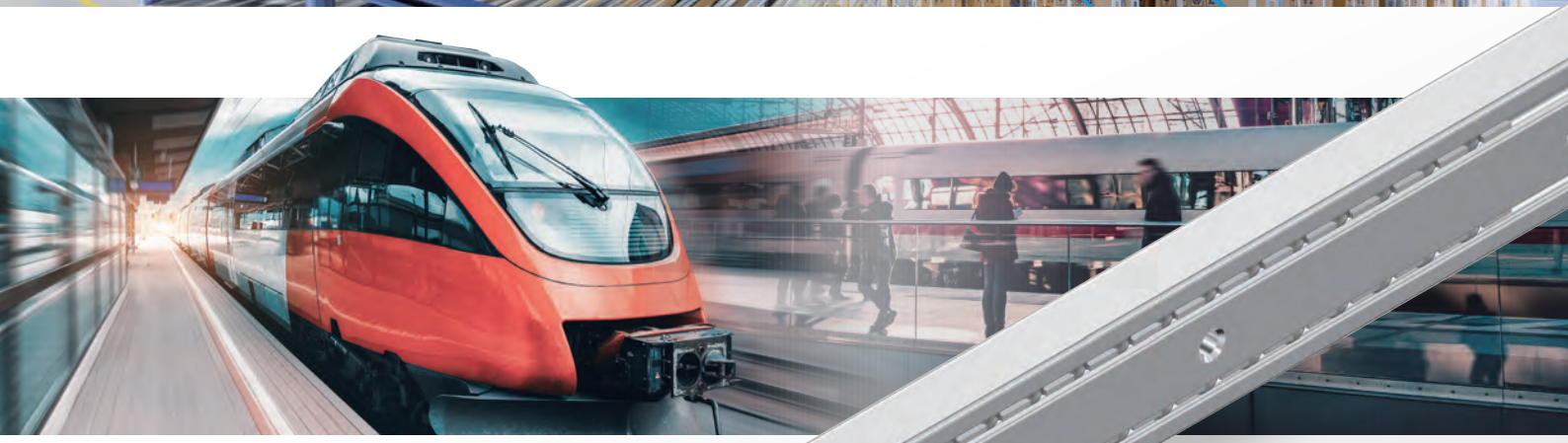
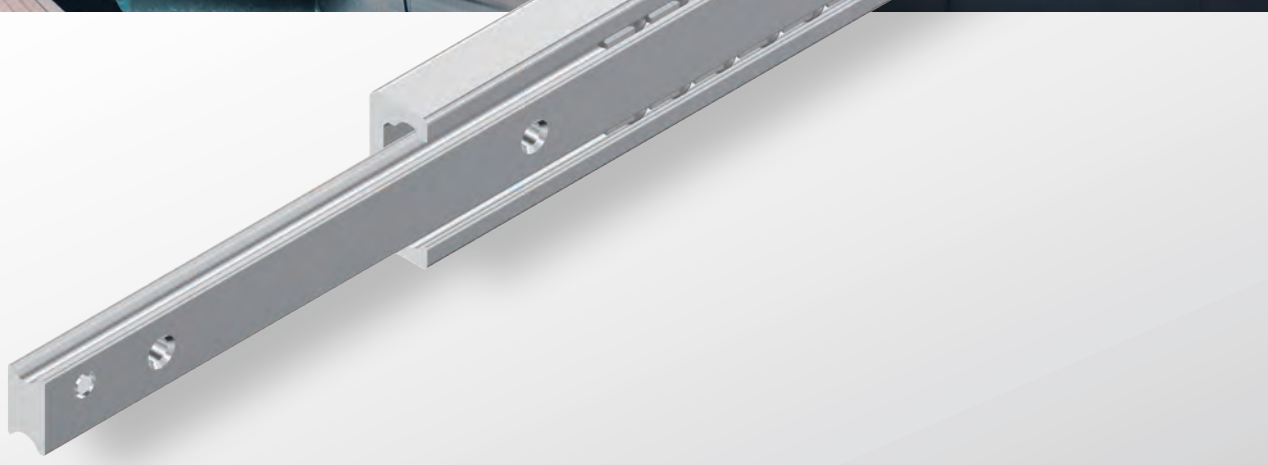
NEW

Utility Slide

ATG



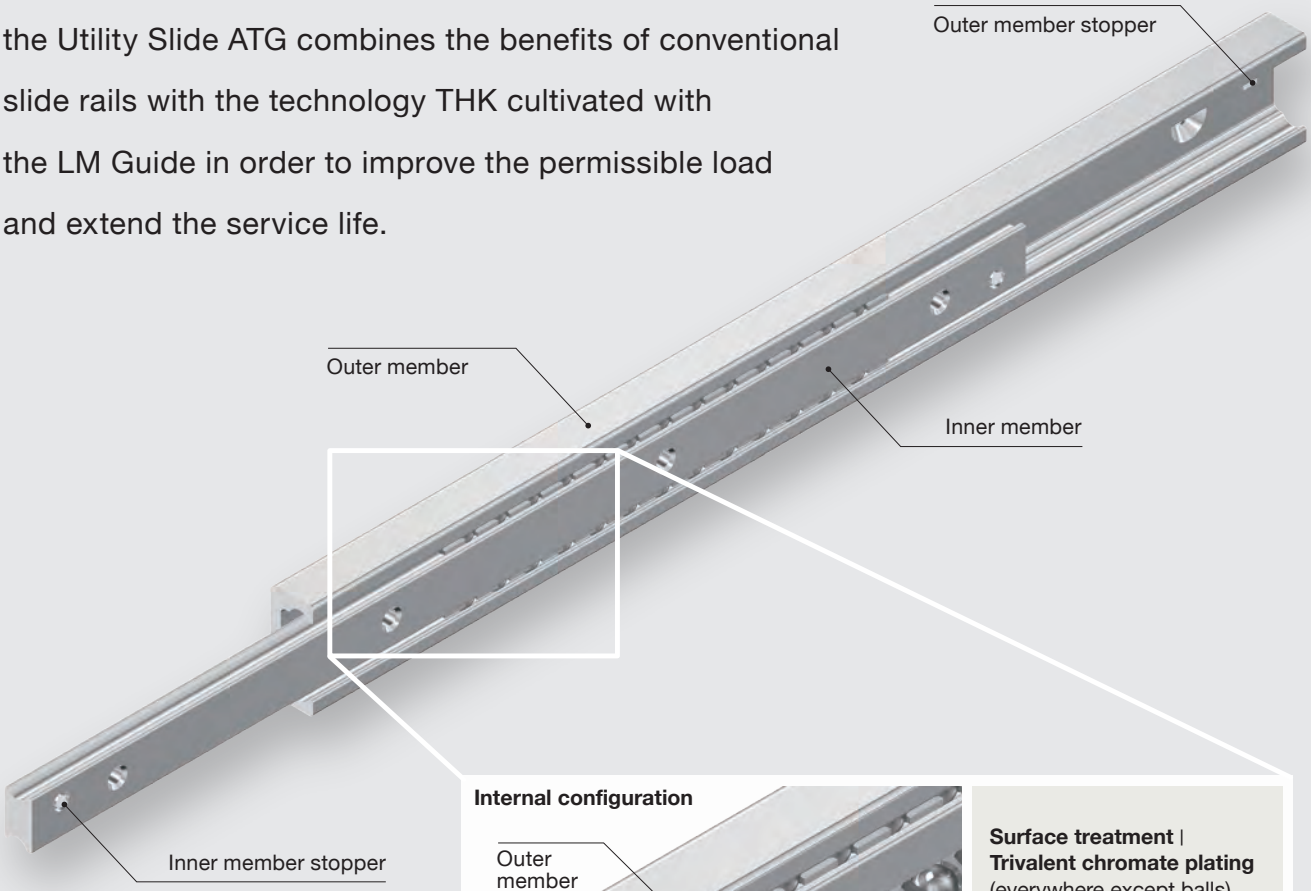


A new slide rail from THK that meets the needs of the logistics and railway industries

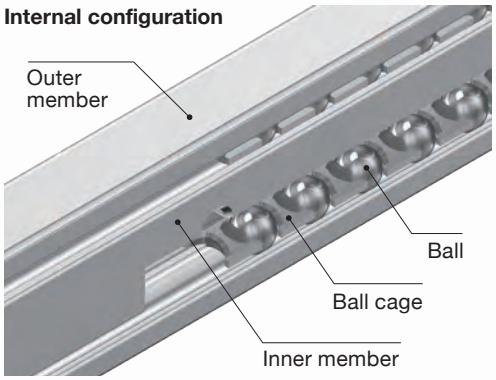
Utility Slide

ATG

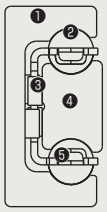
To meet the needs of the **logistics** and **railway industries**, the Utility Slide ATG combines the benefits of conventional slide rails with the technology THK cultivated with the LM Guide in order to improve the permissible load and extend the service life.



Internal configuration

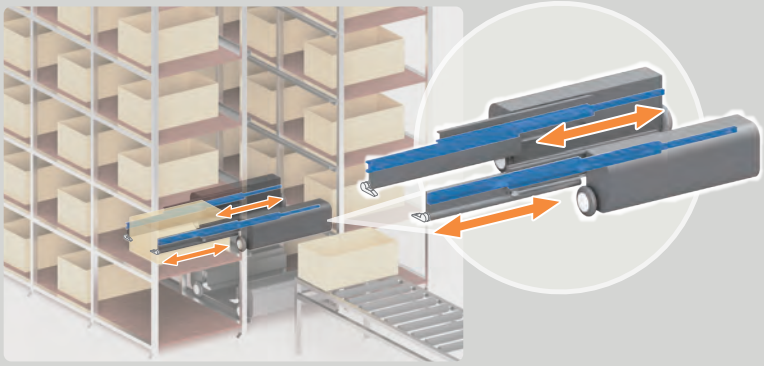


Surface treatment | Trivalent chromate plating
(everywhere except balls)



1. Outer member: High-carbon steel
2. Balls: SUJ2
3. Stoppers: Free-cutting steel
4. Inner member: High-carbon steel
5. Ball cages: SPCC

Applicable Fields

Logistics	Railways
	
▲ Transfer shuttles in automated warehouses	▲ Railway vehicle doors

Utility Slide ATG

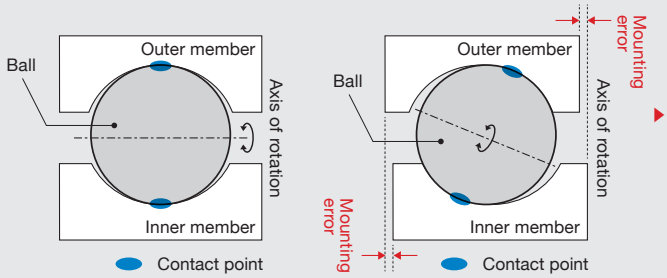
Feature 1 Improved Permissible Load and Extended Service Life

The Model ATG distinguishes itself from conventional slide rails by heat treating the outer and inner members to increase surface hardness and strength. The result is a high load capacity, high durability, and improved permissible load and service life compared to conventional products.

Feature 2 Easy to Install

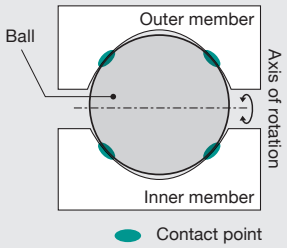
The circular arc grooves make the Model ATG excel at adjusting to slight inaccuracies in the mounting surface during installation.

2-Point Circular Arc Contact



- Circular arc grooves have the ability to absorb any mounting errors by shifting the point where the balls contact the groove.

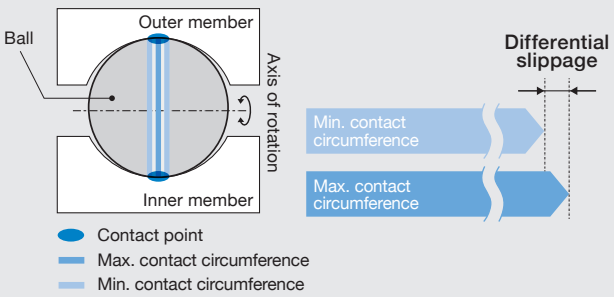
4-Point Gothic Arch Contact



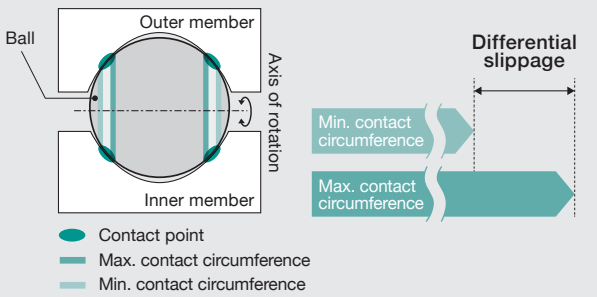
Feature 3 Helps Prevent Locking at the Stroke End

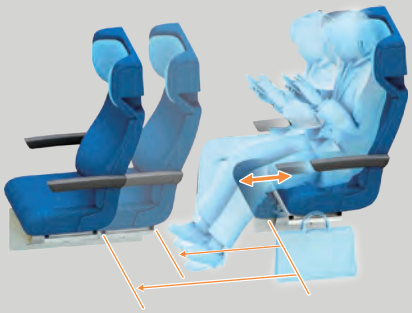
Since the Model ATG features circular arc grooves, it experiences less differential slippage than conventional (Gothic arch groove) products, which helps keep balls from becoming misaligned and causing the product to lock at the stroke end. This helps improve the stability of machine operations.

2-Point Circular Arc Contact

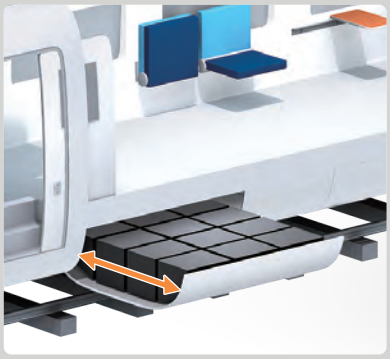


4-Point Gothic Arch Contact





▲ Passenger seating



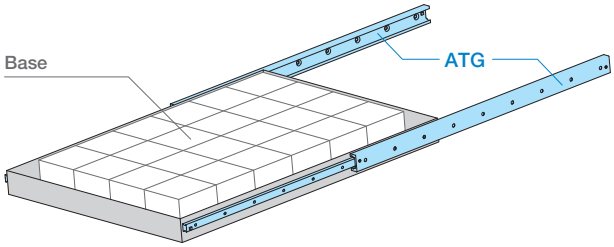
▲ Storage space for railway vehicle maintenance

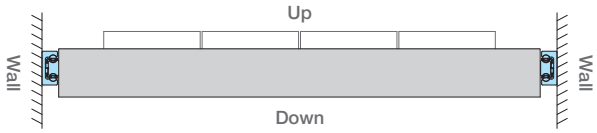
▲ Sliding steps for railway doors

Product Specifications

Mounting Orientation

The Model ATG is intended to be used in a set with two slide rails mounted on a wall.
Please consult THK if you are considering using only one slide rail or installing the product in something other than a wall-mounted orientation.





- Front view -

General Specifications

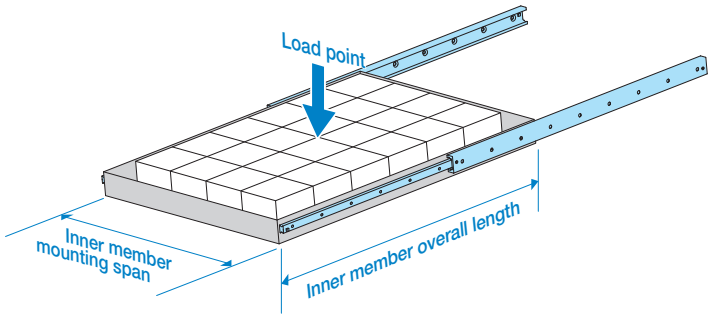
Item	Unit	Model		
		ATG22S	ATG28S	ATG35S
Product width	mm	22	28	35
Permissible load[1]	N/set	1,690 to 3,920	3,410 to 6,600	5,150 to 9,740
Max. sliding resistance[2]	N	3	5	5
Operating temperature range[3]	℃	-15℃ to 100℃		
Grease	—	AFB-LF		

1. The permissible loads are the values for one set of two slide rails. They are calculated from the permissible surface pressure based on a load centered between the inner members.
2. When assembled, the balls are adjusted to aim for zero clearance and to keep the sliding resistance at or below the upper limit.
3. Contact THK if the product will be used in an environment outside of the specified temperature range.

Permissible Load

As shown in the figure below, the Model ATG's permissible load is calculated from the permissible surface pressure based on a load centered between the inner members.

*Please do not install the Model ATG's inner members more than around 300 mm apart. If the distance between the installed inner members will be wider than 300 mm, factor in the load that will be caused by deflection of the mounting components. Contact THK for details.



Safety Factor

When the Model ATG is stationary or in motion, an unexpected external force may be applied due to vibrations, impacts, or inertia caused by starting and stopping. It is necessary to take a safety factor into account with regard to this type of applied load.

$$f_S = \frac{P_0}{P_C}$$

f_S: Safety factor
P_0: Permissible load (N)
P_C: Applied load (N)

Standard Values for the Safety Factor

Based on the usage conditions, treat the safety factor values in the table to the right as the lower limit of the standard value. When selecting the model and member length, make sure that the value is higher than the lower limit of the safety factor fs obtained by dividing the permissible load by the applied load.

Standard Values for the Safety Factor (fs)

Machine type	Load conditions	Lower limit of fs
General industrial machinery (Automated warehouses, doors, etc.)	Without vibrations or impacts	1.0 to 3.5
	With vibrations or impacts	2.0 to 5.0

Lubrication

Standard Grease

AFB-LF Grease is a general-purpose grease that provides excellent extreme pressure and mechanical stability properties through the use of a refined mineral oil base oil and a lithium-based consistency enhancer.

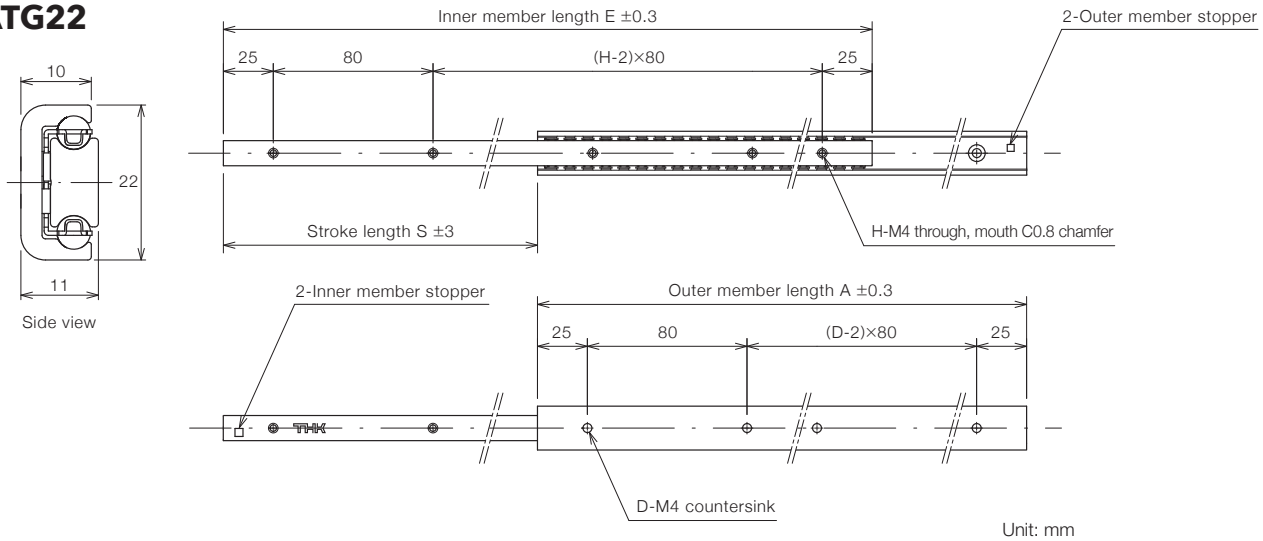
*Non-standard greases are also available. Contact THK for details.

AFB-LF Representative Physical Properties

Item		Representative property	Testing method
Consistency enhancer		Lithium-based	
Base oil		Refined mineral oil	
Base oil kinematic viscosity: mm^2/s (40℃)		170	JIS K 2220 23
Worked penetration (25℃, 60 W)		275	JIS K 2220 7
Mixing stability (100,000 W)		345	JIS K 2220 15
Dropping point: ℃		193	JIS K 2220 8
Evaporation volume: mass% (99℃, 22 h)		0.4	JIS K 2220 10
Oil separation rate: mass% (100℃, 24 h)		0.6	JIS K 2220 11
Copper plate corrosion (B method, 100℃, 24 h)		Passed	JIS K 2220 9
Low-temperature torque: mN·m (-20℃)	Starting	130	JIS K 2220 18
	Rotational	51	
4-ball testing (welding load): N		3089	ASTM D2596
Operating temperature range: ℃		-15 to 100	
Color		Yellowish brown	

Specification Tables

ATG22

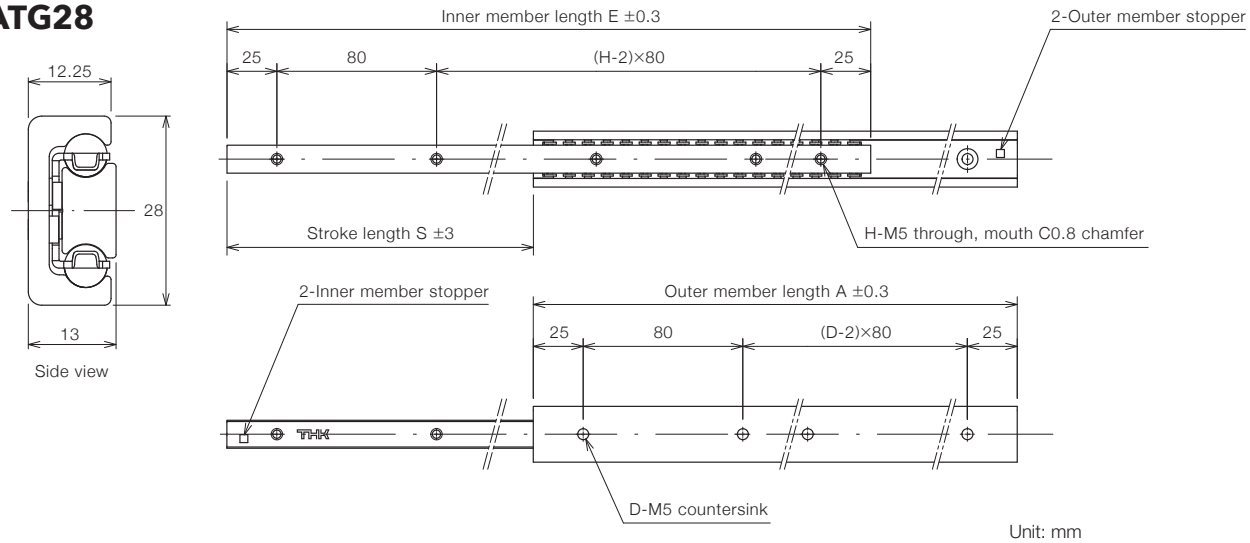


Unit: mm

Model	Stroke S	Outer member length A	Inner member length E	No. of mounting holes		Permissible load N/set	Weight kg/set
				D	H		
ATG22S+130L	79.4	130	130	2	2	1,690	0.35
ATG22S+210L	114.4	210	210	3	3	2,920	0.57
ATG22S+290L	158.4	290	290	4	4	3,010	0.79
ATG22S+370L	202.4	370	370	5	5	3,120	1.01
ATG22S+450L	237.4	450	450	6	6	3,490	1.24
ATG22S+530L	281.4	530	530	7	7	3,500	1.46
ATG22S+610L	316.4	610	610	8	8	3,730	1.68
ATG22S+690L	351.4	690	690	9	9	3,920	1.91

Note 1) The permissible load and weight are the values for one set of two slide rails.
Note 2) Contact THK if a non-standard length longer than the maximum standard length, a special length, or a special stroke is desired.

ATG28

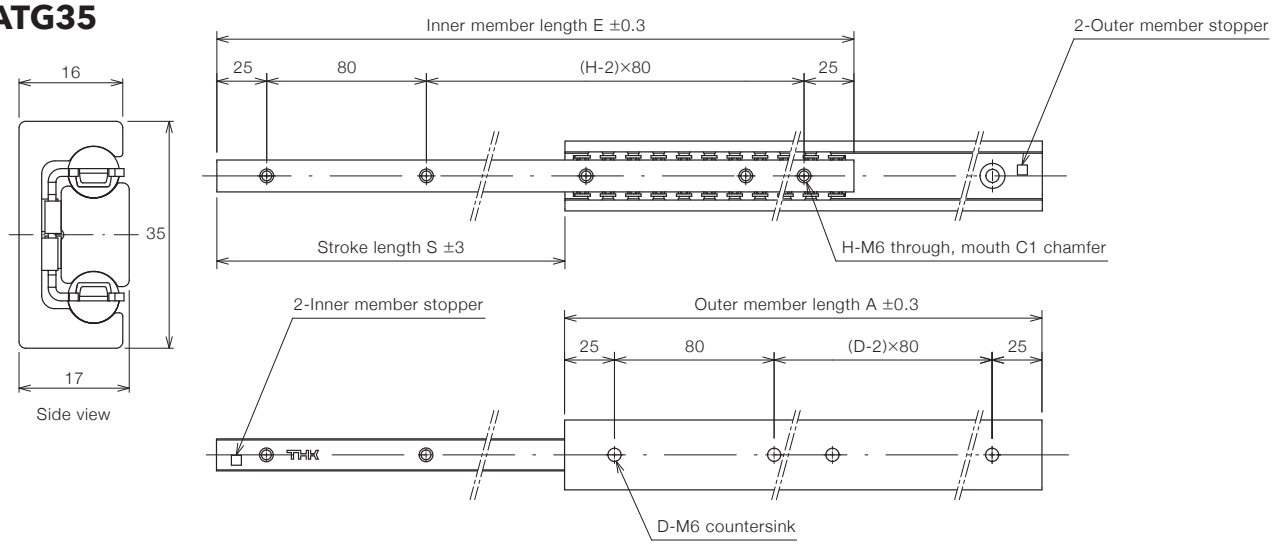


Unit: mm

Model	Stroke S	Outer member length A	Inner member length E	No. of mounting holes		Permissible load N/set	Weight kg/set
				D	H		
ATG28S+130L	75	130	130	2	2	3,410	0.50
ATG28S+210L	117	210	210	3	3	4,560	0.83
ATG28S+290L	149.5	290	290	4	4	6,000	1.15
ATG28S+370L	191.5	370	370	5	5	6,220	1.47
ATG28S+450L	233.5	450	450	6	6	6,370	1.80
ATG28S+530L	275.5	530	530	7	7	6,470	2.12
ATG28S+610L	317.5	610	610	8	8	6,540	2.44
ATG28S+690L	359.5	690	690	9	9	6,600	2.86

Note 1) The permissible load and weight are the values for one set of two slide rails.
Note 2) Contact THK if a non-standard length longer than the maximum standard length, a special length, or a special stroke is desired.

ATG35



Unit: mm

Model	Stroke S	Outer member length A	Inner member length E	No. of mounting holes		Permissible load N/set	Weight kg/set
				D	H		
ATG35S+210L	128.7	210	210	3	3	5,150	1.33
ATG35S+290L	157.9	290	290	4	4	7,990	1.87
ATG35S+370L	199.8	370	370	5	5	8,610	2.40
ATG35S+450L	254.4	450	450	6	6	7,970	2.90
ATG35S+530L	283.6	530	530	7	7	9,320	3.44
ATG35S+610L	325.5	610	610	8	8	9,540	3.97
ATG35S+690L	367.4	690	690	9	9	9,740	4.50

Note 1) The permissible load and weight are the values for one set of two slide rails.
Note 2) Contact THK if a non-standard length longer than the maximum standard length, a special length, or a special stroke is desired.

Model Number Coding Example

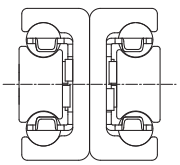
Select an option | Fixed symbol

ATG	35	S	+	210L
Model	Size: 22, 28, 35	Type S: Single		Outer member length

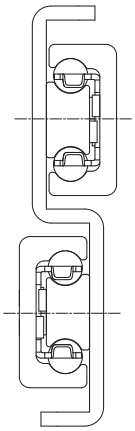
*When ordering the Model ATG, specify the number of individual slide rails needed. The Model ATG can be ordered in any quantity of one or more.

Example Combinations

Double



Parallel



*Combinations can be specified when you place your order.
Please contact THK.

Precautions on Use

- The outer member and inner member stoppers are not designed to handle impact loads. Be certain to provide external stoppers at the stroke ends.
- When installing this product, mount two slide rails on the wall as a set. Be certain to contact THK if you will be using only one slide rail or changing the mounting orientation to something other than what is indicated in the mounting orientation diagram.
- The greasing interval varies depending on the usage conditions and environment. Ultimately, the greasing interval and amount of grease applied should be set using the actual device or machine.
- Do not enter the movement range of moving parts while the device is operating or in an operable state. In particular, do not touch any moving parts during operation.
- Stop the machine (turn off the power) before moving, installing, or performing a maintenance inspection on this product.
- If performing an installation, maintenance inspection, or other task involving multiple people, confirm how to perform the work, what signals will be used, and how to handle problems before beginning, and assign another person to monitor the work.
- Do not place anything on this product or its packaging. Do not apply a strong impact to this product.
- Do not apply a load that exceeds the permissible load.
- Do not disassemble or alter this product.
- Securely fasten the product before use.
- If an abnormality occurs, stop the machine immediately.
- Do not use a product that is malfunctioning or broken.
- Avoid impacts when transferring objects.
- Contact THK if the product will be used in an environment outside of the specified temperature range.
- Ball cages may become misaligned due to factors such as machine vibration.
  To realign ball cages, remove any borne load, then fully open and close the product. During realignment, it will take more force to move because the balls will be sliding.
  Exceeding the stroke range may cause components to break.
- When installing the product, adjust the mounting so that the product runs steadily at a force of 15 N or less when not bearing a load.

Utility Slide **ATG**

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www.thk.com

CATALOG No.C-06-1E ©THK CO., LTD. 202209000 E33 Printed in America

Slide Rail

THK General Catalog

A Product Descriptions

B Support Book (Separate)

Features of the Slide Rail

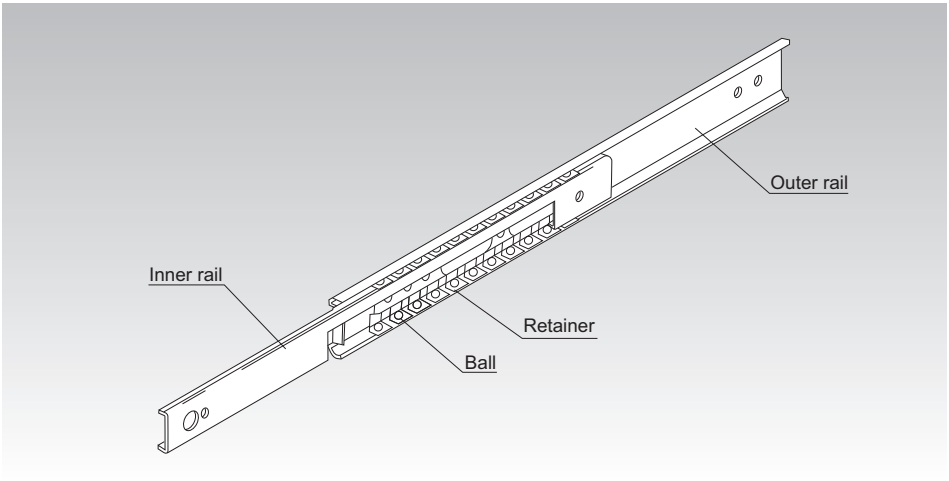


Fig.1 Structure of Slide Rail Model FBL

Structure and Features

Slide rails are low-price finite linear guides made out of precision roll-formed steel plates.
Suitable for various purposes because they are thin, compact, and easy to mount. Slide rails can be used in a wide range of applications such as photocopiers, measuring instruments, telecommunications equipment, medical equipment, automatic vending machines, and various types of office equipment.
The Model FBL slide rail has two rows of ball bearings placed between an inner rail and an outer rail that have been roll-formed out of steel plates. The ball bearings are evenly spaced by a precisely press-molded retainer, eliminating friction between the bearings and achieving a smooth sliding mechanism.

[Allows Easy Installation]
Simple to mount on the mounting surface. Since retainers hold the bearings, they do not fall out even if the inner rail is removed.

[Thin and Compact]
The thin cross section of the Model FBL slide rail means it can be installed in small spaces, and it is suitable for places where space saving is required.

[High Corrosion Resistance]
The Model FBL slide rail is treated with zinc plating, and models E and D are treated with a white anodized aluminum coating, making them highly corrosion-resistant.

Slide Rail Types

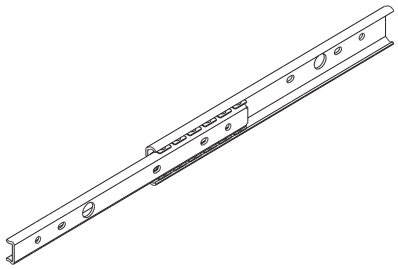
Types and Features

[Single Slides for Light Load]

Model FBL 27S

Specification Table⇒A13-14

The most compact slide rail.

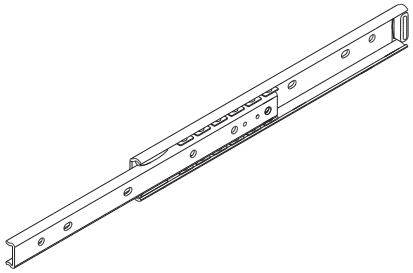


Model FBL 27S

Model FBL 27S-P14

Specification Table⇒A13-15

The Model FBL 27S features a removable inner rail. When retracted, the inner rail can be automatically unlocked by pushing it further into the outer rail.

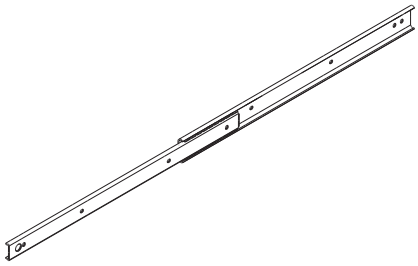


Model FBL 27S-P14

Model FBL 35S

Specification Table⇒A13-16

A single slide type of slide rail with the most fundamental shape.

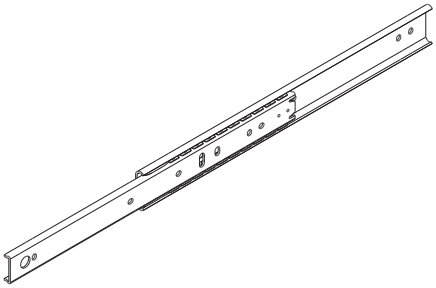


Model FBL 35S

Model FBL 35S-P13

Specification Table⇒A13-17

The Model FBL 35S features a removable inner rail. When retracted, it can be unlocked manually.

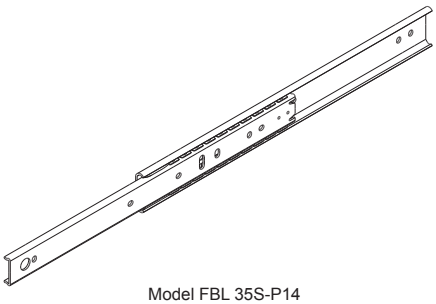


Model FBL 35S-P13

Model FBL 35S-P14

Specification Table⇒A13-18

The Model FBL 35S features a removable inner rail. When retracted, the inner rail can be automatically unlocked by pushing it further into the outer rail.

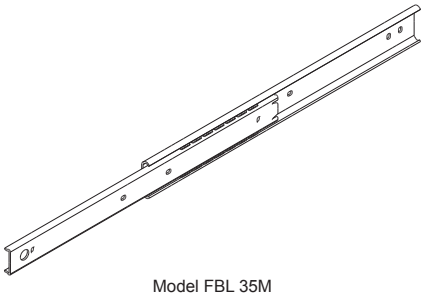


Model FBL 35S-P14

Model FBL 35M

Specification Table⇒A13-19

The Model FBL 35S features a removable inner rail. The slide rail is designed to stop by frictional resistance when it is fully opened. Remove the inner rail by applying more force.
(Includes a brake stop)

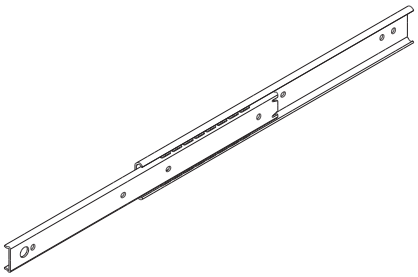


Model FBL 35M

Model FBL 35J

Specification Table⇒A13-20

The Model FBL 35M with additional lead ball that serves as a guide when the inner rail is inserted.

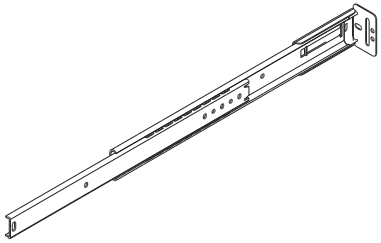


Model FBL 35J

Model FBL 35B

Specification Table⇒A13-21

The Model FBL 35M with additional mounting bracket.



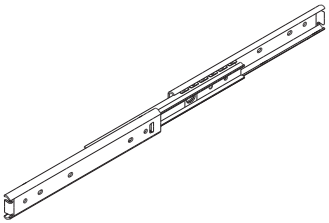
Model FBL 35B

[Double Slides for Light Load]

Model FBL 27D

Specification Table⇒A13-22

A double slide with an additional Model FBL 27S attached on the rear side of the inner rail. Widely used in many types of OA equipment.



Model FBL 27D

Model FBL 35N

Specification Table⇒A13-23

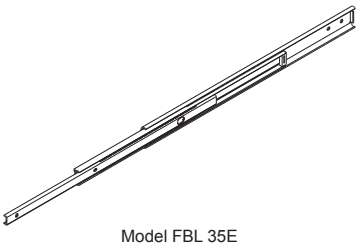
This is a three-rail double slide that allows a long stroke in a small space.
This is the only light-load double slide rail to use plate thickness of 1.2 mm to maximize weight reduction.

Model FBL 35N

Model FBL 35E

Specification Table⇒A13-24

This is a three-rail double slide that allows a long stroke in a small space.

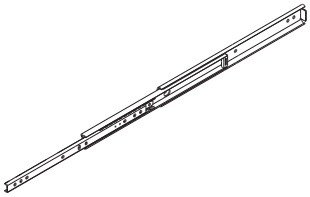


Model FBL 35E

Model FBL 35E-P14

Specification Table⇒A13-25

This is a three-rail double slide that allows a long stroke in a small space. The inner rail can be pulled out, and it can be automatically unlocked by pushing it further into the outer rail.



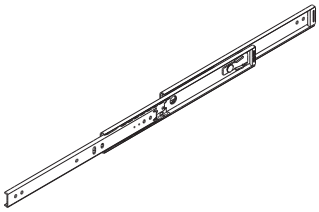
Model FBL 35E-P14

[Double Slides for Medium Load]

Model FBL 35G-P13

Specification Table⇒A13-26

A double slide with an additional Model FBL 35S attached on the front side. The drawer rail can be pulled out, and it can be manually unlocked when retracted. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

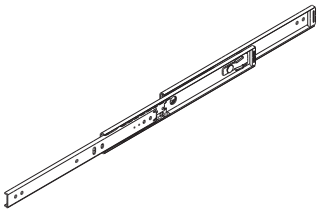


Model FBL 35G-P13

Model FBL 35G-P14

Specification Table⇒A13-27

A double slide with an additional Model FBL 35S attached on the front side. The drawer rail can be pulled out, and it can be automatically unlocked by pushing it further into the outer rail. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

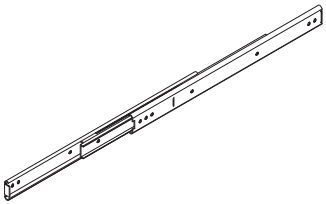


Model FBL 35G-P14

Model FBL 35D

Specification Table⇒A13-28

A double slide with an additional Model FBL 35S attached on the rear side of the inner rail. Widely used in a number of different industries.

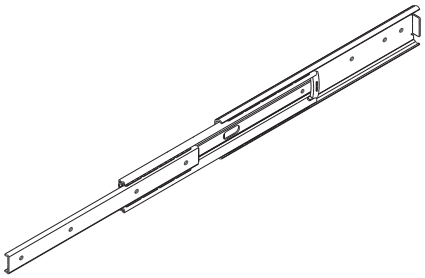


Model FBL 35D

Model FBL 51H

Specification Table⇒A13-29

A three-rail double slide that allows a long stroke. A thin model that can be used in small spaces, even with large working loads.

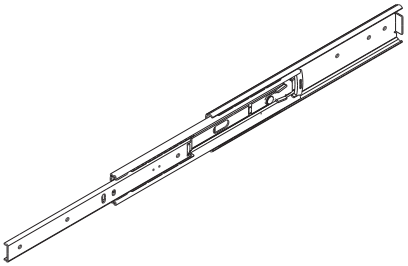


Model FBL 51H

Model FBL 51H-P13

Specification Table⇒A13-30

A three-rail double slide that allows a long stroke. A thin model that can be used in small spaces, even with large working loads. The inner rail can be pulled out, and locked states caused by the disconnection spring can be manually released when retracted. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

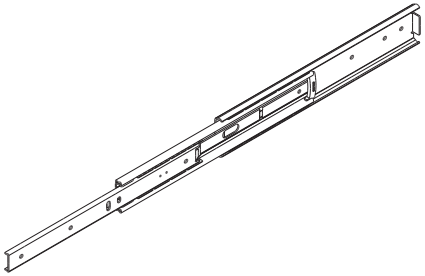


Model FBL 51H-P13

Model FBL 51H-P14

Specification Table⇒A13-31

A three-rail double slide that allows a long stroke. A thin model that can be used in small spaces, even with large working loads. The inner rail can be pulled out, and it can be automatically unlocked by pushing it further into the outer rail.



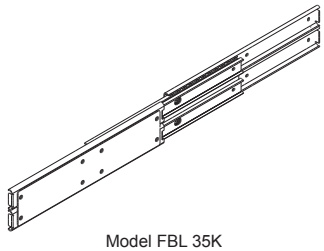
Model FBL 51H-P14

[Double Slides for Heavy Load]

Model FBL 35K

Specification Table⇒A13-32

A double slide combining four Model FBL 35S units. It features the largest allowable load among all models, making it suitable for opening/closing heavy objects.

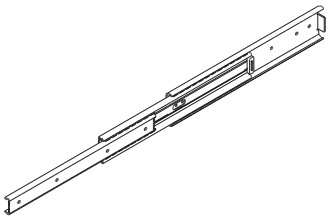


Model FBL 35K

Model FBL 56H

Specification Table⇒A13-33

Three-rail double slide with a large allowable load. Widely used in many types of office furniture.

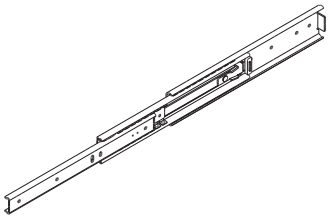


Model FBL 56H

Model FBL 56H-P13

Specification Table⇒A13-34

Three-rail double slide with a large allowable load. The inner rail can be pulled out, and it can be manually unlocked when retracted. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

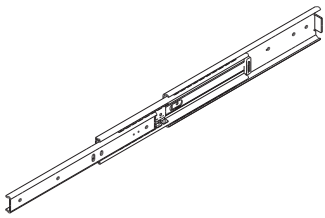


Model FBL 56H-P13

Model FBL 56H-P14

Specification Table⇒A13-35

Three-rail double slide with a large allowable load. The inner rail can be pulled out, and it can be automatically unlocked by pushing it further into the outer rail.



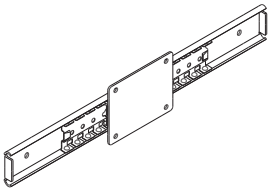
Model FBL 56H-P14

[Linear Type Slides]

Light Load Type Model FBL 35F

Specification Table⇒A13-36

Linear-type slide suitable for limited straight motion, featuring a flange for easy mounting.

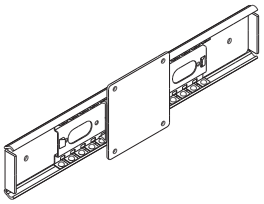


Light Load Type Model FBL 35F

Medium Load Type Model FBL 56F

Specification Table⇒A13-37

Linear-type slide suitable for limited straight motion, featuring a flange for easy mounting. It is suitable for large working loads.



Medium Load Type Model FBL 56F

Heavy Load Type Model FBL 48DR

Specification Table⇒A13-38

A heavy-load, low-friction linear-type slide, developed for sliding heavy doors.

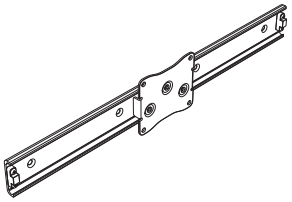
Heavy Load Type Model FBL 48DR

[Wheel-type Linear Slide]

Model E36RS

Specification Table⇒A13-39

A linear slide that features wear-resistant resin bearings.



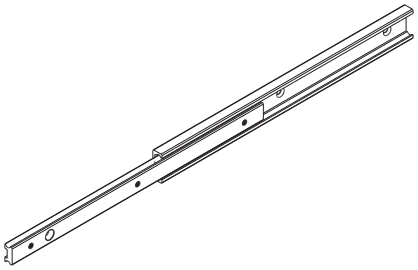
Model E36RS

[Aluminum Alloy Slide Rail]

Light Load Type Model E15

Specification Table⇒A13-40

A compact and lightweight single slide from the aluminum alloy series. Suitable for locations within magnetic fields, locations requiring rust-resistant materials, and locations where appearance is a factor.

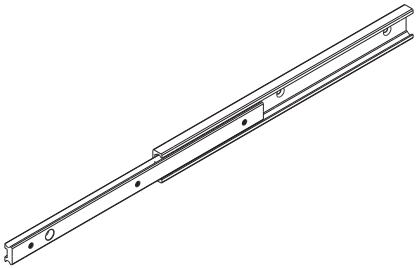


Light Load Type Model E15

Light Load Type Model E20

Specification Table⇒A13-41

A basic single slide from the aluminum alloy series. Suitable for locations within magnetic fields, locations requiring rust-resistant materials, and locations where appearance is a factor.

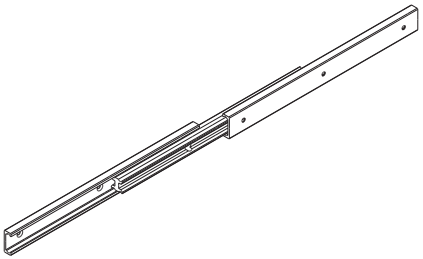


Light Load Type Model E20

Light Load Type Model D20

Specification Table⇒A13-42

The most compact and lightweight double slide in the aluminum alloy series. Suitable for locations within magnetic fields, locations requiring rust-resistant materials, and locations where appearance is a factor.



Light Load Type Model D20

Classification Table for Slide Rails

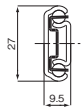
Slide Rail

Single Slide

For Light Load

Model FBL27S

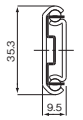
Model FBL27S-P14



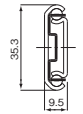
Model FBL35S

Model FBL35S-P13

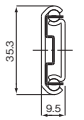
Model FBL35S-P14



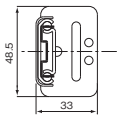
Model FBL35M



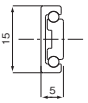
Model FBL35J



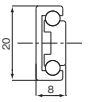
Model FBL35B



Model E15
(Made of Aluminum)



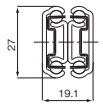
Model E20
(Made of Aluminum)



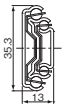
Double Slide

For Light Load

Model FBL27D

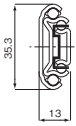


Model FBL35N

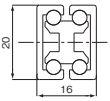


Model FBL35E

Model FBL35E-P14



Model D20
(Made of Aluminum)

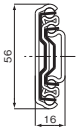


For Heavy Load

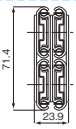
Model FBL56H

Model FBL56H-P13

Model FBL56H-P14



Model FBL35K

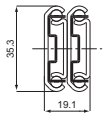


Linear Type Slide

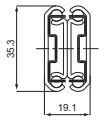
For Medium Load

Model FBL35G-P13

Model FBL35G-P14



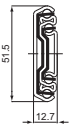
Model FBL35D



Model FBL51H

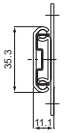
Model FBL51H-P13

Model FBL51H-P14



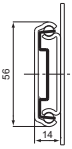
For Light Load

Model FBL35F



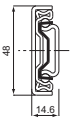
For Medium Load

Model FBL56F



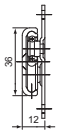
For Heavy Load

Model FBL48DR

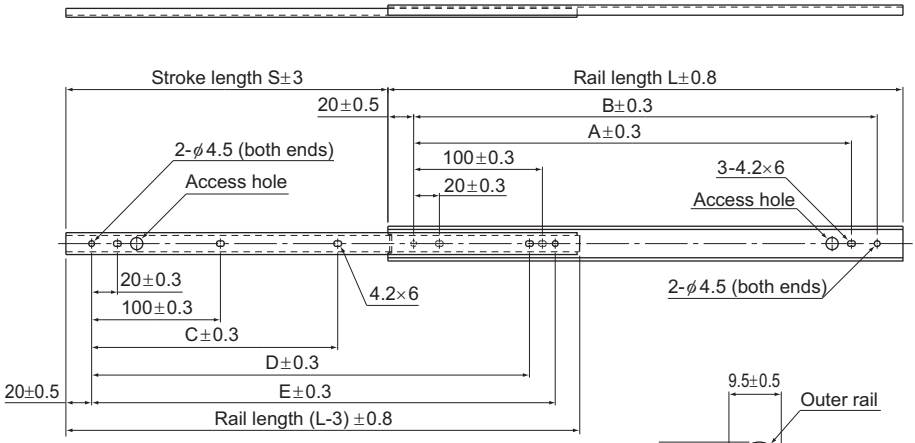


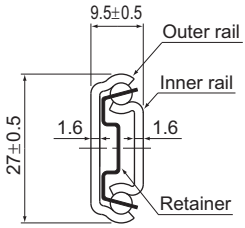
Wheel Type

Model E36RS (Aluminum Outer Rail)



Model FBL 27S





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions					Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	Inner rail	Outer rail		
200	135	140.0	160.0	—	140.0	160.0	5	5	260	0.32
250	185	190.0	210.0	150.0	190.0	210.0	6	5	240	0.40
300	222	240.0	260.0	190.0	240.0	260.0	6	5	240	0.48
350	260	290.0	310.0	225.0	290.0	310.0	6	5	230	0.56
400	297	340.0	360.0	265.0	340.0	360.0	6	5	210	0.64
450	334	390.0	410.0	300.0	390.0	410.0	6	5	200	0.72
500	371	440.0	460.0	337.0	440.0	460.0	6	5	180	0.80

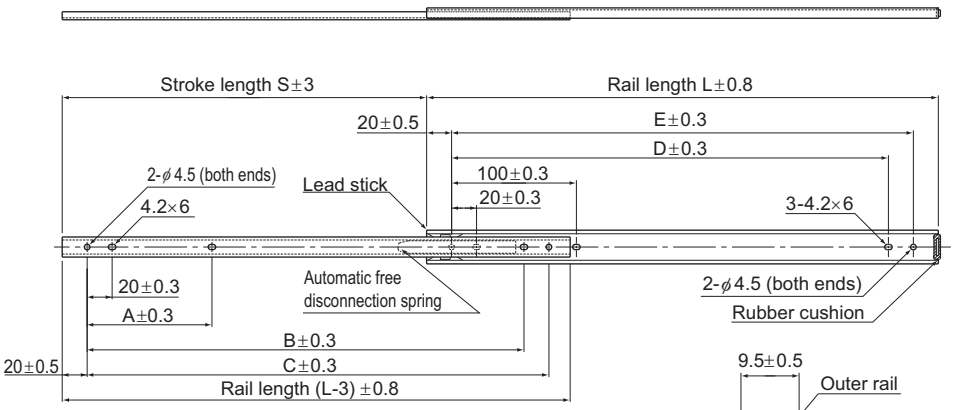
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

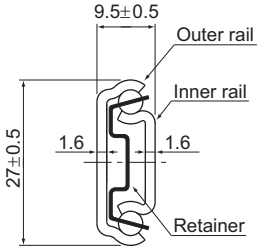
FBL27S +300L

Model number — Overall rail length (mm)

Model FBL 27S-P14



Releasing the automatic free disconnection spring attached to the inner rail allows the inner rail to be pulled out. When retracted, the inner rail can be automatically unlocked by pushing it further into the outer rail.



Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions					Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	Inner rail	Outer rail		
200	116	65.0	—	170.0	140.0	160.0	4	5	260	0.32
250	152	100.0	—	210.0	190.0	210.0	4	5	240	0.40
300	202	100.0	—	260.0	240.0	260.0	4	5	240	0.48
350	251	100.0	—	310.0	290.0	310.0	4	5	230	0.56
400	297	100.0	—	360.0	340.0	360.0	4	5	210	0.64
450	332	100.0	390.0	410.0	390.0	410.0	5	5	210	0.72
500	371	100.0	440.0	460.0	440.0	460.0	5	5	200	0.80
550	407	100.0	490.0	510.0	490.0	510.0	5	5	180	0.80

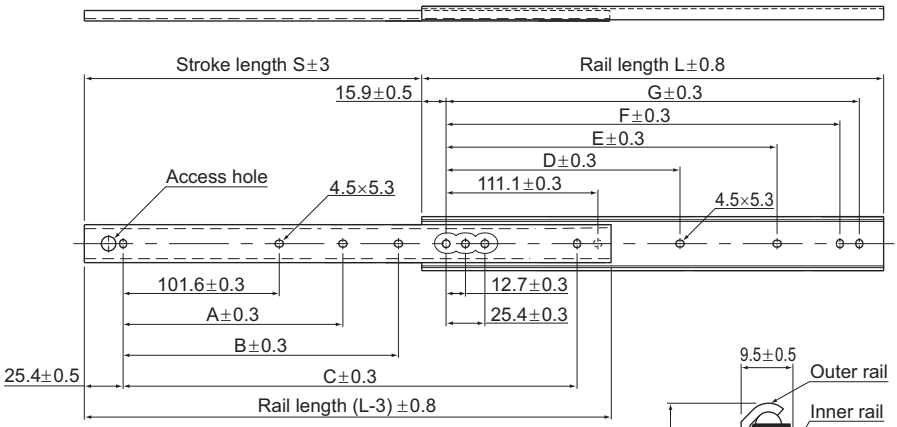
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

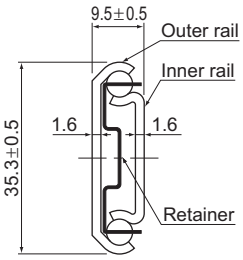
Model number coding

FBL27S-P14 +500L

Model number — Overall rail length (mm)

Model FBL 35S





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	229	—	152.4	254.0	—	149.2	260.3	273.0	4	7	490	0.6
356	279	—	203.2	304.8	—	200.0	311.1	323.8	4	7	400	0.7
406	305	—	254.0	355.6	—	250.8	361.9	374.6	4	7	390	0.8
457	330	203.2	304.8	406.4	212.7	301.6	412.7	425.4	5	8	380	0.9
508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	5	8	330	1.0
559	406	254.0	406.4	508.0	263.5	403.2	514.3	527.0	5	8	320	1.1
610	432	279.4	457.2	558.8	288.9	454.0	565.1	577.8	5	8	310	1.2
660	483	304.8	508.0	609.6	314.3	504.8	615.9	628.6	5	8	280	1.3
711	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	5	8	270	1.4

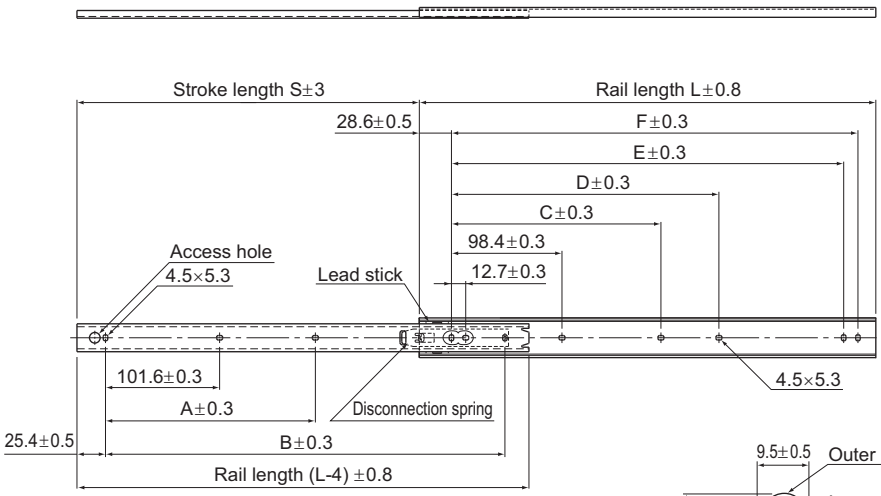
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

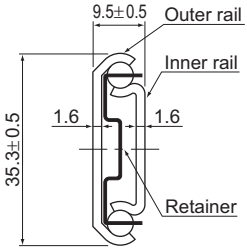
FBL35S +457L

Model number — Overall rail length (mm)

Model FBL 35S-P13



Releasing the disconnection spring attached to the inner rail allows the inner rail to be pulled out. A locked state caused by the disconnection spring can be manually released when retracted.



Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions						Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	Inner rail	Outer rail		
305	224	152.4	—	136.5	—	247.6	260.3	3	6	490	0.6
356	275	203.2	—	187.3	—	298.4	311.1	3	6	400	0.72
406	315	254.0	—	238.1	—	349.2	361.9	3	6	390	0.84
457	330	203.2	406.4	200.0	288.9	400.0	412.7	4	7	380	0.96
508	381	228.6	457.2	225.4	339.7	450.8	463.5	4	7	330	1.04
559	406	254.0	508.0	250.8	390.5	501.6	514.3	4	7	320	1.16
610	432	279.4	558.8	276.2	441.3	552.4	565.1	4	7	310	1.24
660	483	304.8	609.6	301.6	492.1	603.2	615.9	4	7	280	1.36
711	493	330.2	660.4	327.0	542.9	654.0	666.7	4	7	270	1.48

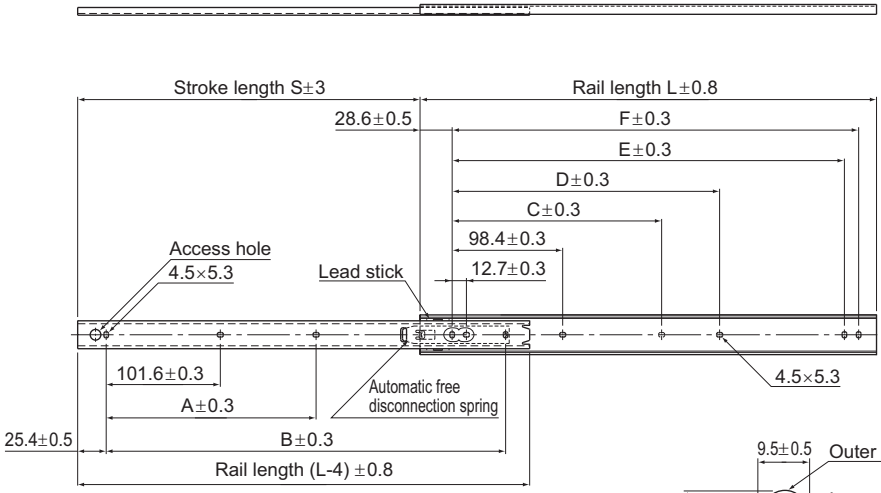
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

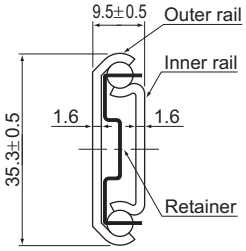
Model number coding

FBL35S-P13 +559L

Model number — Overall rail length (mm)

Model FBL 35S-P14





Cross section

Releasing the automatic free disconnection spring attached to the inner rail allows the inner rail to be pulled out. When retracted, the inner rail can be automatically unlocked by pushing it further into the outer rail.

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions						Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	Inner rail	Outer rail		
305	224	152.4	—	136.5	—	247.6	260.3	3	6	490	0.6
356	275	203.2	—	187.3	—	298.4	311.1	3	6	400	0.72
406	315	254.0	—	238.1	—	349.2	361.9	3	6	390	0.84
457	330	203.2	406.4	200.0	288.9	400.0	412.7	4	7	380	0.96
508	381	228.6	457.2	225.4	339.7	450.8	463.5	4	7	330	1.04
559	406	254.0	508.0	250.8	390.5	501.6	514.3	4	7	320	1.16
610	432	279.4	558.8	276.2	441.3	552.4	565.1	4	7	310	1.24
660	483	304.8	609.6	301.6	492.1	603.2	615.9	4	7	280	1.36
711	493	330.2	660.4	327.0	542.9	654.0	666.7	4	7	270	1.48

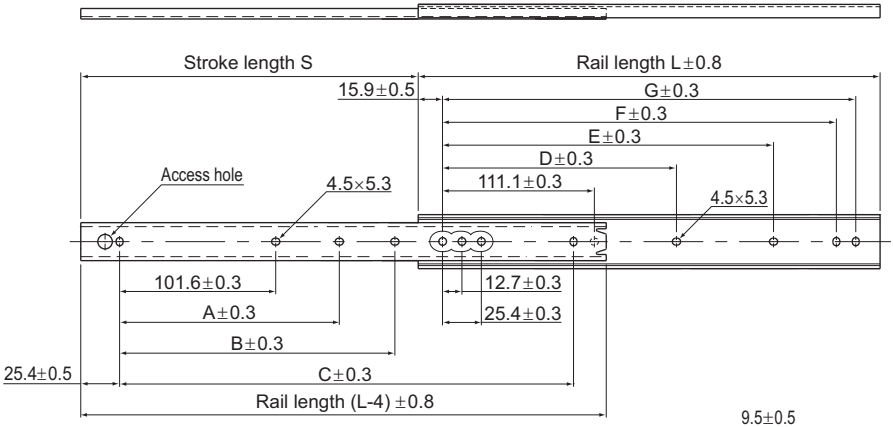
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

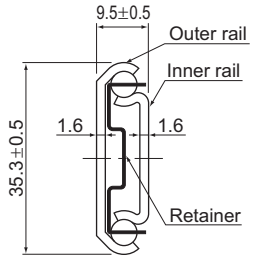
Model number coding

FBL35S-P14 +559L

Model number — Overall rail length (mm)

Model FBL 35M





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	229	—	152.4	254.0	—	149.2	260.3	273.0	4	7	490	0.6
356	279	—	203.2	304.8	—	200.0	311.1	323.8	4	7	400	0.7
406	305	—	254.0	355.6	—	250.8	361.9	374.6	4	7	390	0.8
457	330	203.2	304.8	406.4	212.7	301.6	412.7	425.4	5	8	380	0.9
508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	5	8	330	1.0
559	406	254.0	406.4	508.0	263.5	403.2	514.3	527.0	5	8	320	1.1
610	432	279.4	457.2	558.8	288.9	454.0	565.1	577.8	5	8	310	1.2
660	483	304.8	508.0	609.6	314.3	504.8	615.9	628.6	5	8	280	1.3
711	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	5	8	270	1.4

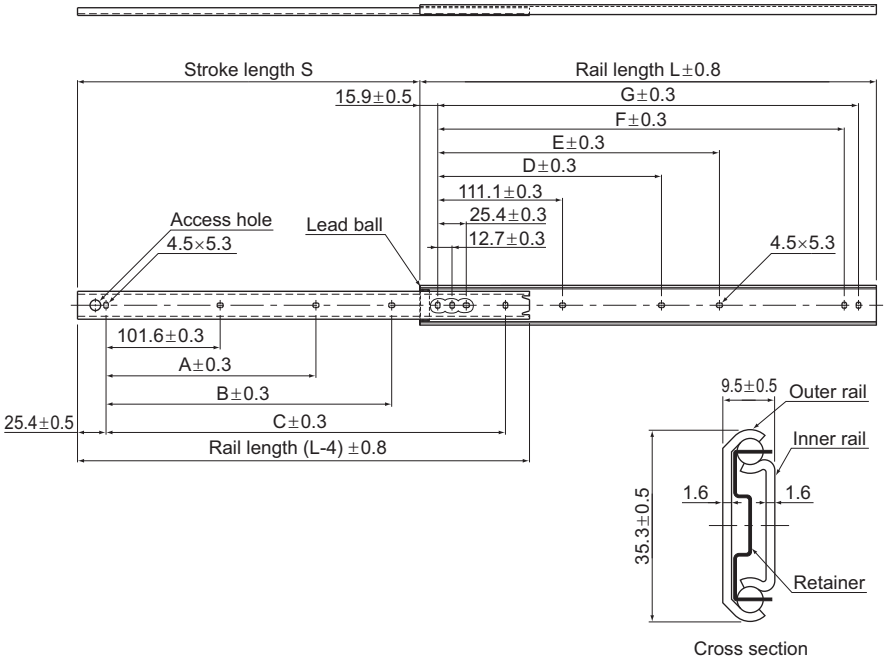
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

FBL35M +406L

Model number — Overall rail length (mm)

Model FBL 35J



Unit: mm

Rail length L (±0.8)	Stroke S	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	229	—	152.4	254.0	—	149.2	260.3	273.0	4	7	490	0.6
356	279	—	203.2	304.8	—	200.0	311.1	323.8	4	7	400	0.7
406	305	—	254.0	355.6	—	250.8	361.9	374.6	4	7	390	0.8
457	330	203.2	304.8	406.4	212.7	301.6	412.7	425.4	5	8	380	0.9
508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	5	8	330	1.0
559	406	254.0	406.4	508.0	263.5	403.2	514.3	527.0	5	8	320	1.1
610	432	279.4	457.2	558.8	288.9	454.0	565.1	577.8	5	8	310	1.2
660	483	304.8	508.0	609.6	314.3	504.8	615.9	628.6	5	8	280	1.3
711	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	5	8	270	1.4

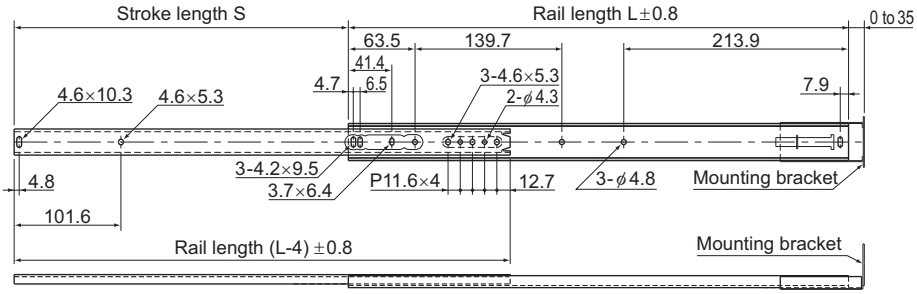
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

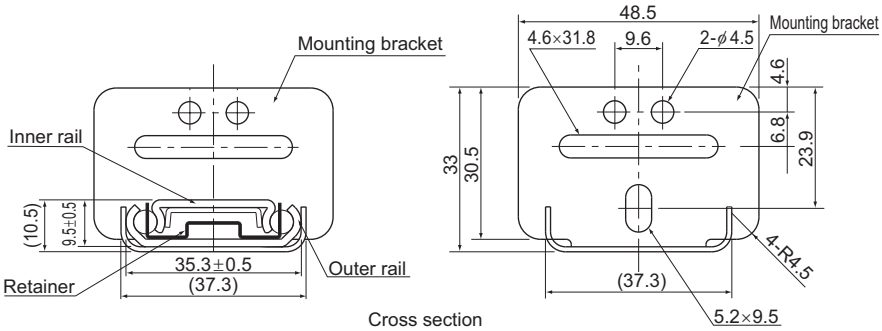
Model number coding

FBL35J +660L

Model number — Overall rail length (mm)

Model FBL 35B





Unit: mm

Rail length L (±0.8)	Stroke S	Mounting hole		Permissible load N/pair	Mass kg/pair
		Inner rail	Outer rail		
324	216	7	7	115	0.8
375	267	7	7	105	0.92
425	305	7	7	100	1
476	318	7	7	90	1.12
527	368	7	7	83	1.24
578	419	7	7	73	1.32
629	445	7	7	66	1.44
679	495	7	7	61	1.6

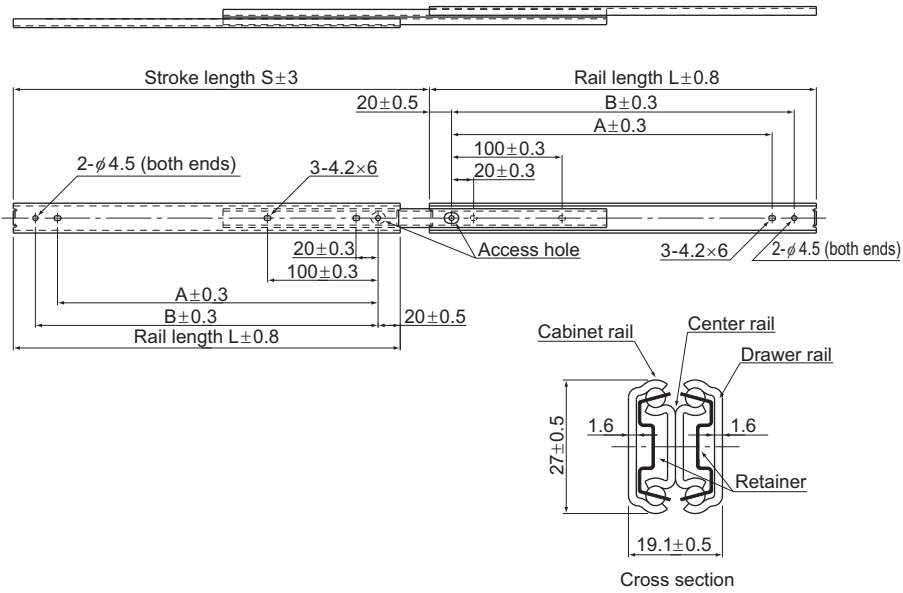
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

FBL35B +375L

Model number — Overall rail length (mm)

Model FBL 27D



Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions		Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	Drawer rail	Cabinet rail		
200	229	140.0	160.0	5	5	370	0.64
250	276	190.0	210.0	5	5	360	0.8
300	327	240.0	260.0	5	5	350	0.96
350	376	290.0	310.0	5	5	330	1.12
400	426	340.0	360.0	5	5	310	1.28
450	475	390.0	410.0	5	5	290	1.46
500	524	440.0	460.0	5	5	280	1.6

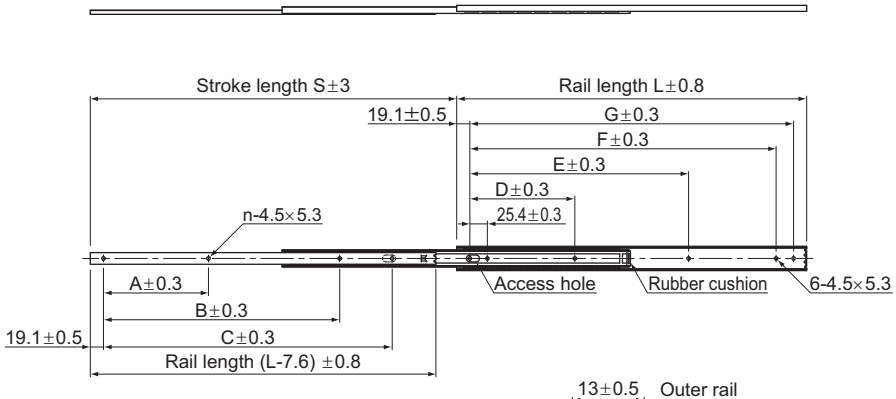
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

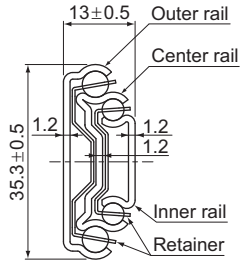
Model number coding

FBL27D +200L

Model number Overall rail length (mm)

Model FBL 35N





Cross section

Unit: mm

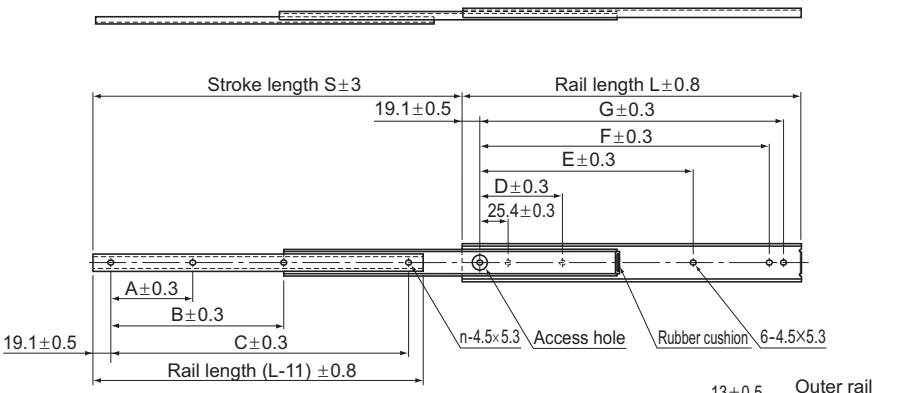
Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole n	Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail		
254	280	76.2	154.9	180.3	76.2	139.7	190.5	215.9	4	290	0.61
305	330	76.2	154.9	231.1	76.2	190.5	241.3	266.7	4	290	0.74
356	381	127	—	266.7	88.9	215.9	292.1	317.5	3	280	0.86
406	432	152.4	—	317.5	127	241.3	342.9	368.3	3	270	0.98
457	483	177.8	—	368.3	127	292.1	393.7	419.1	3	250	1.10
508	533	152.4	342.9	419.1	152.4	317.5	444.5	469.9	4	240	1.22

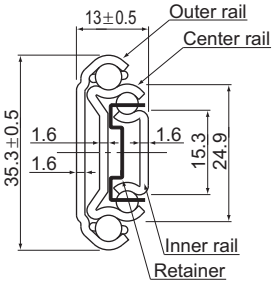
Model number coding

FBL35N +508L

Model No. Overall rail length (mm)

Model FBL 35E





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole n	Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail		
305	330	76.2	—	154.9	76.2	190.5	241.3	266.7	3	290	0.8
356	381	127	—	266.7	88.9	215.9	292.1	317.5	3	280	0.9
406	432	152.4	—	317.5	127	241.3	342.9	368.3	3	270	1.1
457	483	177.8	—	368.3	127	292.1	393.7	419.1	3	250	1.2
508	533	152.4	342.9	419.1	152.4	317.5	444.5	469.9	4	240	1.4

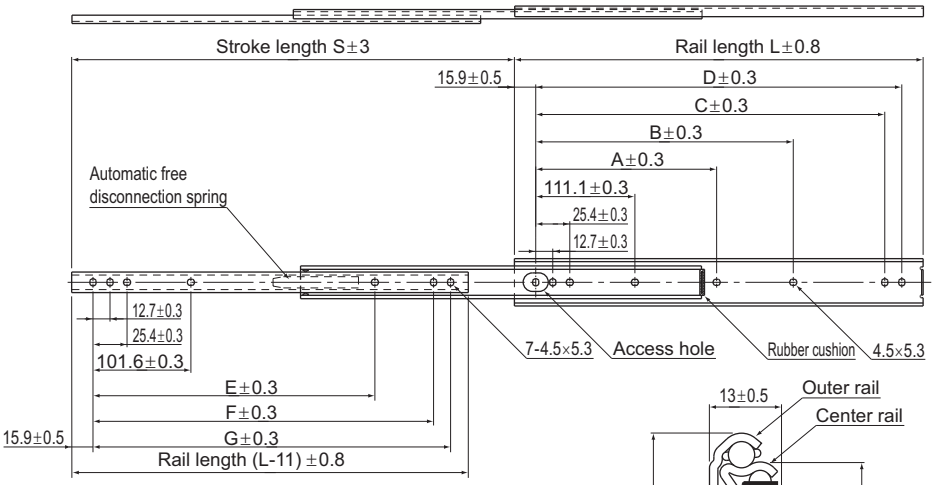
Note1) To mount model FBL35E, use an M3 truss and binding machine screws.
Note2) The Permissible Load and Mass each indicate when used as a pair of 2 units.

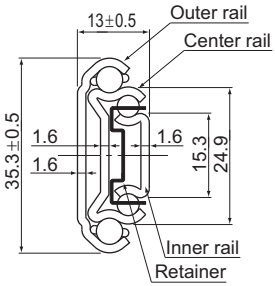
Model number coding

FBL35E +406L

Model No. Overall rail length (mm)

Model FBL 35E-P14





Cross section

Releasing the automatic free disconnection spring attached to the inner rail allows the inner rail to be pulled out. When retracted, the inner rail can be automatically unlocked by pushing it further into the outer rail.

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	—	149.2	260.3	273.0	233.1	254.0	266.7	7	7	294	0.84
356	381	—	200.0	311.1	323.8	258.5	304.8	317.5	7	7	284	0.98
406	432	—	250.8	361.9	374.6	283.9	355.6	368.3	7	7	275	1.12
457	483	212.7	301.6	412.7	425.4	309.3	406.4	419.1	7	8	255	1.26
508	533	238.1	352.4	463.5	476.2	334.7	457.2	469.9	7	8	235	1.40

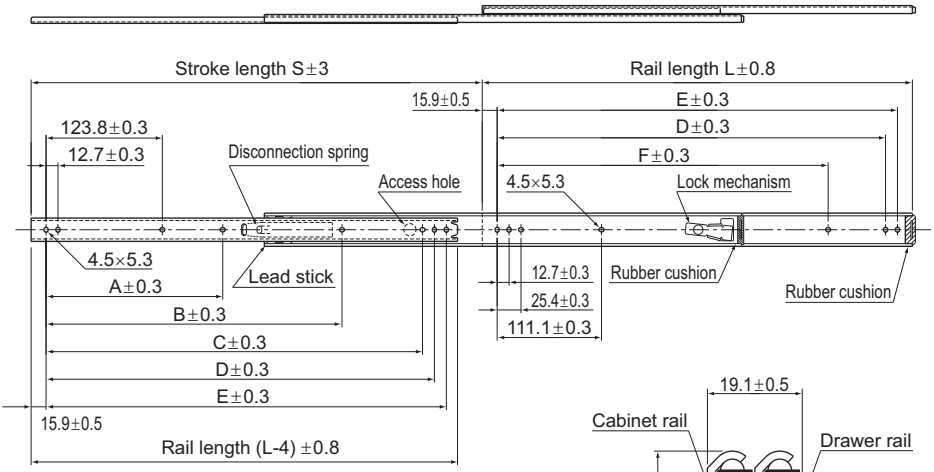
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

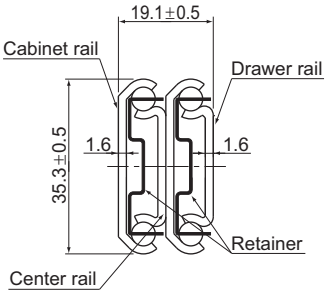
Model number coding

FBL35E-P14 +508L

Model number — Overall rail length (mm)

Model FBL 35G-P13





Cross section

Releasing the disconnection spring attached to the drawer rail allows the drawer rail to be pulled out. A locked state caused by the disconnection spring can be manually released when retracted. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions						Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	Drawer rail	Cabinet rail		
305	327	—	—	—	260.3	273.0	—	5	6	623	1.2
356	378	—	—	298.4	311.1	323.8	—	6	6	586	1.4
406	429	—	—	349.2	361.9	374.6	250.8	6	7	555	1.6
457	480	212.7	—	400.0	412.7	425.4	301.6	7	7	516	1.8
508	530	238.1	365.1	450.8	463.5	476.2	352.4	8	7	475	2
559	581	263.5	415.9	501.6	514.3	527.0	403.2	8	7	444	2.2
610	632	288.9	466.7	552.4	565.1	577.8	454.0	8	7	413	2.4
660	683	314.3	517.5	603.2	615.9	628.6	504.8	8	7	382	2.6
711	734	339.7	568.3	654.0	666.7	679.4	555.6	8	7	355	2.8

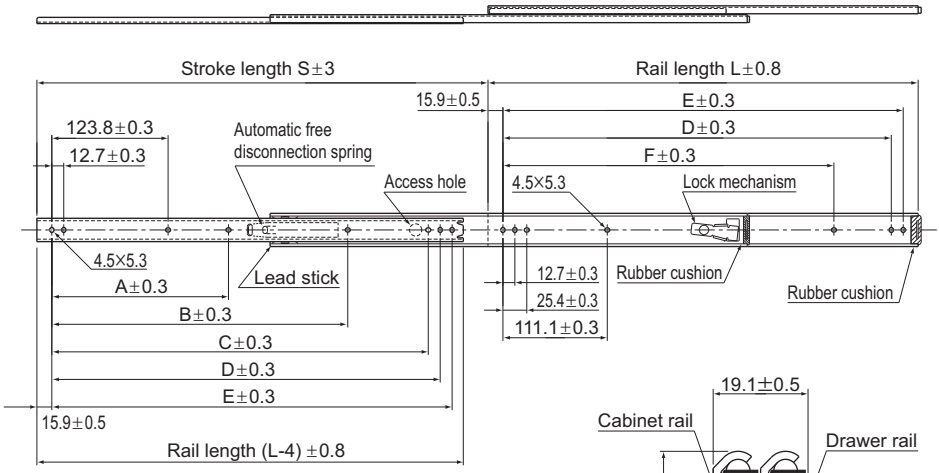
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

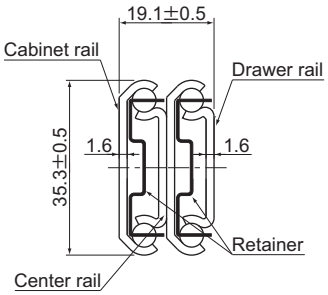
FBL35G-P13 +356L

Model number — Overall rail length (mm)

Model FBL 35G-P14



Releasing the automatic free disconnection spring attached to the drawer rail allows the drawer rail to be pulled out. A locked state caused by the disconnection spring can be manually released when retracted. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.



Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions						Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	Drawer rail	Cabinet rail		
305	327	—	—	—	260.3	273.0	—	5	6	623	1.2
356	378	—	—	298.4	311.1	323.8	—	6	6	586	1.4
406	429	—	—	349.2	361.9	374.6	250.8	6	7	555	1.6
457	480	212.7	—	400.0	412.7	425.4	301.6	7	7	516	1.8
508	530	238.1	365.1	450.8	463.5	476.2	352.4	8	7	475	2
559	581	263.5	415.9	501.6	514.3	527.0	403.2	8	7	444	2.2
610	632	288.9	466.7	552.4	565.1	577.8	454.0	8	7	413	2.4
660	683	314.3	517.5	603.2	615.9	628.6	504.8	8	7	382	2.6
711	734	339.7	568.3	654.0	666.7	679.4	555.6	8	7	355	2.8

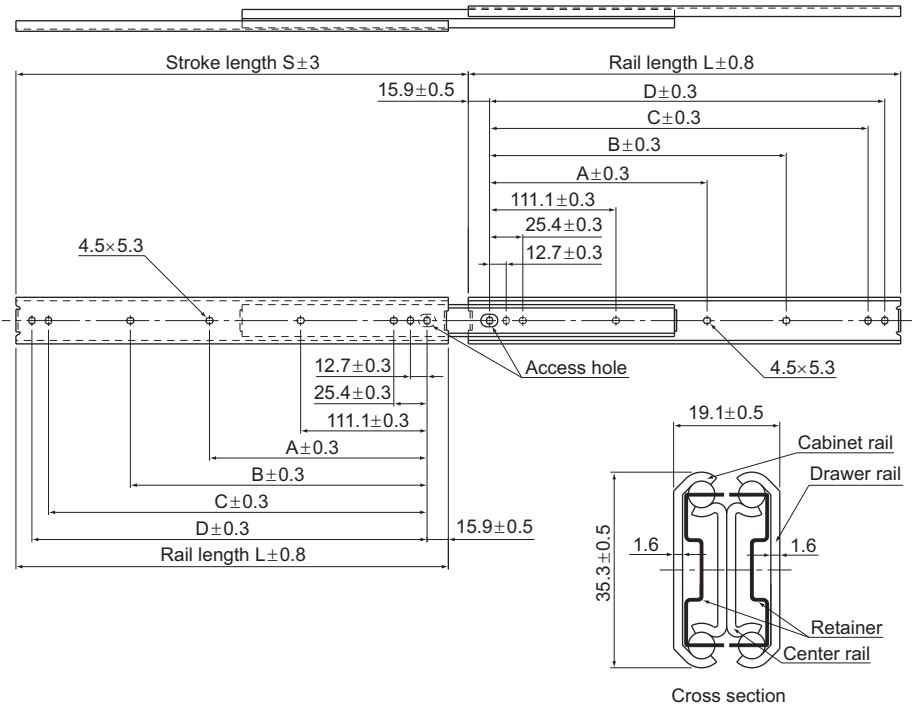
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

FBL35G-P14 +610L

Model number — Overall rail length (mm)

Model FBL 35D



Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions				Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	Drawer rail	Cabinet rail		
305	327	—	149.2	260.3	273.0	7	7	588	1.28
356	378	—	200.0	311.1	323.8	7	7	578	1.48
406	429	—	250.8	361.9	374.6	7	7	559	1.72
457	480	212.7	301.6	412.7	425.4	8	8	549	1.96
508	530	238.1	352.4	463.5	476.2	8	8	529	2.12
559	581	263.5	403.2	514.3	527.0	8	8	500	2.4
610	632	288.9	454.0	565.1	577.8	8	8	480	2.56
660	683	314.3	504.8	615.9	628.6	8	8	461	2.8
711	734	339.7	555.6	666.7	679.4	8	8	441	3

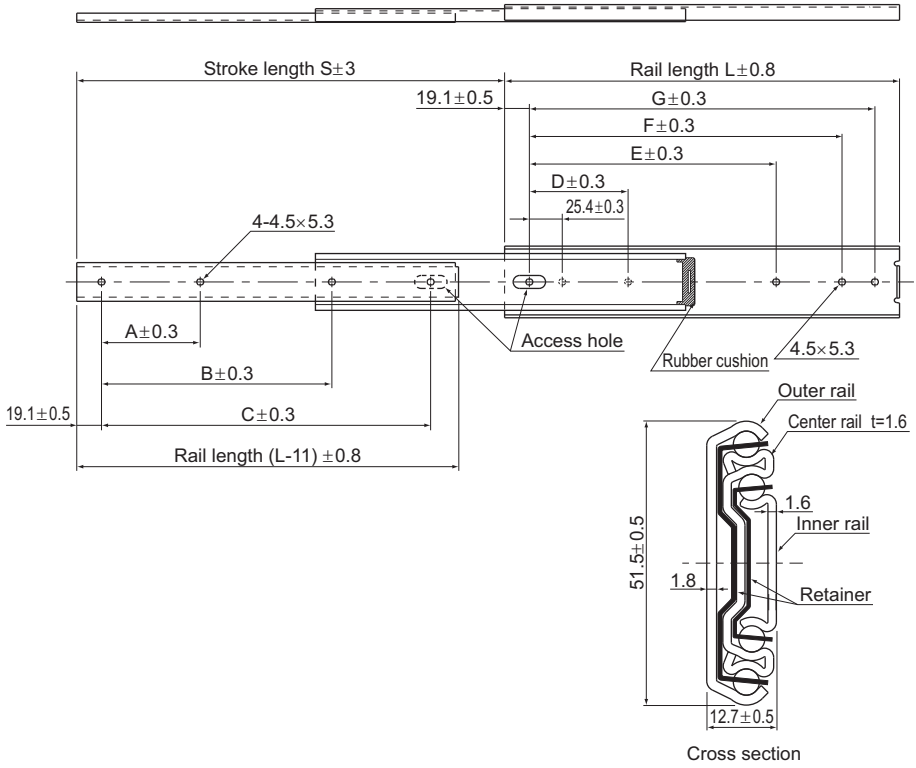
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

FBL35D +711L

Model number — Overall rail length (mm)

Model FBL 51H



Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	177.8	254.0	76.2	190.5	241.3	266.7	4	6	850	1.46
356	381	101.6	203.2	304.8	88.9	215.9	292.1	317.5	4	6	820	1.72
406	432	127.0	228.6	355.6	127.0	241.3	342.9	368.3	4	6	770	1.89
457	483	127.0	279.4	406.4	127.0	292.1	393.7	419.1	4	6	730	2.26
508	533	152.4	304.8	457.2	152.4	317.5	444.5	469.9	4	6	710	2.52
559	584	177.8	330.2	508.0	177.8	342.9	495.3	520.7	4	6	690	2.72
610	635	177.8	381.0	558.8	177.8	393.7	546.1	571.5	4	6	660	3.00
660	686	203.2	406.4	609.6	203.2	419.1	596.9	622.3	4	6	630	3.25
711	737	228.6	431.8	660.4	228.6	444.5	647.7	673.1	4	6	610	3.54
762	787	228.6	457.2	711.2	228.6	469.9	698.5	723.9	4	6	580	3.86

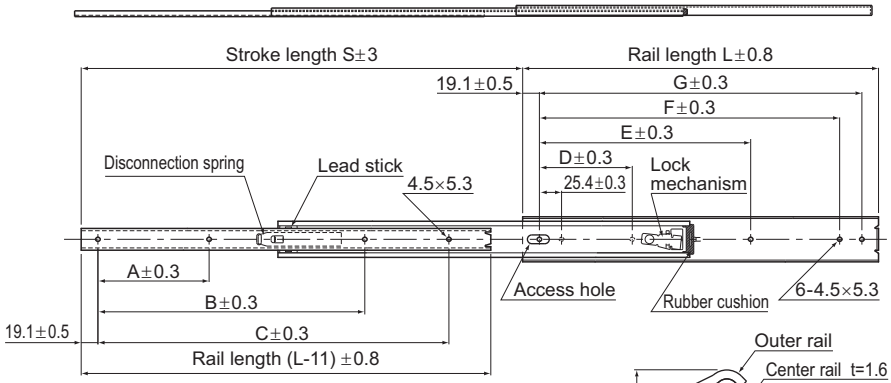
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

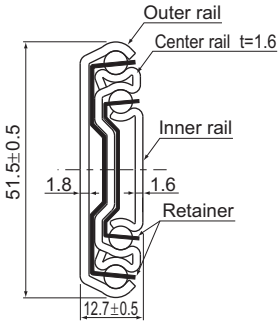
Model number coding

FBL51H +610L

Model number — Overall rail length (mm)

Model FBL 51H-P13





Cross section

Releasing the disconnection spring attached to the inner rail allows the inner rail to be pulled out. A locked state caused by the disconnection spring can be manually released when retracted. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	—	190.5	76.2	190.5	241.3	266.7	3	6	850	1.46
356	381	101.6	—	266.7	88.9	215.9	292.1	317.5	3	6	820	1.72
406	432	127.0	—	304.8	127.0	241.3	342.9	368.3	3	6	770	1.89
457	483	127.0	317.5	368.3	127.0	292.1	393.7	419.1	4	6	730	2.26
508	533	152.4	355.6	406.4	152.4	317.5	444.5	469.9	4	6	710	2.52
559	584	177.8	381.0	457.2	177.8	342.9	495.3	520.7	4	6	690	2.72
610	635	177.8	430.8	508.0	177.8	393.7	546.1	571.5	4	6	660	3.00
660	686	203.2	457.2	558.8	203.2	419.1	596.9	622.3	4	6	630	3.25
711	737	228.6	508.0	609.6	228.6	444.5	647.7	673.1	4	6	610	3.54
762	787	228.6	533.4	660.4	228.6	469.9	698.5	723.9	4	6	580	3.86

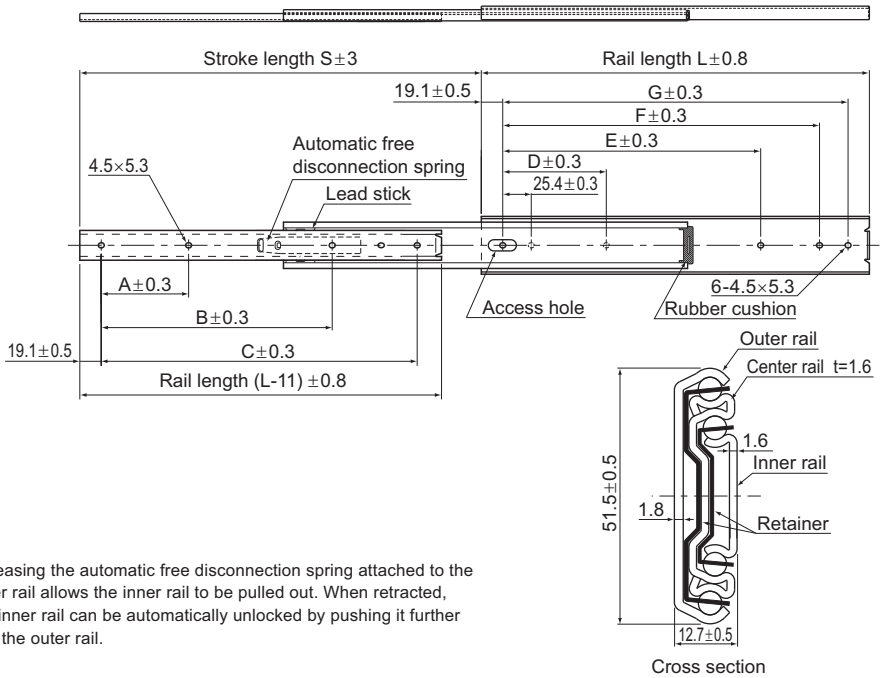
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

FBL51H-P13 +559L

Model number — Overall rail length (mm)

Model FBL 51H-P14



Cross section

Releasing the automatic free disconnection spring attached to the inner rail allows the inner rail to be pulled out. When retracted, the inner rail can be automatically unlocked by pushing it further into the outer rail.

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	—	254.0	76.2	190.5	241.3	266.7	3	6	850	1.46
356	381	127.0	—	304.8	88.9	215.9	292.1	317.5	3	6	820	1.72
406	432	152.4	317.5	355.6	127.0	241.3	342.9	368.3	4	6	770	1.89
457	483	177.8	368.3	406.4	127.0	292.1	393.7	419.1	4	6	730	2.26
508	533	152.4	419.1	457.2	152.4	317.5	444.5	469.9	4	6	710	2.52
559	584	177.8	469.9	508.0	177.8	342.9	495.3	520.7	4	6	690	2.72
610	635	177.8	520.7	558.8	177.8	393.7	546.1	571.5	4	6	660	3.00
660	686	203.2	571.5	609.6	203.2	419.1	596.9	622.3	4	6	630	3.25
711	737	228.6	622.3	660.4	228.6	444.5	647.7	673.1	4	6	610	3.54
762	787	228.6	673.1	711.2	228.6	469.9	698.5	723.9	4	6	580	3.86

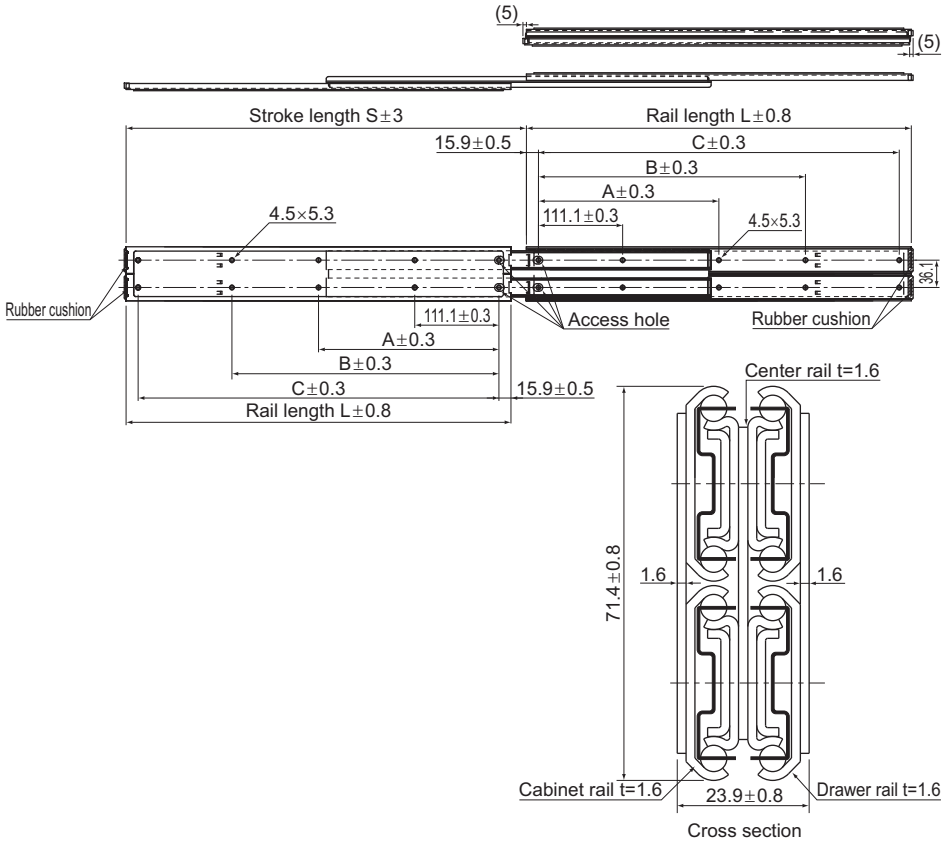
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

FBL51H-P14 +305L

Model number — Overall rail length (mm)

Model FBL 35K



Note) The product has a rubber cushion.
If desiring to keep the length within the rail length when storing the product, remove the rubber cushion.

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions			Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	Drawer rail	Cabinet rail		
305	327	—	149.2	273.0	4	4	2670	4.04
356	378	—	200.0	323.8	4	4	2630	4.8
406	429	—	250.8	374.6	4	4	2540	5.6
457	480	212.7	301.6	425.4	5	5	2450	6.04
508	530	238.1	352.4	476.2	5	5	2360	6.92
559	581	263.5	403.2	527.0	5	5	2250	7.56
610	632	288.9	454.0	577.8	5	5	2120	8.4
660	683	314.3	504.8	628.6	5	5	1960	9
711	734	339.7	555.6	679.4	5	5	1780	9.68

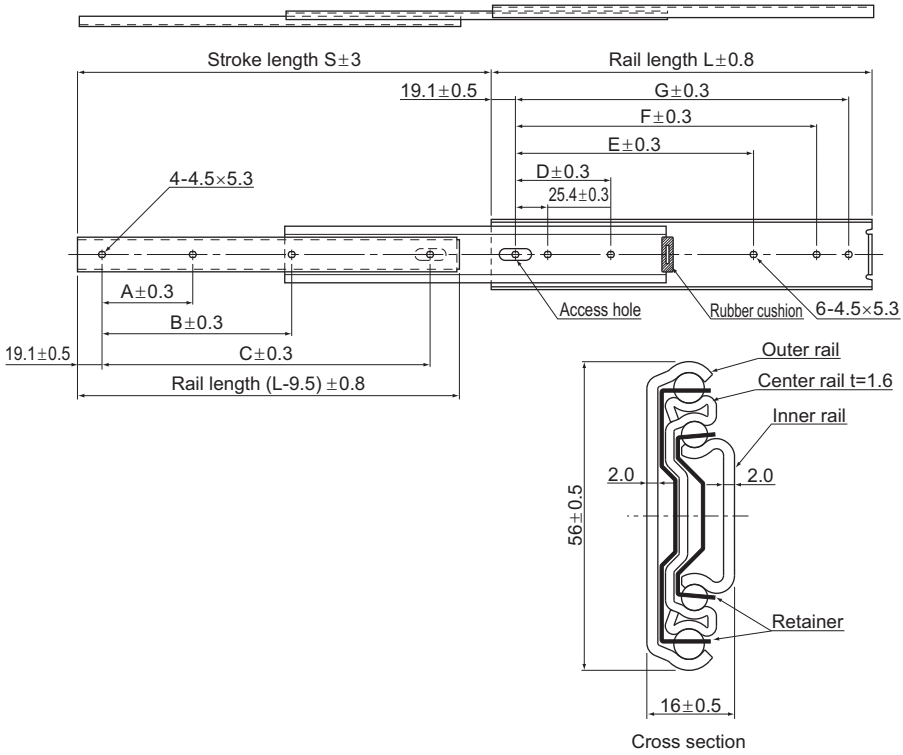
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

FBL35K +711L

Model number Overall rail length (mm)

Model FBL 56H



Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	177.8	254.0	76.2	190.5	241.3	266.7	4	6	961	1.76
356	381	101.6	203.2	304.8	88.9	215.9	292.1	317.5	4	6	951	2.04
406	432	127.0	228.6	355.6	127.0	241.3	342.9	368.3	4	6	941	2.36
457	483	127.0	279.4	406.4	127.0	292.1	393.7	419.1	4	6	922	2.64
508	533	152.4	304.8	457.2	152.4	317.5	444.5	469.9	4	6	902	2.96
559	584	177.8	330.2	508.0	177.8	342.9	495.3	520.7	4	6	882	3.24
610	635	177.8	381.0	558.8	177.8	393.7	546.1	571.5	4	6	863	3.6
660	686	203.2	406.4	609.6	203.2	419.1	596.9	622.3	4	6	843	3.84
711	737	228.6	431.8	660.4	228.6	444.5	647.7	673.1	4	6	824	4.06
762	787	228.6	457.2	711.2	228.6	469.9	698.5	723.9	4	6	784	4.44

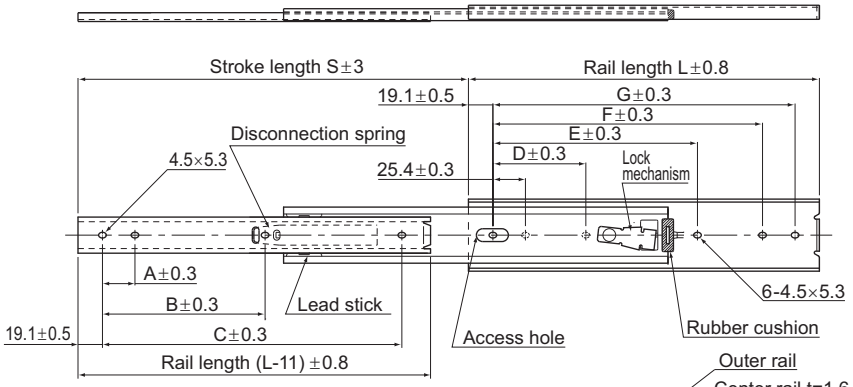
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

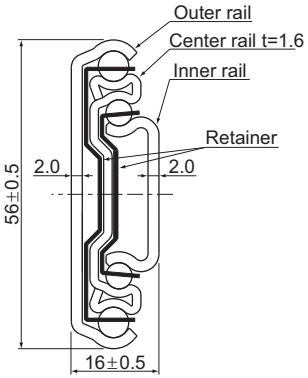
Model number coding

FBL56H +406L

Model number — Overall rail length (mm)

Model FBL 56H-P13





Cross section

Releasing the disconnection spring attached to the inner rail allows the inner rail to be pulled out. A locked state caused by the disconnection spring can be manually released when retracted. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	—	254.0	76.2	190.5	241.3	266.7	3	6	961	1.76
356	381	127.0	—	304.8	88.9	215.9	292.1	317.5	3	6	951	2.04
406	432	152.4	317.5	355.6	127.0	241.3	342.9	368.3	4	6	941	2.36
457	483	177.8	368.3	406.4	127.0	292.1	393.7	419.1	4	6	922	2.64
508	533	152.4	419.1	457.2	152.4	317.5	444.5	469.9	4	6	902	2.96
559	584	177.8	469.9	508.0	177.8	342.9	495.3	520.7	4	6	882	3.24
610	635	177.8	520.7	558.8	177.8	393.7	546.1	571.5	4	6	863	3.6
660	686	203.2	571.5	609.6	203.2	419.1	596.9	622.3	4	6	843	3.84
711	737	228.6	622.3	660.4	228.6	444.5	647.7	673.1	4	6	824	4.06
762	787	228.6	673.1	711.2	228.6	469.9	698.5	723.9	4	6	784	4.44

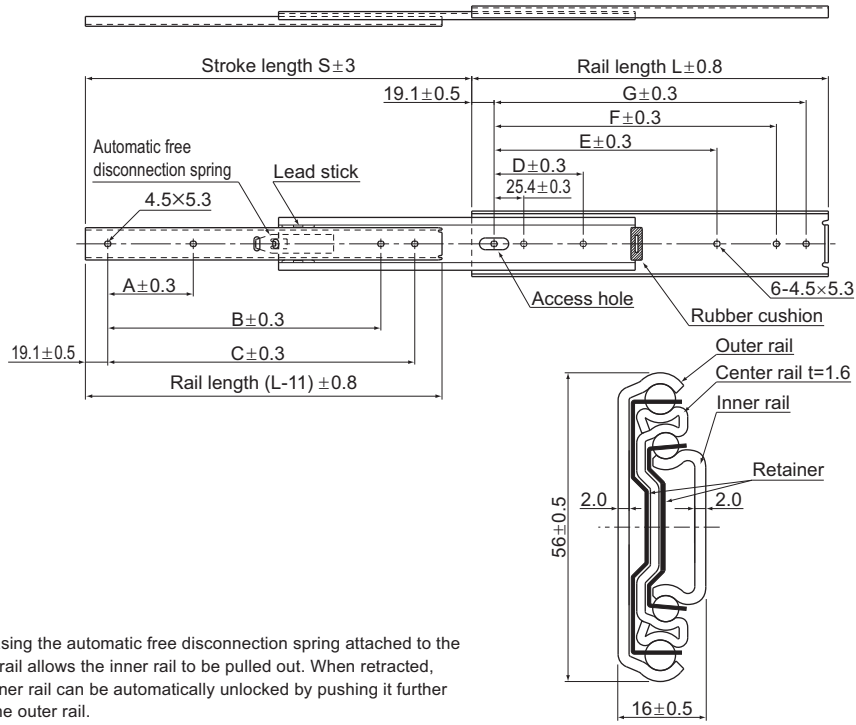
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

FBL56H-P13 +762L

Model number — Overall rail length (mm)

Model FBL 56H-P14



Releasing the automatic free disconnection spring attached to the inner rail allows the inner rail to be pulled out. When retracted, the inner rail can be automatically unlocked by pushing it further into the outer rail.

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	—	254.0	76.2	190.5	241.3	266.7	3	6	961	1.76
356	381	127.0	—	304.8	88.9	215.9	292.1	317.5	3	6	951	2.04
406	432	152.4	317.5	355.6	127.0	241.3	342.9	368.3	4	6	941	2.36
457	483	177.8	368.3	406.4	127.0	292.1	393.7	419.1	4	6	922	2.64
508	533	152.4	419.1	457.2	152.4	317.5	444.5	469.9	4	6	902	2.96
559	584	177.8	469.9	508.0	177.8	342.9	495.3	520.7	4	6	882	3.24
610	635	177.8	520.7	558.8	177.8	393.7	546.1	571.5	4	6	863	3.6
660	686	203.2	571.5	609.6	203.2	419.1	596.9	622.3	4	6	843	3.84
711	737	228.6	622.3	660.4	228.6	444.5	647.7	673.1	4	6	824	4.06
762	787	228.6	673.1	711.2	228.6	469.9	698.5	723.9	4	6	784	4.44

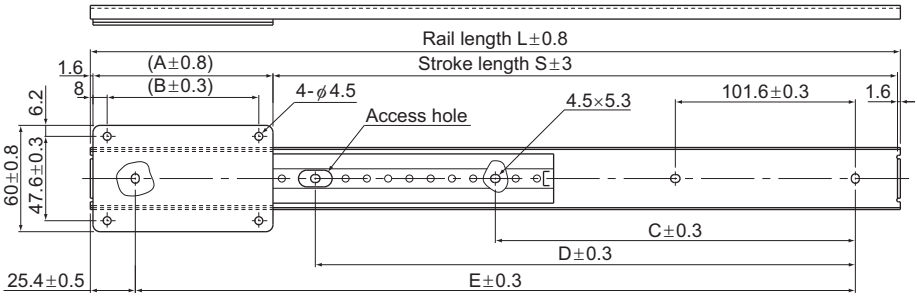
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

FBL56H-P14 +457L

Model number — Overall rail length (mm)

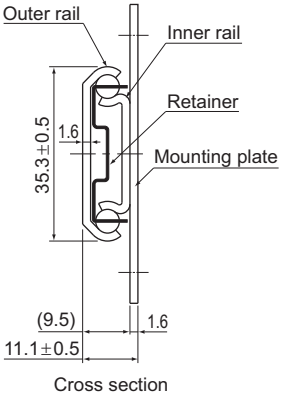
Model FBL 35F



Mass Unit: kg/pair

Rail length L (±0.8) mm	Mounting plate Model No.					
	#3	#4	#5	#6	#7	#8
305	0.60	0.67	0.74	0.81	—	—
356	0.66	0.73	0.80	0.87	0.94	1.01
406	0.73	0.80	0.87	0.94	1.01	1.08
457	0.80	0.87	0.94	1.01	1.08	1.15
508	0.86	0.93	1.0	1.07	1.14	1.21
559	0.93	1.0	1.07	1.14	1.21	1.28
610	1.0	1.07	1.14	1.21	1.28	1.35
660	1.06	1.13	1.20	1.27	1.34	1.41
711	1.13	1.20	1.27	1.34	1.41	1.48
762	1.20	1.27	1.34	1.41	1.48	1.55

Note) The mass indicates the value for a pair of 2 product units.



Cross section

Unit: mm

Mounting plate	Model No.	#3	#4	#5	#6	#7	#8	Dimension of the outer rail mounting hole (±0.3)		
	Length (A±0.8)	76.2	101.6	127	152.4	177.8	203.2			
Rail length L (±0.8)		Stroke length S (±3) ✻Varies with the combination with the mounting plate above.						C	D	E
305		225.4	200.0	174.6	149.2	—	—	—	152.4	254.0
356		276.2	250.8	225.4	200.0	174.6	149.2	—	203.2	304.8
406		327.0	301.6	276.2	250.8	225.4	200.0	—	254.0	355.6
457		377.8	352.4	327.0	301.6	276.2	250.8	203.2	304.8	406.4
508		428.6	403.2	377.8	352.4	327.0	301.6	228.6	355.6	457.2
559		479.4	454.0	428.6	403.2	377.8	352.4	254.0	406.4	508.0
610		530.2	504.8	479.4	454.0	428.6	403.2	279.4	457.2	558.8
660		581.0	555.6	530.2	504.8	479.4	454.0	304.8	508.0	609.6
711		631.8	606.4	581.0	555.6	530.2	504.8	330.2	558.8	660.4
762		682.6	657.2	631.8	606.4	581.0	555.6	355.6	609.6	711.2
Pitch of the mounting plate mounting hole (B±0.3)		60.2	85.6	111.0	136.4	161.8	187.2	—	—	—
Permissible load (N/pair)		294	392	490	588	686	784	—	—	—

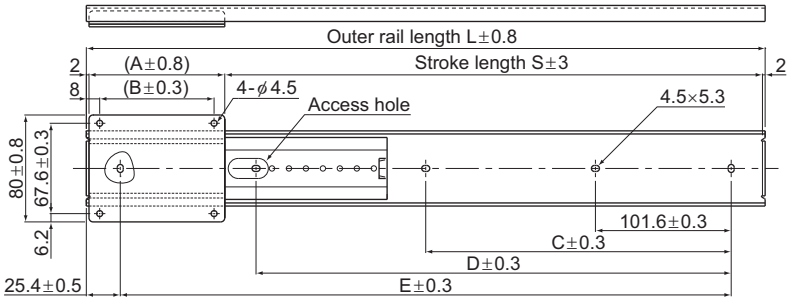
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

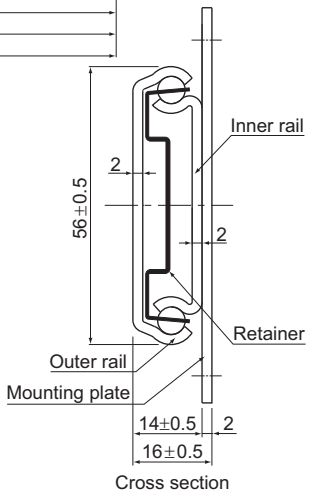
Model number coding

FBL35F +356L #5

FBL35F: Model number
+356L: Overall rail length (mm)
#5: Model number of mounting plate

Model FBL 56F





Mass Unit: kg/pair

Rail length L (±0.8) mm	Mounting plate Model No.					
	#3	#4	#5	#6	#7	#8
305	1.16	1.31	1.43	1.55	—	—
356	1.32	1.44	1.57	1.69	1.81	1.94
406	1.46	1.58	1.70	1.83	1.95	2.07
457	1.59	1.71	1.84	1.96	2.09	2.21
508	1.73	1.85	1.98	2.10	2.22	2.35
559	1.87	1.99	2.11	2.24	2.36	2.48
610	2.0	2.13	2.25	2.37	2.50	2.62
660	2.14	2.26	2.39	2.51	2.63	2.76
711	2.28	2.40	2.52	2.65	2.77	2.89
762	2.41	2.54	2.66	2.78	2.91	3.03

Note) The mass indicates the value for a pair of 2 product units.

Unit: mm

Mounting plate	Model No.	#3	#4	#5	#6	#7	#8	Dimension of the outer rail mounting hole (±0.3)		
	Length (A±0.8)	76.2	101.6	127	152.4	177.8	203.2			
Rail length L (±0.8)		Stroke length S (±3) ✻Varies with the combination with the mounting plate above.						C	D	E
305		224.6	199.2	173.8	148.4	—	—	—	152.4	254.0
356		275.4	250.0	224.6	199.2	173.8	148.4	—	203.2	304.8
406		326.2	300.8	275.4	250.0	224.6	199.2	—	254.0	355.6
457		377.0	351.6	326.2	300.8	275.4	250.0	203.2	304.8	406.4
508		427.8	402.4	377.0	351.6	326.2	300.8	228.6	355.6	457.2
559		478.6	453.2	427.8	402.4	377.0	351.6	254.0	406.4	508.0
610		529.4	504.0	478.6	453.2	427.8	402.4	279.4	457.2	558.8
660		580.2	554.8	529.4	504.0	478.6	453.2	304.8	508.0	609.6
711		631.0	605.6	580.2	554.8	529.4	504.0	330.2	558.8	660.4
762		681.8	656.4	631.0	605.6	580.2	554.8	355.6	609.6	711.2
Pitch of the mounting plate mounting hole (B±0.3)		60.2	85.6	111.0	136.4	161.8	187.2	—	—	—
Permissible load (N/pair)		588	784	980	1176	1372	1568	—	—	—

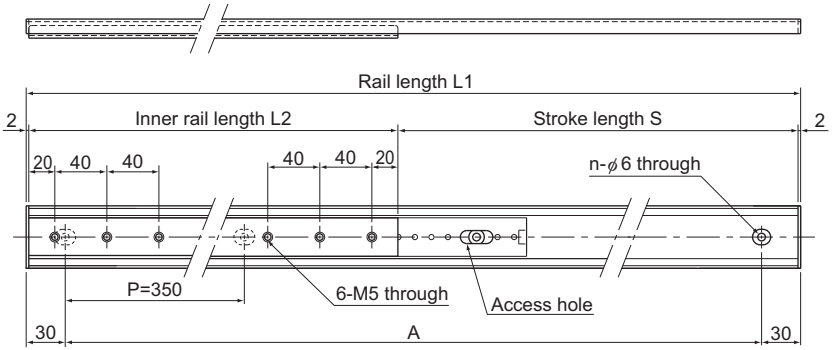
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

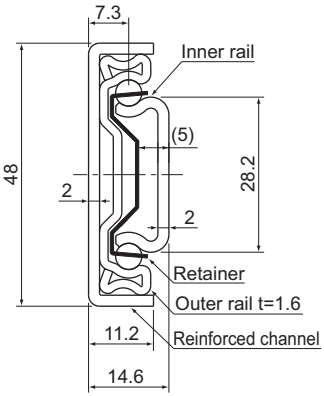
Model number coding

FBL56F +305L #6

Model number — Overall rail length (mm) — Model number of mounting plate

Model FBL 48DR





Cross section

Unit: mm

Outer rail length L1	Inner rail length L2	Stroke length S	Mounting hole pitch A	No. of mounting holes n	Permissible load [N]	Mass [kg]
1110	496	610	P350×3	4	490	2.73
1110	696	410	P350×3	4	686	2.88
1460	496	960	P350×4	5	490	3.47
1460	696	760	P350×4	5	686	3.62
1810	696	1110	P350×5	6	686	4.36
2160	496	1660	P350×6	7	490	4.95
2160	696	1460	P350×6	7	686	5.10

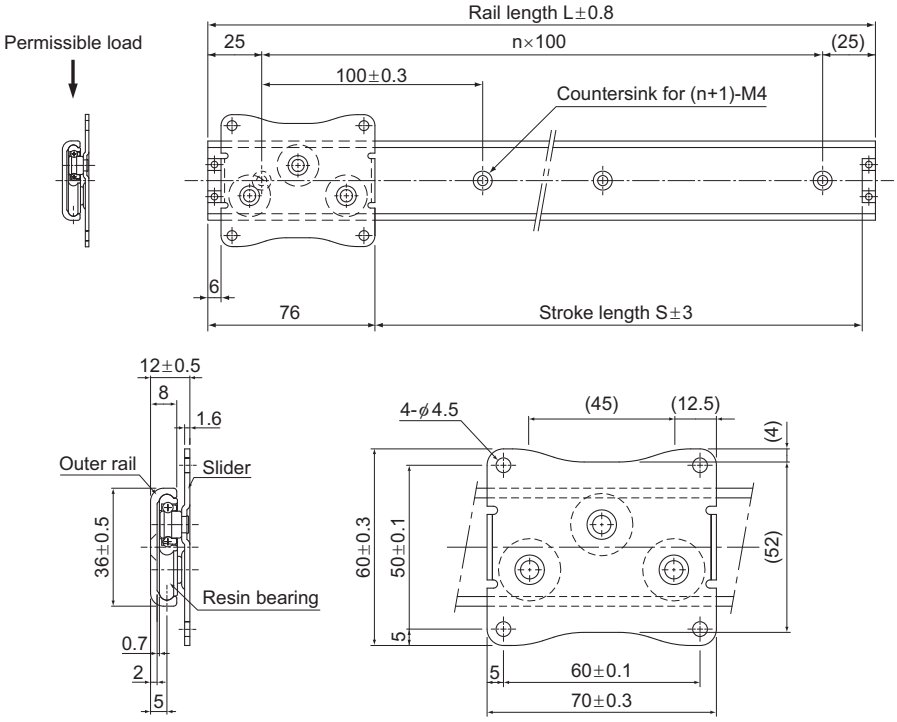
Note1) Set the length of the mounting screws for the inner rail such that they do not touch the retainer.
Note2) Model FBL48DR differs from other slide rails by assuming use with a single rail. Therefore, the value is per single rail for permissible load.

Model number coding

FBL48DR +1810/696L

- FBL48DR: Model number
- +1810: Outer rail length L1 (mm)
- /696L: Inner rail length L2 (mm)

Model E36RS



Unit: mm

Rail length L (±0.8)	Stroke length S (±3)	n	Mounting hole n+1	Permissible load[Note1] N	Mass g
150	68	1	2	40	104
250	168	2	3	40	130
350	268	3	4	40	156
450	368	4	5	40	182
550	468	5	6	40	207
650	568	6	7	40	233
750	668	7	8	40	259

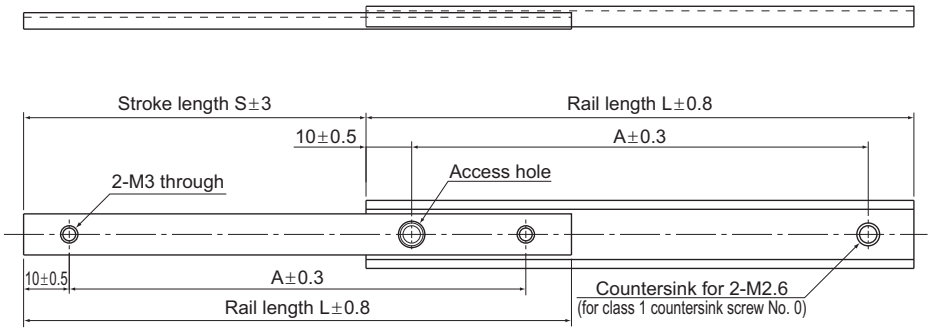
Note) Model E36RS differs from other slide rails by assuming use with a single rail. Therefore, the value is per single rail for permissible load.

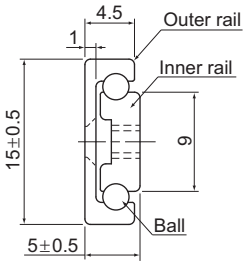
Model number coding

E36RS +550L

Model number — Overall rail length (mm)

Model E15





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions A±0.3	Permissible load N/pair	Mass [g/pair]
50	20	30.0	5	15
80	45	60.0	8	24
100	60	80.0	10	30
120	75	100.0	10	36

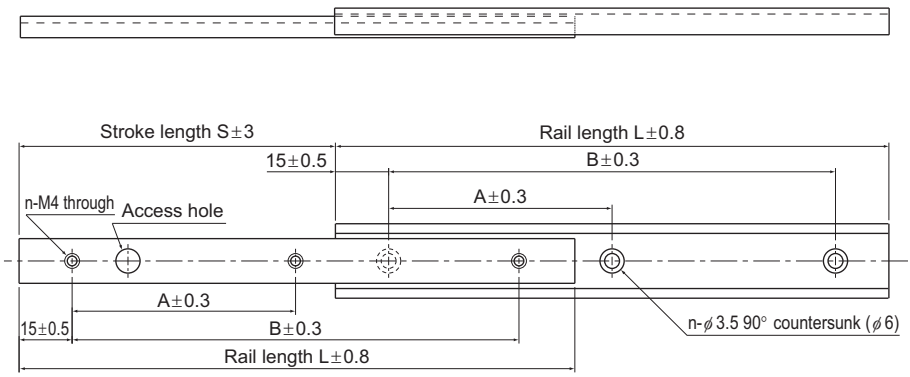
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

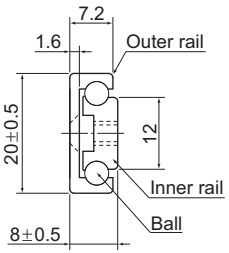
Model number coding

E15 +100L

Model number Overall rail length (mm)

Model E20





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions			Permissible load N/pair	Mass [g/pair]
		A±0.3	B±0.3	n (pcs)		
80	45	50.0	—	2	20	50
100	60	70.0	—	2	30	62
150	85	60.0	120.0	3	80	98
200	120	85.0	170.0	3	140	131
300	180	135.0	270.0	3	145	197

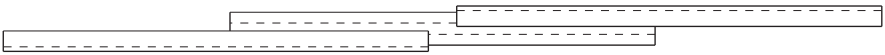
Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

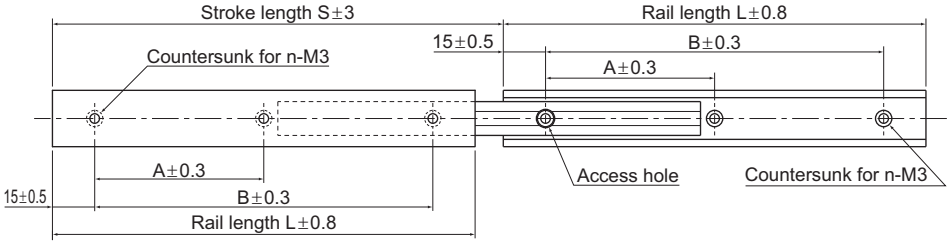
Model number coding

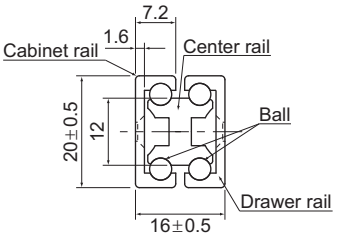
E20 +150L

Model number Overall rail length (mm)

Model D20







Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions			Permissible load N/pair	Mass [g/pair]
		A±0.3	B±0.3	n (pcs)		
80	80	50.0	—	2	20	94
100	100	70.0	—	2	30	118
150	160	60.0	120.0	3	80	179
200	223	85.0	170.0	3	140	241
300	345	135.0	270.0	3	145	364

Note) The Permissible Load and Mass each indicate when used as a pair of 2 units.

Model number coding

D20 +300L

Model number Overall rail length (mm)

[Permissible Load and Mounting Orientation]

For use other than with the mounting orientation shown in Fig.1, contact THK.

The permissible load of the Slide Rail indicates the load in the direction Pa that two rails can receive in the middle of the inner rail length at the maximum stroke.

The mounting orientation shown in Fig.2 is applicable to model FBL35B only.

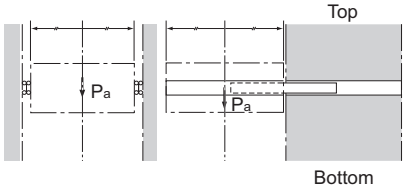


Fig.1

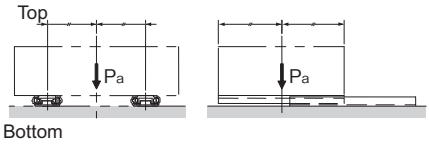


Fig.2

The mounting orientation of Fig.3 is applicable to model FBL35F and model FBL56F.
The mounting orientation of Fig.4 must be used for model FBL48DR. To prevent a moment load from being applied, position the center of gravity of the door on the ball and cage center lines, and ensure that section A of the hanger is structured to allow free rotation.
The mounting orientation of Fig.5 is applicable to model E36RS.
Unlike other slide rails, model FBL48DR and model E36RS are used in a single rail configuration. Therefore, the load must be centered on the ball and the cage center line.

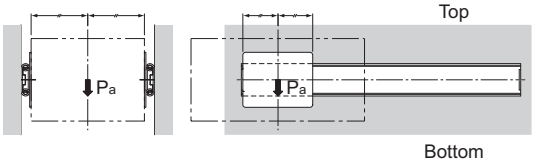


Fig.3

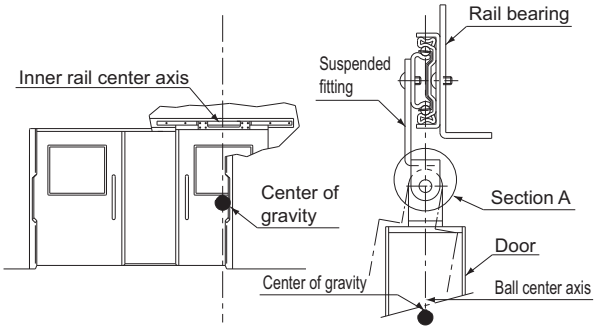


Fig.4

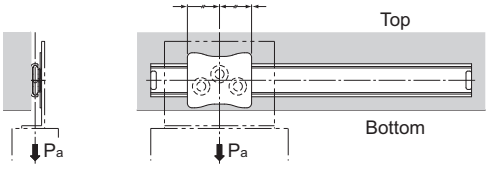


Fig.5

[Surface Treatment]
The surface of the Slide Rail is electro-galvanized (treated with trivalent chromate) as standard.
The aluminum slide rail of models E and D is white alumite-treated as standard. The slider of model E36RS is electro-galvanized (trivalent chromate treatment) and the rail is white alumite-treated as standard. For other surface treatments, contact THK.

Model Number Coding

Model number configurations differ depending on the model features. Refer to the corresponding sample model number configuration.

[Single slide/Double slide]

- **Models FBL 27S, FBL 27S-P14, FBL 35S, FBL 35S-P13, FBL 35S-P14, FBL 35M, FBL 35J, FBL 35B, FBL 27D, FBL 35N, FBL 35E, FBL 35E-P14, FBL 35G-P13, FBL 35G-P14, FBL 35D, FBL 51H, FBL 51H-P13, FBL 51H-P14, FBL 35K, FBL 56H, FBL 56H-P13 and FBL 56H-P14**

FBL27S +300L

Model No. Overall rail length (in mm)

[Linear Type Slides]

- **Models FBL35F and FBL56F**

FBL35F +356L #5

Model No. Overall rail length (in mm) Model number of mounting plate

[Heavy Load Linear Type Slide]

- **Model FBL48DR**

FBL48DR +1810/696L

Model No. Outer rail length (in mm) Inner rail length (in mm)

[Linear Slide Wheel-type]

- **Model E36RS**

E36RS +550L

Model number Overall rail length (mm)

[Aluminum Alloy Slide Rail]

● **Models E15, E20 and D20**

E15 +100L

Model No. Overall rail length (in mm)

[Handling]
(1) Tilting a Slide Rail may cause it to fall by its own weight.
(2) Do not disassemble the parts. This will result in loss of functionality.
(3) Take care not to drop or strike the Slide Rail. Doing so may cause injury or damage. Giving an impact to it could also cause damage to its function even if the product looks intact.
(4) When handling the product, wear protective gloves, safety shoes, etc., as necessary to ensure safety.

[Precautions on Use]
(1) When mounting the Slide Rail, use care to always keep both rails in parallel.
(2) Prevent foreign material, such as cutting chips or coolant, from entering the product. Failure to do so may cause damage.
(3) If the product is used in an environment where cutting chips, coolant, corrosive solvents, water, etc., may enter the product, use bellows, covers, etc., to prevent them from entering the product.
(4) If foreign material such as cutting chips adheres to the product, replenish the lubricant after cleaning the product.
(5) Avoid using the product at other than normal temperature, or using it in harsh conditions such as intensive reciprocations that generate frictional heat and environments with water or dust.
(6) The durability of the Slide Rail varies depending on factors such as the drawing dimension, travel distance, mounting conditions and environment in addition to operating frequency. Take these factors into account when making a selection.
(7) Note that the cage creep may occur if the slide rail is mounted vertically, subject to machine vibrations, etc. To correct the cage creep, fully open and fully close the slide rail. During this process, the motion will be less smooth than usual. If cage creep is inevitable, we recommend using Slide Packs, LM Guides, etc., which are infinite stroke linear motion systems.
(8) If you replace an old slider or outer rail of your E36RS with a new one, the clearance and sliding resistance may substantially increase.
(9) Do not use the supplied stopper as a mechanical stopper. This may damage the stopper due to impact.
(10) Do not use undue force when fitting parts (pin, key, etc.) to the product. This may generate pressure marks on the raceway, leading to loss of functionality.
(11) Insufficient rigidity or accuracy of mounting members causes the bearing load to concentrate on one point and the bearing performance will drop significantly. Accordingly, give sufficient consideration to the rigidity/accuracy of the housing and base and strength of the fixing bolts.

[Lubrication]
(1) Lithium soap-based grease No. 2 is applied to the slide rail. Do not mix different lubricants. Even greases containing the same type of thickening agent may, if mixed, interact adversely due to disparate additives or other ingredients.
(2) The consistency of grease changes according to the temperature. Take note that the slide resistance of the Slide Rail also changes as the consistency of grease changes.
(3) After lubrication, the slide resistance of the Slide Rail may increase due to the agitation resistance of grease. Be sure to let the grease spread fully before use.

(4) Excess grease may scatter immediately after lubrication, so wipe off scattered grease as necessary.
(5) The properties of grease deteriorate and its lubrication performance drops over time, so grease must be checked and added properly according to the use frequency of the machine.
(6) The greasing interval varies depending on the use condition and service environment. Set the final lubrication interval/amount based on the actual machine.

[Storage]
When storing the Slide Rail, enclose it in a package designated by THK and store it in a room in a horizontal orientation while avoiding high temperature, low temperature and high humidity.
After the product has been in storage for an extended period of time, lubricant inside may have deteriorated, so add new lubricant before use.

[Disposal]
Dispose of the product properly as industrial waste.

Slide Rail

THK General Catalog

B Support Book

A Product Descriptions (Separate)

Features of the Slide Rail

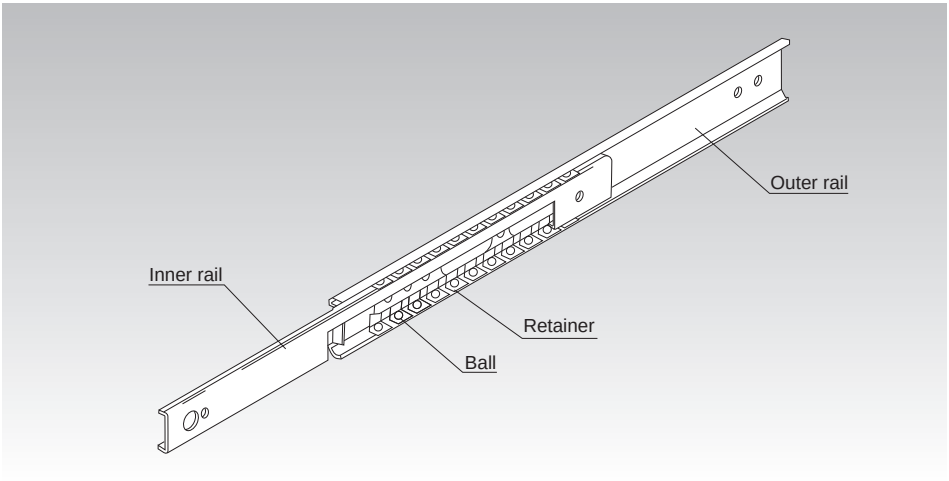


Fig.1 Structure of Slide Rail Model FBL

Structure and Features

Slide rails are low-price finite linear guides made out of precision roll-formed steel plates.
Suitable for various purposes because they are thin, compact, and easy to mount. Slide rails can be used in a wide range of applications such as photocopiers, measuring instruments, telecommunications equipment, medical equipment, automatic vending machines, and various types of office equipment.
The Model FBL slide rail has two rows of ball bearings placed between an inner rail and an outer rail that have been roll-formed out of steel plates. The ball bearings are evenly spaced by a precisely press-molded retainer, eliminating friction between the bearings and achieving a smooth sliding mechanism.

[Allows Easy Installation]
Simple to mount on the mounting surface. Since retainers hold the bearings, they do not fall out even if the inner rail is removed.

[Thin and Compact]
The thin cross section of the Model FBL slide rail means it can be installed in small spaces, and it is suitable for places where space saving is required.

[High Corrosion Resistance]
The Model FBL slide rail is treated with zinc plating, and models E and D are treated with a white anodized aluminum coating, making them highly corrosion-resistant.

Slide Rail Types

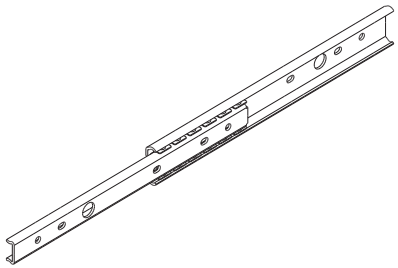
Types and Features

[Single Slides for Light Load]

Model FBL 27S

Specification Table⇒A13-14

The most compact slide rail.

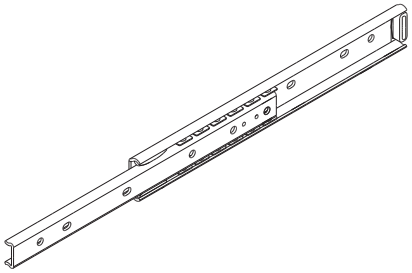


Model FBL 27S

Model FBL 27S-P14

Specification Table⇒A13-15

The Model FBL 27S features a removable inner rail. When retracted, the inner rail can be automatically unlocked by pushing it further into the outer rail.

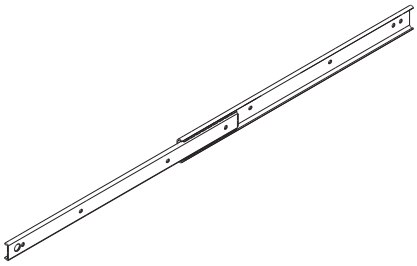


Model FBL 27S-P14

Model FBL 35S

Specification Table⇒A13-16

A single slide type of slide rail with the most fundamental shape.

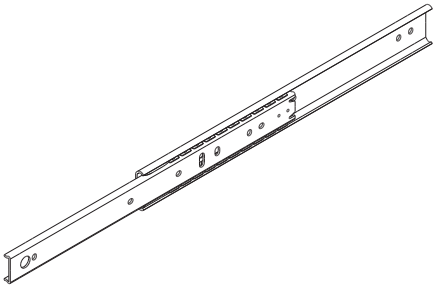


Model FBL 35S

Model FBL 35S-P13

Specification Table⇒A13-17

The Model FBL 35S features a removable inner rail. When retracted, it can be unlocked manually.

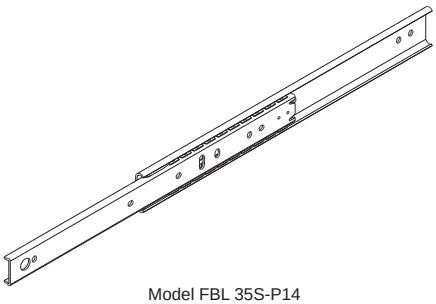


Model FBL 35S-P13

Model FBL 35S-P14

Specification Table⇒A13-18

The Model FBL 35S features a removable inner rail. When retracted, the inner rail can be automatically unlocked by pushing it further into the outer rail.

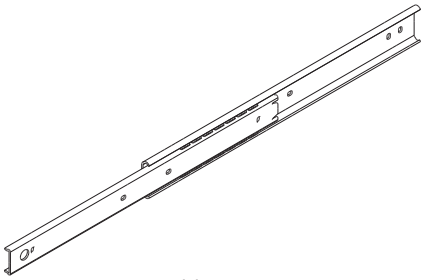


Model FBL 35S-P14

Model FBL 35M

Specification Table⇒A13-19

The Model FBL 35S features a removable inner rail. The slide rail is designed to stop by frictional resistance when it is fully opened. Remove the inner rail by applying more force.
(Includes a brake stop)

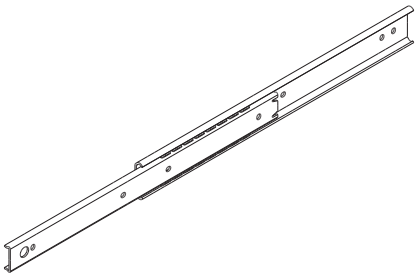


Model FBL 35M

Model FBL 35J

Specification Table⇒A13-20

The Model FBL 35M with additional lead ball that serves as a guide when the inner rail is inserted.

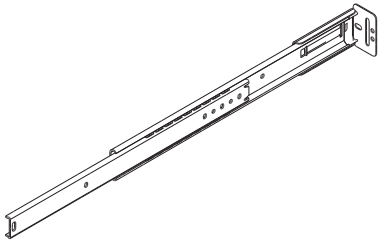


Model FBL 35J

Model FBL 35B

Specification Table⇒A13-21

The Model FBL 35M with additional mounting bracket.



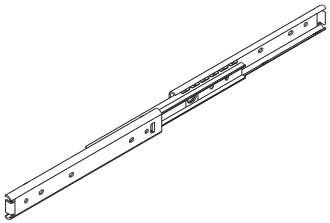
Model FBL 35B

[Double Slides for Light Load]

Model FBL 27D

Specification Table⇒A13-22

A double slide with an additional Model FBL 27S attached on the rear side of the inner rail. Widely used in many types of OA equipment.



Model FBL 27D

Model FBL 35N

Specification Table⇒A13-23

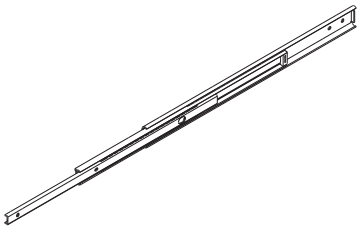
This is a three-rail double slide that allows a long stroke in a small space.
This is the only light-load double slide rail to use plate thickness of 1.2 mm to maximize weight reduction.

Model FBL 35N

Model FBL 35E

Specification Table⇒A13-24

This is a three-rail double slide that allows a long stroke in a small space.

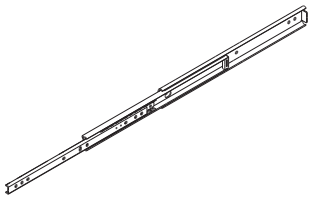


Model FBL 35E

Model FBL 35E-P14

Specification Table⇒A13-25

This is a three-rail double slide that allows a long stroke in a small space. The inner rail can be pulled out, and it can be automatically unlocked by pushing it further into the outer rail.



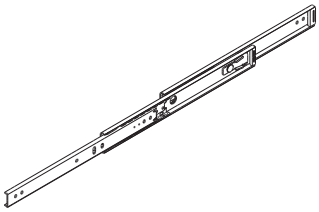
Model FBL 35E-P14

[Double Slides for Medium Load]

Model FBL 35G-P13

Specification Table⇒A13-26

A double slide with an additional Model FBL 35S attached on the front side. The drawer rail can be pulled out, and it can be manually unlocked when retracted. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

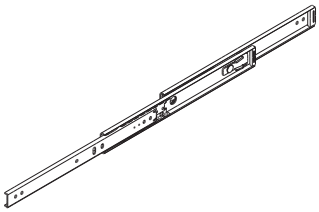


Model FBL 35G-P13

Model FBL 35G-P14

Specification Table⇒A13-27

A double slide with an additional Model FBL 35S attached on the front side. The drawer rail can be pulled out, and it can be automatically unlocked by pushing it further into the outer rail. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

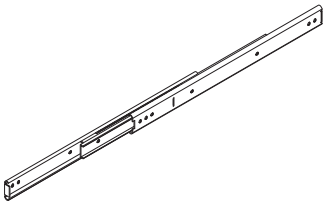


Model FBL 35G-P14

Model FBL 35D

Specification Table⇒A13-28

A double slide with an additional Model FBL 35S attached on the rear side of the inner rail. Widely used in a number of different industries.

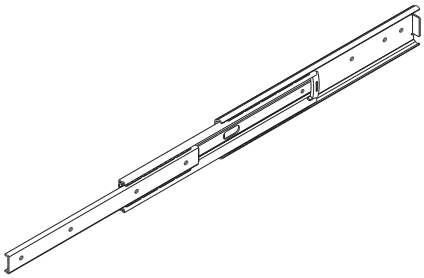


Model FBL 35D

Model FBL 51H

Specification Table⇒A13-29

A three-rail double slide that allows a long stroke. A thin model that can be used in small spaces, even with large working loads.

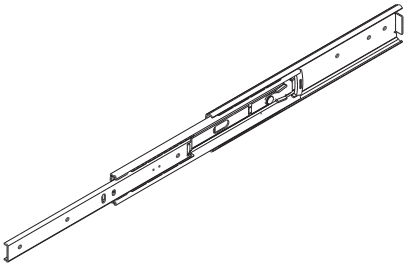


Model FBL 51H

Model FBL 51H-P13

Specification Table⇒A13-30

A three-rail double slide that allows a long stroke. A thin model that can be used in small spaces, even with large working loads. The inner rail can be pulled out, and locked states caused by the disconnection spring can be manually released when retracted. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

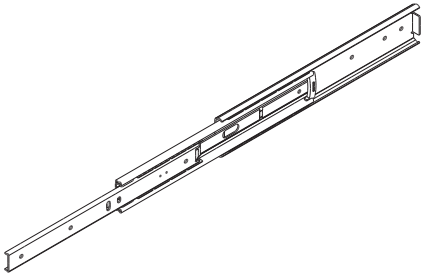


Model FBL 51H-P13

Model FBL 51H-P14

Specification Table⇒A13-31

A three-rail double slide that allows a long stroke. A thin model that can be used in small spaces, even with large working loads. The inner rail can be pulled out, and it can be automatically unlocked by pushing it further into the outer rail.



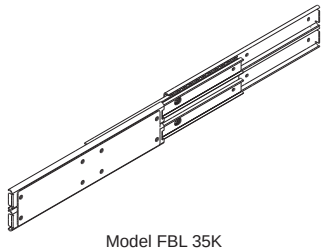
Model FBL 51H-P14

[Double Slides for Heavy Load]

Model FBL 35K

Specification Table⇒A13-32

A double slide combining four Model FBL 35S units. It features the largest allowable load among all models, making it suitable for opening/closing heavy objects.

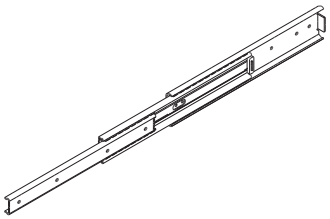


Model FBL 35K

Model FBL 56H

Specification Table⇒A13-33

Three-rail double slide with a large allowable load. Widely used in many types of office furniture.

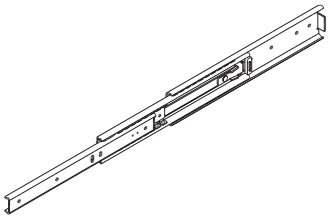


Model FBL 56H

Model FBL 56H-P13

Specification Table⇒A13-34

Three-rail double slide with a large allowable load. The inner rail can be pulled out, and it can be manually unlocked when retracted. It is also equipped with a useful locking mechanism that engages when the slide rail is fully opened.

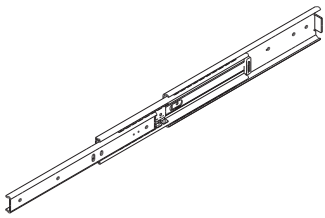


Model FBL 56H-P13

Model FBL 56H-P14

Specification Table⇒A13-35

Three-rail double slide with a large allowable load. The inner rail can be pulled out, and it can be automatically unlocked by pushing it further into the outer rail.



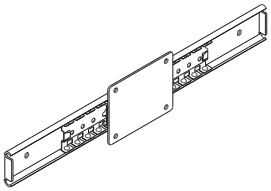
Model FBL 56H-P14

[Linear Type Slides]

Light Load Type Model FBL 35F

Specification Table⇒A13-36

Linear-type slide suitable for limited straight motion, featuring a flange for easy mounting.

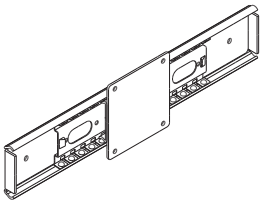


Light Load Type Model FBL 35F

Medium Load Type Model FBL 56F

Specification Table⇒A13-37

Linear-type slide suitable for limited straight motion, featuring a flange for easy mounting. It is suitable for large working loads.



Medium Load Type Model FBL 56F

Heavy Load Type Model FBL 48DR

Specification Table⇒A13-38

A heavy-load, low-friction linear-type slide, developed for sliding heavy doors.

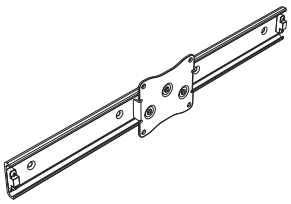
Heavy Load Type Model FBL 48DR

[Wheel-type Linear Slide]

Model E36RS

Specification Table⇒A13-39

A linear slide that features wear-resistant resin bearings.



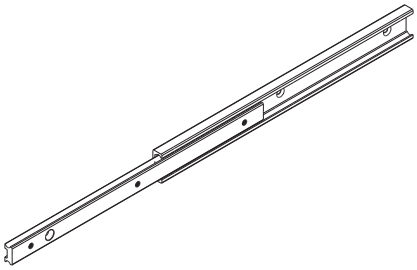
Model E36RS

[Aluminum Alloy Slide Rail]

Light Load Type Model E15

Specification Table⇒A13-40

A compact and lightweight single slide from the aluminum alloy series. Suitable for locations within magnetic fields, locations requiring rust-resistant materials, and locations where appearance is a factor.

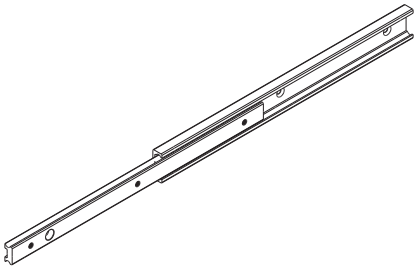


Light Load Type Model E15

Light Load Type Model E20

Specification Table⇒A13-41

A basic single slide from the aluminum alloy series. Suitable for locations within magnetic fields, locations requiring rust-resistant materials, and locations where appearance is a factor.

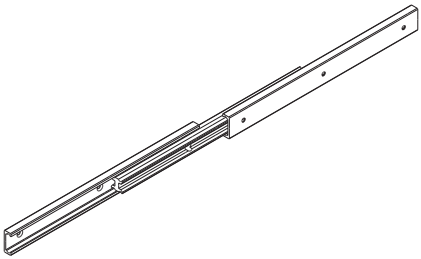


Light Load Type Model E20

Light Load Type Model D20

Specification Table⇒A13-42

The most compact and lightweight double slide in the aluminum alloy series. Suitable for locations within magnetic fields, locations requiring rust-resistant materials, and locations where appearance is a factor.



Light Load Type Model D20

Classification Table for Slide Rails

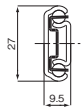
Slide Rail

Single Slide

For Light Load

Model FBL27S

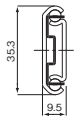
Model FBL27S-P14



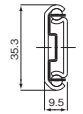
Model FBL35S

Model FBL35S-P13

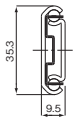
Model FBL35S-P14



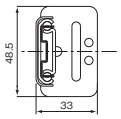
Model FBL35M



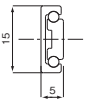
Model FBL35J



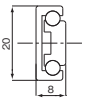
Model FBL35B



Model E15
(Made of Aluminum)



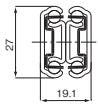
Model E20
(Made of Aluminum)



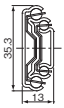
Double Slide

For Light Load

Model FBL27D

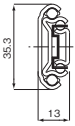


Model FBL35N

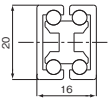


Model FBL35E

Model FBL35E-P14



Model D20
(Made of Aluminum)

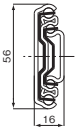


For Heavy Load

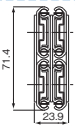
Model FBL56H

Model FBL56H-P13

Model FBL56H-P14



Model FBL35K

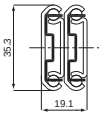


Linear Type Slide

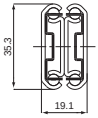
For Medium Load

Model FBL35G-P13

Model FBL35G-P14



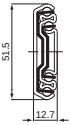
Model FBL35D



Model FBL51H

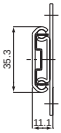
Model FBL51H-P13

Model FBL51H-P14



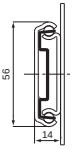
For Light Load

Model FBL35F



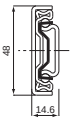
For Medium Load

Model FBL56F



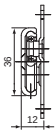
For Heavy Load

Model FBL48DR



Wheel Type

Model E36RS (Aluminum Outer Rail)



Mounting the Slide Rail

[Mounting Screws of the Slide Rail]

The slide rail is designed to be mounted using M4 screws. Since the mounting space is small as shown in Fig.1, we recommend using button head or binding head bolts.

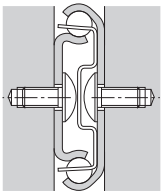


Fig.1

Note that the mounting screw for the slide rail of the models indicated in the following table is different.

Model number	button-head bolt	binding-head bolt	countersunk screw
Models FBL27S/27S-P14/27D	M3	M3 , M4	—
Model E15	—	—	M2.6
Models E20/D20	—	—	M3
Model FBL35E	M3	M3	—
Model E36RS	—	—	M4

Note) For button head bolts, binding head bolts, and countersunk screws, see the appendix of JIS B 1111.

[Attaching the Slide Rail]

At full extension of the slide, mount the outer rail at the overlap of rails. Followed by full retraction of the slide and mount the opposite end using the access hole.

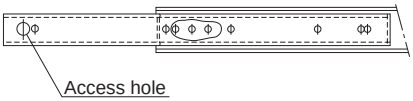


Fig.2

∗ For the following model numbers, mount outer rail after removing inner rail, as shown in Fig.3.

Models: FBL27S-P14,FBL35S-P13,FBL35S-P14,FBL35M,FBL35J,FBL35B,FBL35E-P14, FBL35G-P13,FBL35G-P14,FBL51H-P13,FBL51H-P14,FBL56H-P13,FBL56H-P14

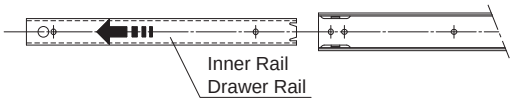


Fig.3

In addition, when mounting the outer rail or cabinet rail of models FBL35G-P13, FBL35G-P14, FBL51H-P13 and FBL56H-P13, which have locking mechanisms, release the lock by pressing the lock plate in the direction indicated in Fig.4 and adjust the position of the access hole.

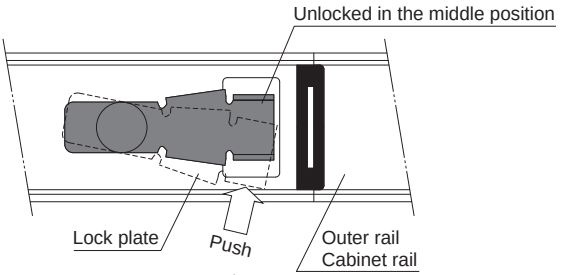


Fig.4

* For the following models, mount the inner rail by sliding it in the contracting direction as show in Fig.5. When doing so, do not remove the inner rail from the outer rail. If the inner rail is pulled out, it may be difficult to reinsert.

Models: FBL27S, FBL35S

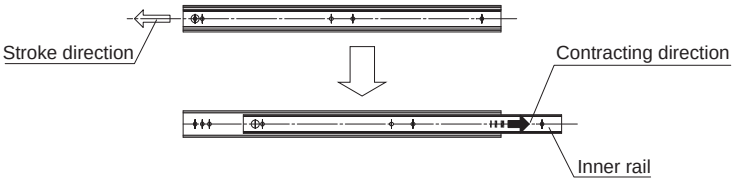


Fig.5

[Permissible Load and Mounting Orientation]

For use other than with the mounting orientation shown in Fig.6, contact THK.

The permissible load of the Slide Rail indicates the load in the direction Pa that two rails can receive in the middle of the inner rail length at the maximum stroke.

The mounting orientation shown in Fig.7 is applicable to “model FBL35B” only.

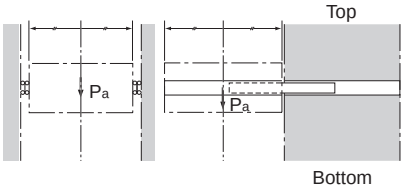


Fig.6

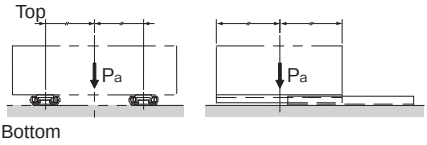


Fig.7 Applicable to “model FBL35B” only

The mounting orientation of Fig.8 is applicable to model FBL35F and model FBL56F.
The mounting orientation of Fig.9 must be used for model FBL48DR. To prevent a moment load from being applied, position the center of gravity of the door on the ball and cage center lines, and ensure that section A of the hanger is structured to allow free rotation.
The mounting orientation of Fig.10 is applicable to model E36RS.
Unlike other slide rails, model FBL48DR and model E36RS are used in a single rail configuration. Therefore, the load must be centered on the ball and the cage center line.

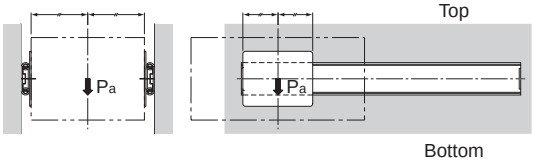


Fig.8

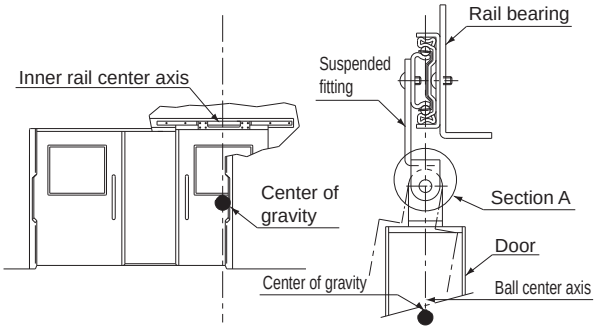


Fig.9

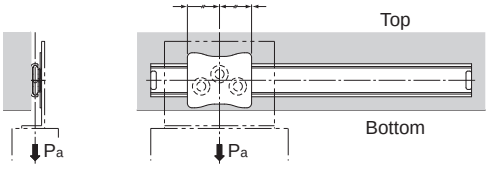


Fig.10

[Surface Treatment]
The surface of the Slide Rail is electro-galvanized (treated with trivalent chromate) as standard.
The aluminum slide rail of models E and D is white alumite-treated as standard. The slider of model E36RS is electro-galvanized (trivalent chromate treatment) and the rail is white alumite-treated as standard. For other surface treatments, contact THK.

Model Number Coding

Model number configurations differ depending on the model features. Refer to the corresponding sample model number configuration.

[Single slide/Double slide]

- **Models FBL 27S, FBL 27S-P14, FBL 35S, FBL 35S-P13, FBL 35S-P14, FBL 35M, FBL 35J, FBL 35B, FBL 27D, FBL 35N, FBL 35E, FBL 35E-P14, FBL 35G-P13, FBL 35G-P14, FBL 35D, FBL 51H, FBL 51H-P13, FBL 51H-P14, FBL 35K, FBL 56H, FBL 56H-P13 and FBL 56H-P14**

FBL27S +300L

Model No. Overall rail length (in mm)

[Linear Type Slides]

- **Models FBL35F and FBL56F**

FBL35F +356L #5

Model No. Overall rail length (in mm) Model number of mounting plate

[Heavy Load Linear Type Slide]

- **Model FBL48DR**

FBL48DR +1810/696L

Model No. Outer rail length (in mm) Inner rail length (in mm)

[Linear Slide Wheel-type]

- **Model E36RS**

E36RS +550L

Model number Overall rail length (mm)

[Aluminum Alloy Slide Rail]

● **Models E15, E20 and D20**

E15 +100L

Model No. Overall rail length (in mm)

[Handling]

(1) Tilting a Slide Rail may cause it to fall by its own weight.
(2) Do not disassemble the parts. This will result in loss of functionality.
(3) Take care not to drop or strike the Slide Rail. Doing so may cause injury or damage. Giving an impact to it could also cause damage to its function even if the product looks intact.
(4) When handling the product, wear protective gloves, safety shoes, etc., as necessary to ensure safety.

[Precautions on Use]

(1) When mounting the Slide Rail, use care to always keep both rails in parallel.
(2) Prevent foreign material, such as cutting chips or coolant, from entering the product. Failure to do so may cause damage.
(3) If the product is used in an environment where cutting chips, coolant, corrosive solvents, water, etc., may enter the product, use bellows, covers, etc., to prevent them from entering the product.
(4) If foreign material such as cutting chips adheres to the product, replenish the lubricant after cleaning the product.
(5) Avoid using the product at other than normal temperature, or using it in harsh conditions such as intensive reciprocations that generate frictional heat and environments with water or dust.
(6) The durability of the Slide Rail varies depending on factors such as the drawing dimension, travel distance, mounting conditions and environment in addition to operating frequency. Take these factors into account when making a selection.
(7) Note that the cage creep may occur if the slide rail is mounted vertically, subject to machine vibrations, etc. To correct the cage creep, fully open and fully close the slide rail. During this process, the motion will be less smooth than usual. If cage creep is inevitable, we recommend using Slide Packs, LM Guides, etc., which are infinite stroke linear motion systems.
(8) If you replace an old slider or outer rail of your E36RS with a new one, the clearance and sliding resistance may substantially increase.
(9) Do not use the supplied stopper as a mechanical stopper. This may damage the stopper due to impact.
(10) Do not use undue force when fitting parts (pin, key, etc.) to the product. This may generate pressure marks on the raceway, leading to loss of functionality.
(11) Insufficient rigidity or accuracy of mounting members causes the bearing load to concentrate on one point and the bearing performance will drop significantly. Accordingly, give sufficient consideration to the rigidity/accuracy of the housing and base and strength of the fixing bolts.

[Lubrication]

(1) Lithium soap-based grease No. 2 is applied to the slide rail. Do not mix different lubricants. Even greases containing the same type of thickening agent may, if mixed, interact adversely due to disparate additives or other ingredients.
(2) The consistency of grease changes according to the temperature. Take note that the slide resistance of the Slide Rail also changes as the consistency of grease changes.
(3) After lubrication, the slide resistance of the Slide Rail may increase due to the agitation resistance of grease. Be sure to let the grease spread fully before use.

(4) Excess grease may scatter immediately after lubrication, so wipe off scattered grease as necessary.
(5) The properties of grease deteriorate and its lubrication performance drops over time, so grease must be checked and added properly according to the use frequency of the machine.
(6) The greasing interval varies depending on the use condition and service environment. Set the final lubrication interval/amount based on the actual machine.

[Storage]
When storing the Slide Rail, enclose it in a package designated by THK and store it in a room in a horizontal orientation while avoiding high temperature, low temperature and high humidity.
After the product has been in storage for an extended period of time, lubricant inside may have deteriorated, so add new lubricant before use.

[Disposal]
Dispose of the product properly as industrial waste.