

A

Slide Pack



THK

Slide Pack Type FBW

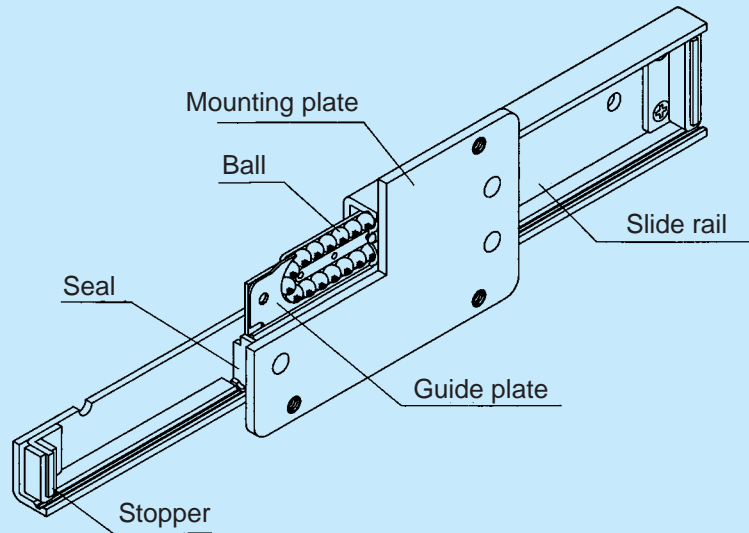


Fig. 1 Construction of Slide Pack Type FBW-RUU

Construction and Features

Slide Pack type FBW is an LM system in which a slider with balls incorporated therein performs perpetual linear motion in a precision press-formed raceway casing. Used in combination with dedicated rails, Slide Pack type FBW provides a lightweight, compact LM system at low cost.

The slider and dedicated rail are nitrided and therefore highly wear-resistant (model 2560R is made of stainless steel).

Type FBW-R is a low-noise type obtained by improving the conventional type.

The Slide Pack type FBW series is suitable for the slides of copiers, tool cabinets, cabinets for various electronic devices, mobile seats, vending machines, machine-tool slide covers, cash registers, heavy-duty doors, and curtail walls, to name just a few.

Low-cost and interchangeable

The manufacturing method based on forming by precision pressing guarantees stable quality and interchangeability among products. Taking advantage of these features, you can create your own LM system at low cost.

Unlimited stroke length

Unlike conventional limited-stroke types, those in the FBW series allow the slider to move over any length, provided that the dedicated rails are connected to that length.

Simple assembly and handling

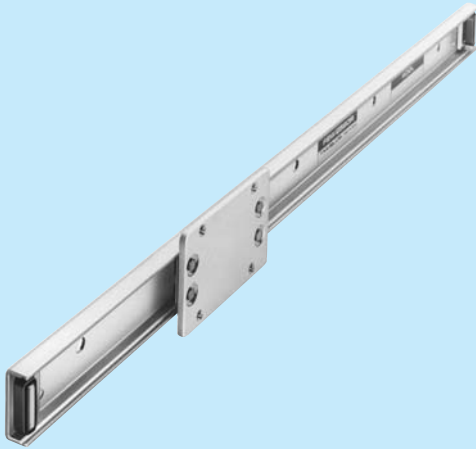
As the Slide Pack is constructed so that balls will not fall off if the slider is removed from the rail, it can be installed in areas with a complicated shape that require the slider to be separated.

Models with contamination protection seals also available.

Where the entry of cutting chips, dust, or other foreign matter is likely, a model with dedicated contamination protection seals provided as standard equipment can be selected from our line-up.

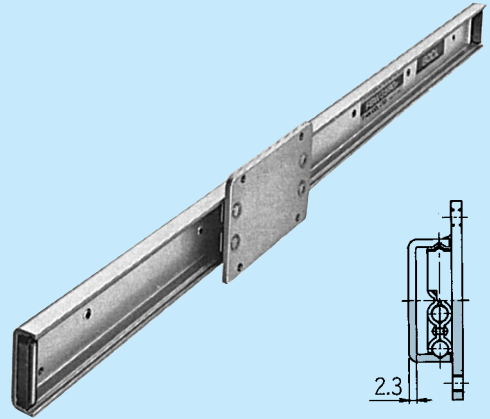
Types and Features

FBW2560R



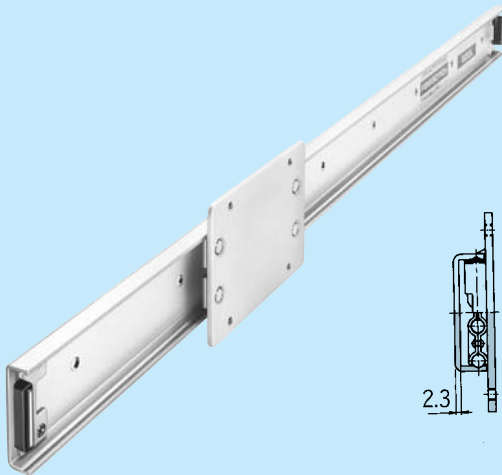
Stainless steel compact type

FBW3590R



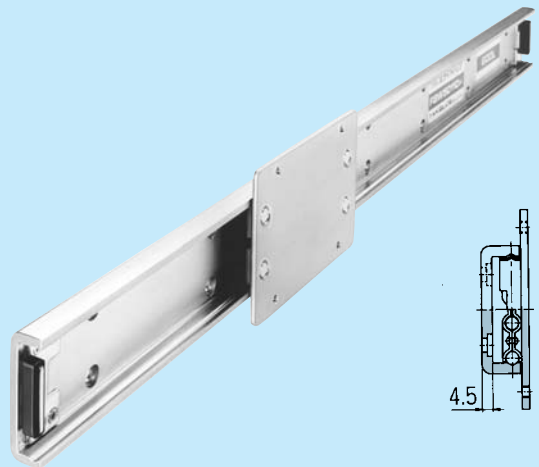
Standard type

FBW50110R



Heavy-load type

FBW50110H



High-rigidity type

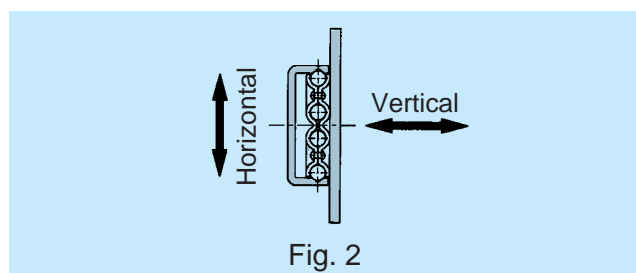
As the dedicated rails are produced by precision rolling, they are interchangeable. The high-precision finish of the rails ensures smooth movement.

In addition to models FBW50110R and 3590R, model FBW2560R, which is smaller in size, and model FBW50110H, featuring higher rigidity, have also been standardized.

Slider Clearance

The clearance of type FBW-R is standardized as follows:

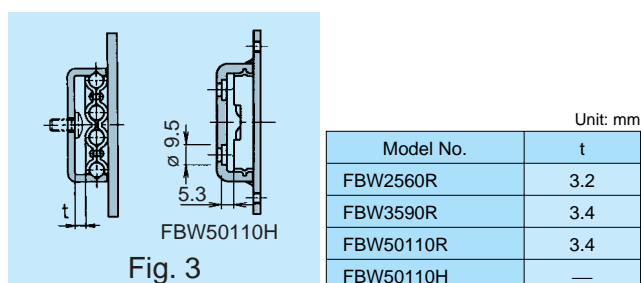
- Vertical clearance : 0.03 mm max.
- Horizontal clearance : 0.1 mm max.



Precautions on Use

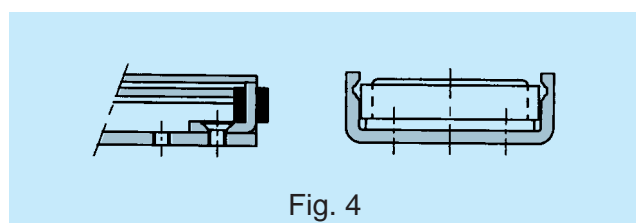
Slide-rail mounting bolt

As a slide rail has only a narrow space to accommodate mounting bolts, use of button-head or binding-head bolts is recommended.



Mounting stoppers

Where the slider may overrun, causing it to detach from the rail, provide dedicated stoppers on the rail ends as shown in Fig. 4.

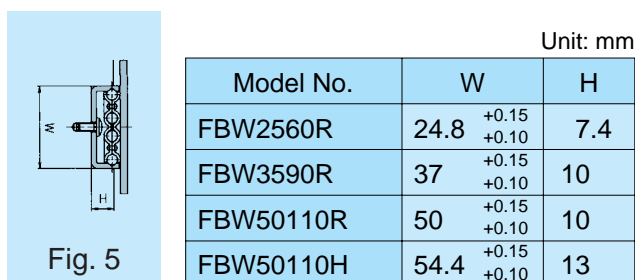


Assembling the slider

In type FBW-R, balls will not fall off if the slider is removed from the rail. However, forcibly inserting the slider at an improper angle may cause the balls to fall off. Therefore, whenever possible, mount the Slide Pack without separating the slider from the rail.

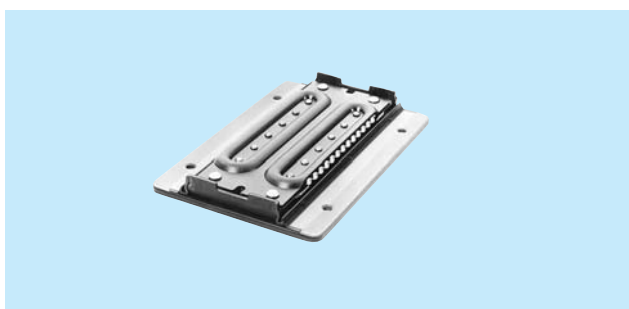
Groove dimensions

When type FBW-R is used fit into a groove, the dimensions of the groove should be as shown in Fig. 5.



Contamination Protection and Lubrication

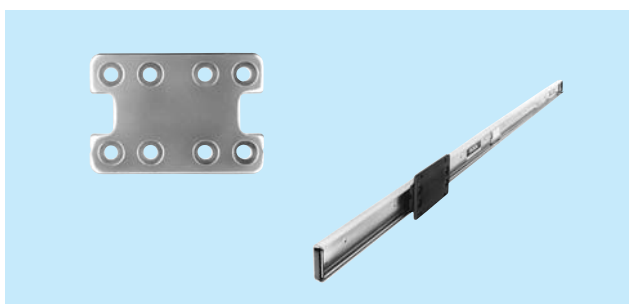
To prevent lubricant leakage and the entry of foreign matter into the slider, some models of Slide Pack type FBW-R come with highly wear-resistant, special synthetic rubber seals (type UU). The special synthetic rubber seals are kept in contact with the rail raceways wherein balls roll, and with both sides of the rail. This method of sealing provides a significant contamination protection effect.



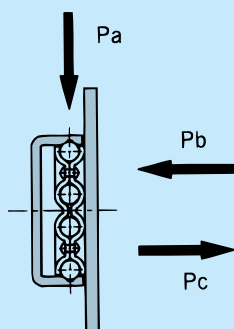
For lubrication, apply high-quality lithium soap-based grease to the raceways.

Connected-Use Slide Rail (Optional)

Where a longer stroke than standard is required, despite the type of Slide Pack, this special rail can be used connected to the desired length. When placing an order, specify the overall length.



Static Permissible Load



Model-Number Coding

2 FBW50110R UU + 800L

Rail overall length (mm)
 Type of seal
 Model No.
 No. of sliders on a rail
 (no symbol here when the number is one)

Table 1 Static Permissible Load

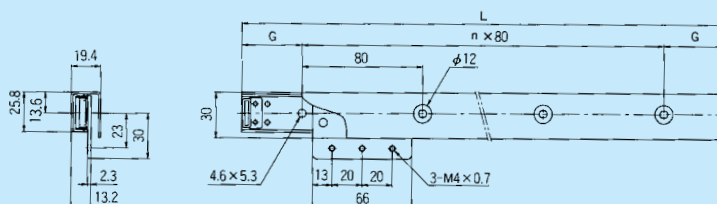
Unit: N

Model No.	Static Permissible Load		
	Pa	Pb	Pc
FBW2560R	590	150	70
FBW3590R	880	200	100
FBW50110R FBW50110H	1960	500	390

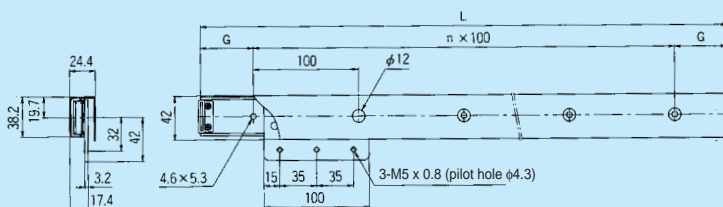
Slide Pack with Metal Contamination-Protection Cover

- Steel covers have been standardized.
- Covering an entire rail with a steel contamination-protection cover prevents the entry of cutting chips and other foreign matter.
- Suitable for the sliding doors of NC lathes, machining centers, and similar cutting machines

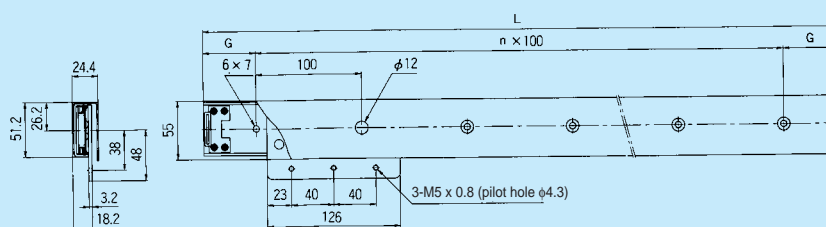
FBW2560RG
 (with contamination protection cover)



FBW3590RG
 (with contamination protection cover)

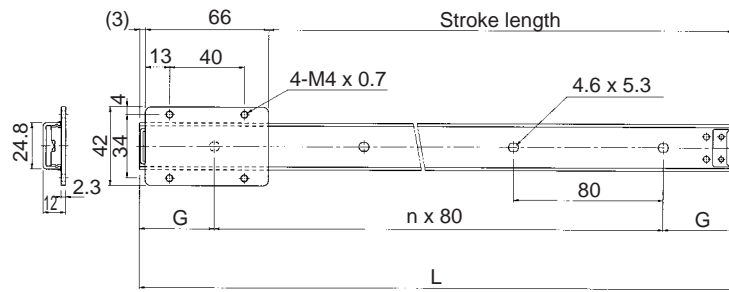


FBW50110RG
 (with contamination protection cover)

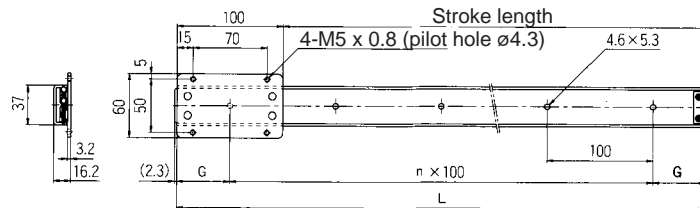


Types FBW2560R and 3590R

FBW2560R



FBW3590R



• FBW2560R (stainless steel type)

Unit: mm

Rail length L	Major dimensions		Stroke length	Rail mass, gr (70)
	n	G		
160	1	40	88	70
240	2	40	168	110
320	3	40	248	140
400	4	40	328	180
480	5	40	408	210
560	6	40	488	250
640	7	40	568	290
720	8	40	648	320
800	9	40	728	360
880	10	40	808	390
960	11	40	888	430
1040	12	40	968	460
1200	14	40	1128	540

• FBW3590R

Unit: mm

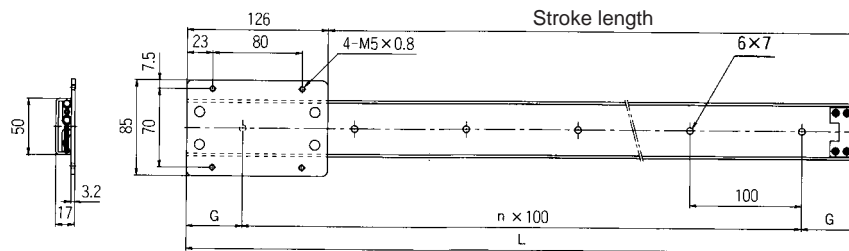
Rail length L	Major dimensions		Stroke length	Rail mass, g (250)
	n	G		
300	2	50	200	260
350	3	25	250	300
400	3	50	300	350
450	4	25	350	390
500	4	50	400	430
550	5	25	450	480
600	5	50	500	520
650	6	25	550	560
700	6	50	600	600
750	7	25	650	650
800	7	50	700	690
900	8	50	800	780
1000	9	50	900	860
1200	11	50	1100	1000
1500	14	50	1400	1300
1800	17	50	1700	1600

Notes:

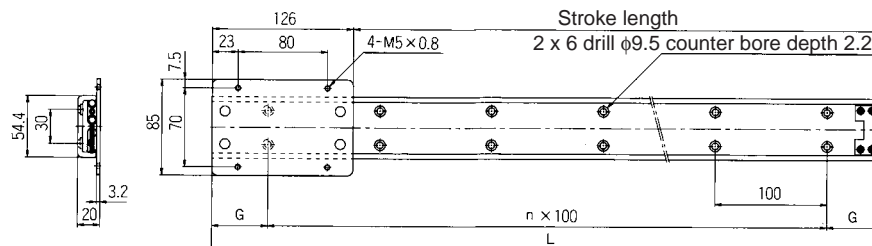
- If you require a long Slide Pack, we will provide one intended for connected use.
- The stroke length with seals (type UU) is 5 mm shorter than that shown.
- Figures in parentheses indicate the slider mass.
- For model-number coding, see page F-7.

Types FBW50010R and FBW50110H

FBW50110R



FBW50110H



- FBW50110R, FBW50110H

Unit: mm

Rail length L	Major dimensions		Stroke length		Rail mass, g	
	n	G	FBW50110R	FBW50110H	FBW50110R (420)	FBW50110H (420)
300	2	50	170	170	360	740
350	3	25	220	220	420	870
400	3	50	270	270	480	990
450	4	25	320	320	540	1100
500	4	50	370	370	600	1200
600	5	50	470	470	720	1400
700	6	50	570	570	840	1700
800	7	50	670	670	960	2000
900	8	50	770	770	1100	2200
1000	9	50	870	870	1200	2500
1200	11	50	1070	1070	1400	3000
1500	14	50	1370	1370	1800	3700
1800	17	50	1670	1670	2200	4400

Notes:

- If you require a long Slide Pack, we will provide one intended for connected use.
- The stroke length with seals (type UU) is 6 mm shorter than that shown.
- Figures in parentheses indicate the slider mass.
- For model-number coding, see page F-7.

B

Slide Pack



THK

Slide Pack Type FBL

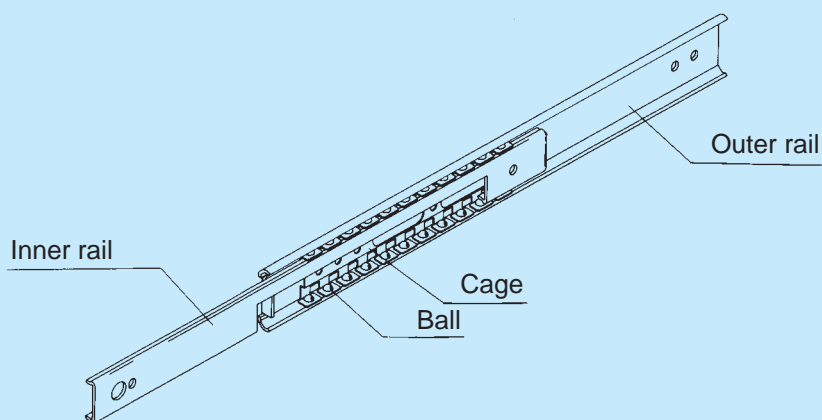


Fig. 1 Construction of Slide Pack Type FBL

Construction and Features

Slide Pack type FBL is a thin, compact, low-cost finite-linear-motion slide unit. It is obtained by precision-roll-forming a steel plate, with two trains of balls positioned between the inner and outer rails. As the balls are equidistantly arrayed at all times by a cage formed by a precision press, there is no friction between balls. The resulting sliding mechanism enables smooth movement.

With simple installation, smooth linear motion can be provided. The Slide Pack's wide range of applications as a sliding mechanism include computers and peripherals, copiers, measuring instruments, telecommunication equipment, medical equipment, vending machines, and various types of office equipment.

Unit type easy to install

The clearance and movement of the Slide Pack is adjusted prior to shipment. Simply bolt it to your system.

Thin and compact

The cross section is thin, so less space is required alongside the Slide Pack. As many units as necessary can be installed in parallel to suit your load conditions.

No play and high positioning-accuracy reproducibility

The unique shape of the Slide Pack enables the application of a preload without excessive force. The preload eliminates play, resulting in high positioning-accuracy reproducibility. Moreover, if installation is not very accurate, the slide rail and balls deform to absorb the error. Thus, the Slide Pack provides completely smooth linear motion.

Maintenance-free

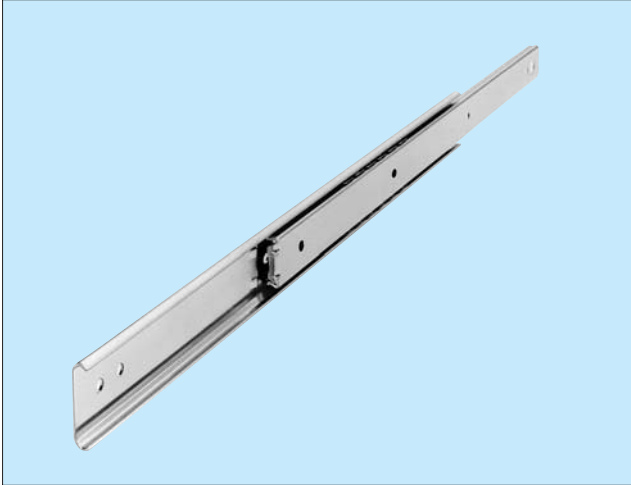
The slide rails are galvanized, making them corrosion-resistant. Grease is sealed into the sliding mechanism. As a result, in normal use there is no need for further feeding of grease.

Note:

This Catalog provides basic information relating to THK linear motion and related products. The Catalog, including all information, charts, formulas, factors, accuracy standards, tolerances and applications recommendations contained herein, is only a starting point for the customer's selection of appropriate products, and may not apply in all intended applications. The Catalog is not a substitute for a proper application analysis conducted by an experienced, knowledgeable design engineer. Product selection should be based upon your specific application needs and conditions, which will vary greatly depending on many factors. No specific product application should be based solely on the information contained in this Catalog. All purchases of THK Products are subject to THK America's and the manufacturer's limited warranty. Customers should confirm independently that a contemplated application is safe, appropriate and effective.

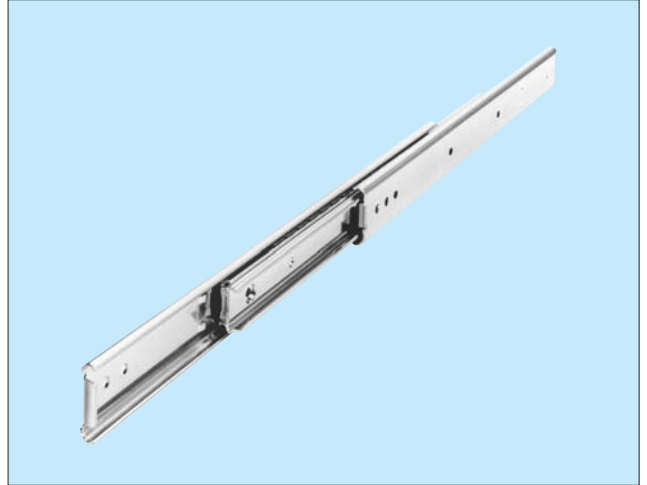
Types and Features

Types FBL27S and 35S



These are basic unit types with a stroke length designed to be approximately 70% of the rail's overall length.

Types FBL27D and 35D



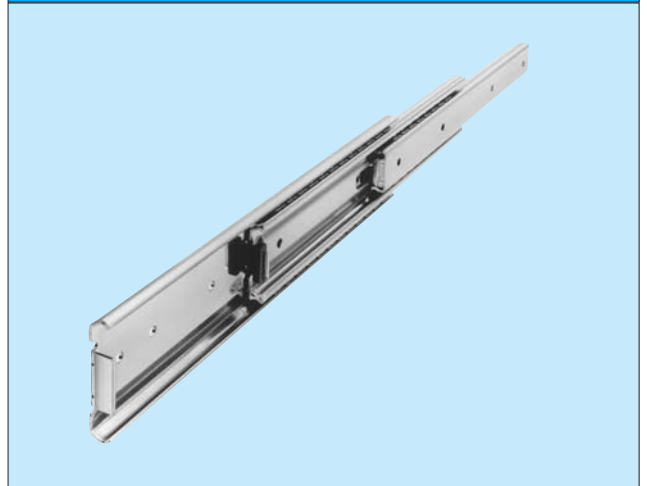
These are double-layer unit types capable of providing overstroke over the rail's entire length.

Types FBL35E and 55E



These are double-layer unit types that can be installed in a limited space and are capable of providing overstroke over the rail's entire length.

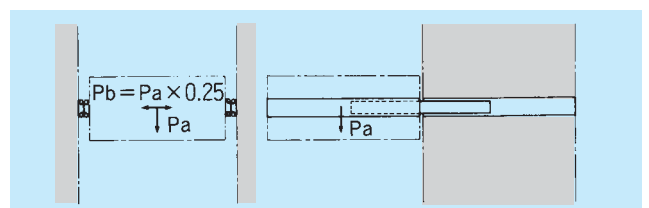
Type FBL56H



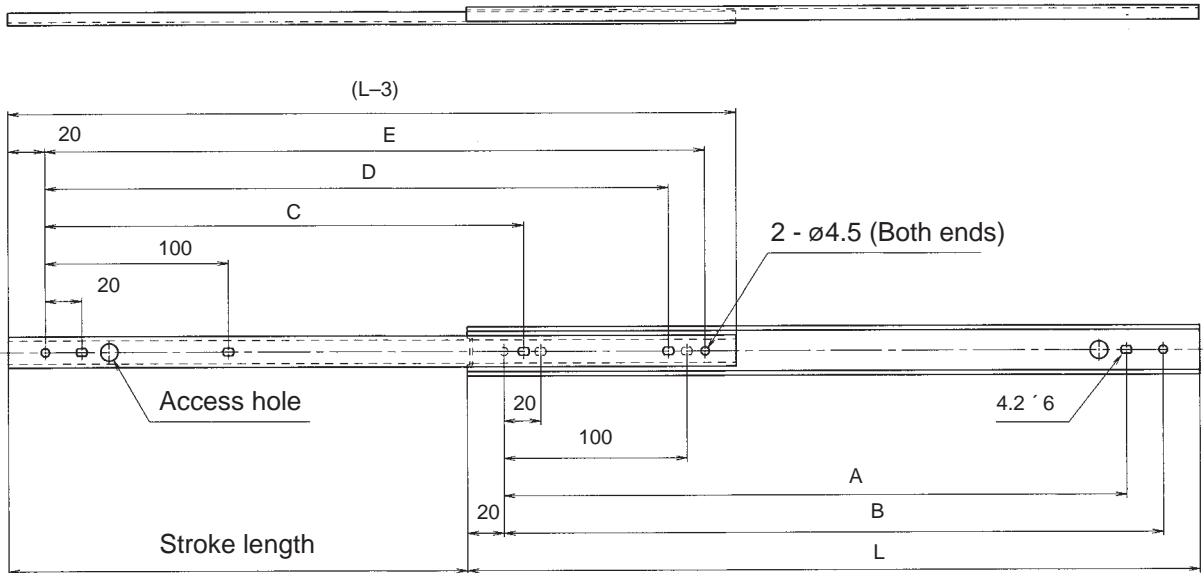
This is a double-layer heavy-duty type with a high permissible load.

Permissible load

Permissible load of the type FBL depends on the length of rail and each value is listed in the dimension table. This value represents permissible load in Pa direction which can be loaded to 2 pcs./set, and at the center part of the rail length when they are at maximum stroke. Please be aware that permissible load for Pb direction would be 25% of the value of Pa.



Type FBL27S

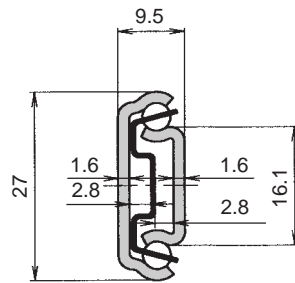


Model-Number Coding

FBL27S + 300L

Rail overall length (mm)

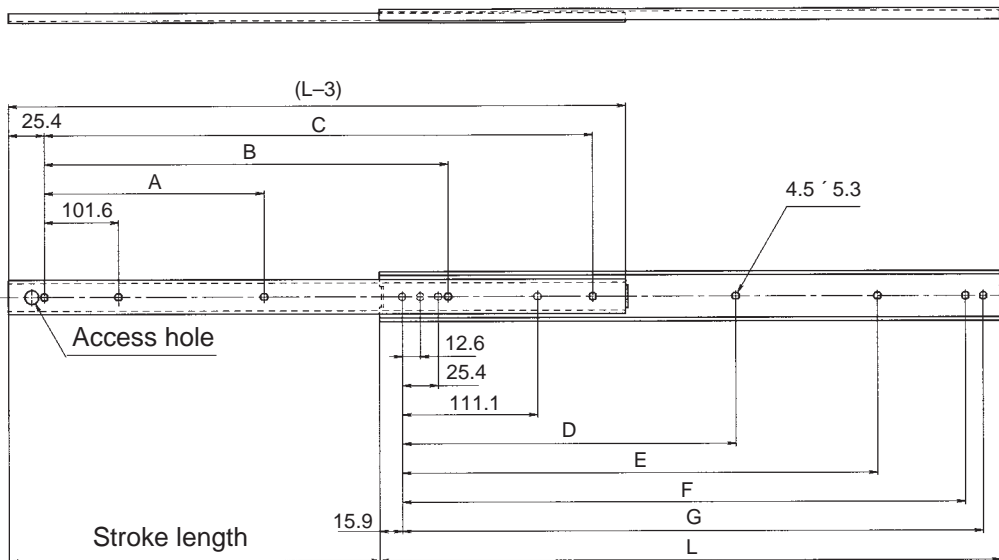
Model No.



Unit: mm

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

Type FBL35S

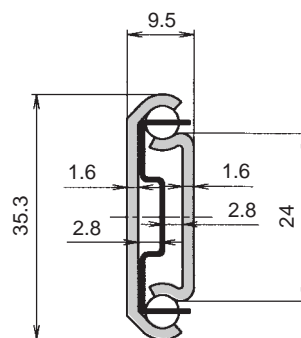


Model-Number Coding

FBL35S + 356L

Rail overall length (mm)

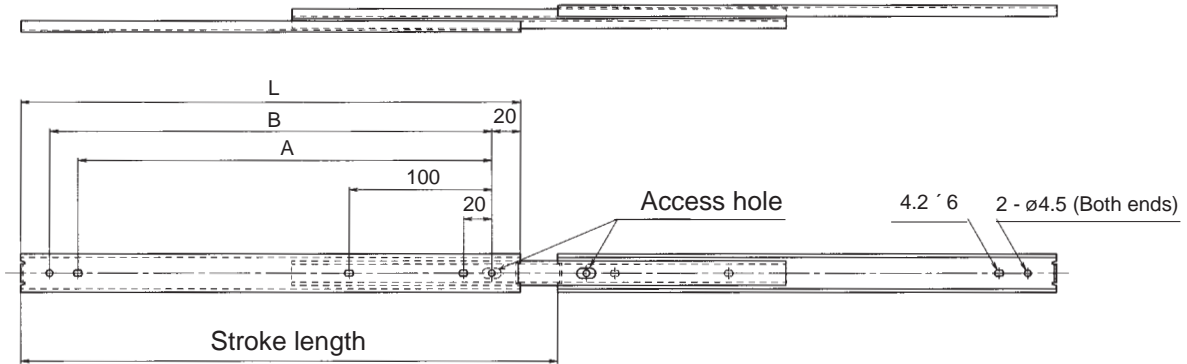
Model No.



Unit: mm

Rail length L (±0.8)	Stroke length (±3)	Mounting-hole dimensions							Permissible load N/set	Mass kg/set
		A	B	C	D	E	F	G		
305	229	—	152.4	254.0	—	149.2	260.3	273.0	490	0.60
356	279	—	203.2	304.8	—	200.0	311.1	323.8	400	0.72
406	305	—	254.0	355.6	—	250.8	361.9	374.6	390	0.84
457	330	203.2	304.8	406.4	212.7	301.6	412.7	425.4	380	0.96
508	381	228.6	355.6	457.2	238.1	352.4	463.6	476.2	330	1.04
559	406	254.0	406.4	508.0	263.5	403.2	514.3	527.0	320	1.16
610	432	279.4	457.2	558.8	288.9	454.0	565.1	577.8	310	1.24
660	483	304.8	508.0	609.6	314.3	504.8	615.9	628.6	280	1.36
711	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	270	1.48

Type FBL27D

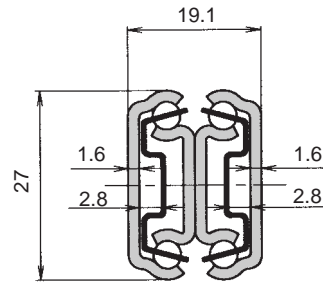


Model-Number Coding

FBL27D + 300L

Rail overall length (mm)

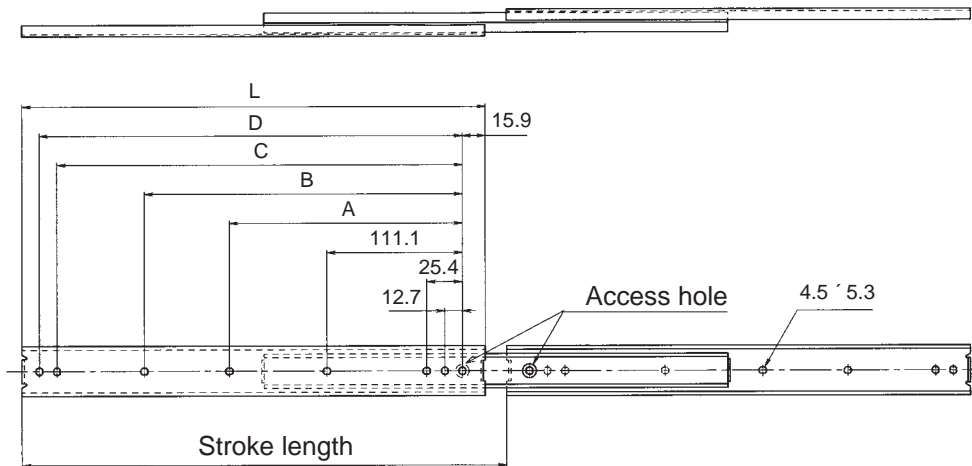
Model No.



Unit: mm

Rail length L (±0.8)	Stroke length (±3)	Mounting-hole dimensions		Permissible load N/set	Mass kg/set
		A	B		
200	229	140.0	160.0	370	0.64
250	276	190.0	210.0	360	0.80
300	327	240.0	260.0	350	0.96
350	376	290.0	310.0	330	1.12
400	426	340.0	360.0	310	1.28
450	475	390.0	410.0	290	1.46
500	524	440.0	460.0	280	1.60

Type FBL35D

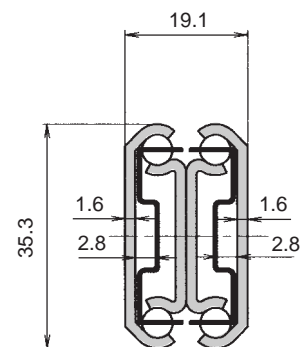


Model-Number Coding

FBL35D + 356L

Rail overall length (mm)

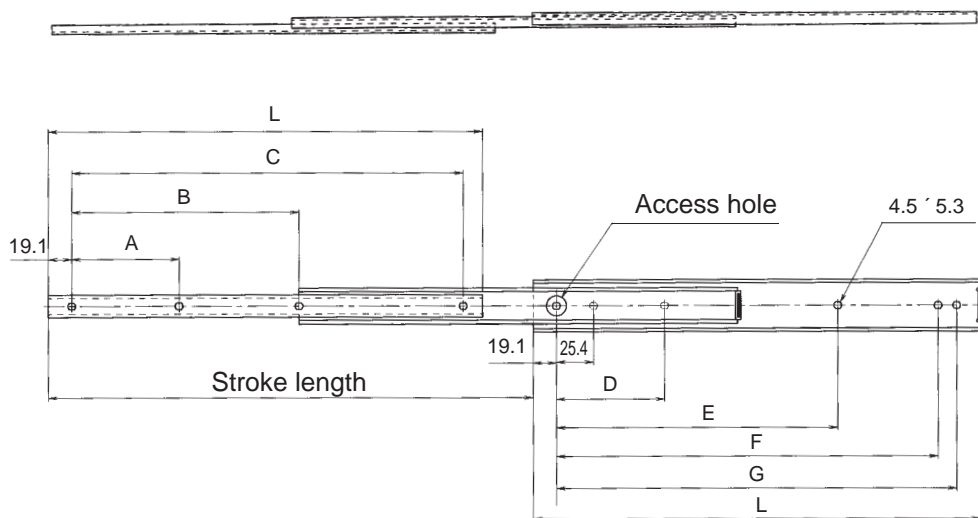
Model No.



Unit: mm

Rail length L (±0.8)	Stroke length (±3)	Mounting-hole dimensions				Permissible load N/set	Mass kg/set
		A	B	C	D		
305	327	—	149.2	260.3	273.0	588	1.28
356	378	—	200.0	311.1	323.8	578	1.48
406	429	—	250.8	361.9	374.6	559	1.72
457	480	212.7	301.6	412.7	425.4	549	1.96
508	530	238.1	352.4	463.6	476.2	529	2.12
559	581	263.5	403.2	514.3	527.0	500	2.40
610	632	288.9	454.0	565.1	577.8	480	2.56
660	683	314.3	504.8	615.9	628.6	461	2.80
711	734	339.7	555.6	666.7	679.4	441	3.00

Type FBL35E

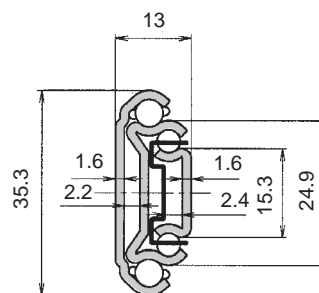


Model-Number Coding

FBL35E + 356L

Rail overall length (mm)

Model No.



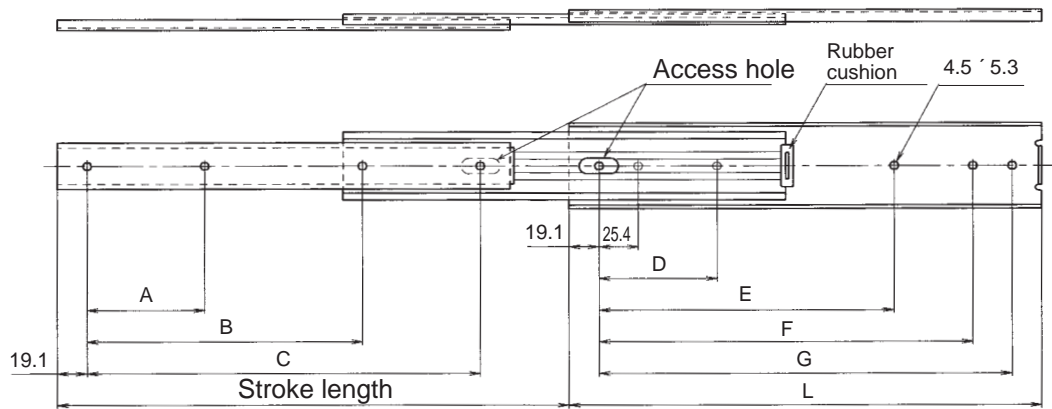
Unit: mm

Rail length L (±0.8)	Stroke length (±3)	Mounting-hole dimensions							Permissible load N/set	Mass kg/set
		A	B	C	D	E	F	G		
305	330	76.2	—	154.9	76.2	190.5	241.3	266.7	290	0.6
356	381	127.0	—	266.7	88.9	215.9	292.1	317.5	280	0.7
406	432	152.4	—	317.5	127.0	241.3	342.9	368.3	270	0.9
457	483	177.8	—	368.3	127.0	292.1	393.7	419.1	250	1.1
508	533	152.4	342.9	419.1	152.4	317.5	444.5	469.9	240	1.3

Note:

1. To install FBL35E, use M3 truss and binding screws.

Type FBL55E

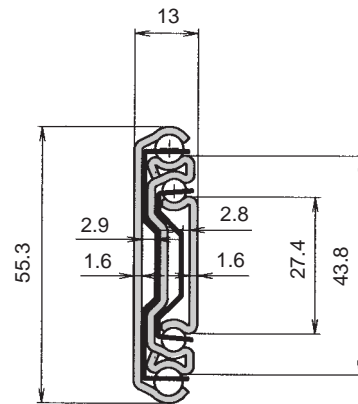


Model-Number Coding

FBL55E + 356L

Rail overall length (mm)

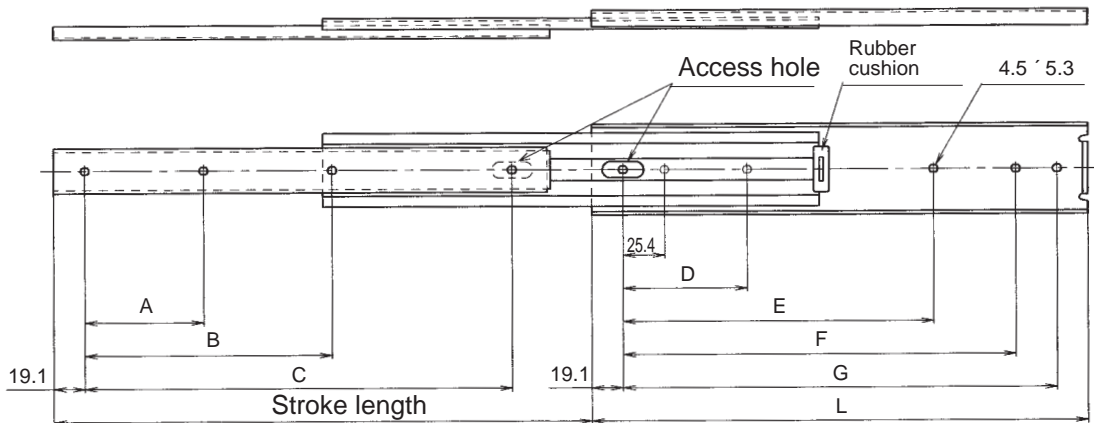
Model No.



Unit: mm

Rail length L (±0.8)	Stroke length (±3)	Mounting-hole dimensions							Permissible load N/set	Mass kg/set
		A	B	C	D	E	F	G		
305	330	76.2	177.8	254.0	76.2	190.5	241.3	266.7	620	1.44
356	381	101.6	203.2	304.8	88.9	215.9	292.1	317.5	620	1.68
406	432	127.0	228.6	355.6	127.0	241.3	342.9	368.3	610	1.96
457	483	127.0	279.4	406.4	127.0	292.1	393.7	419.1	610	2.24
508	533	152.4	304.8	457.2	152.4	317.5	444.5	469.9	600	2.44
559	584	177.8	330.2	508.0	177.8	342.9	495.3	520.7	580	2.72
610	635	177.8	381.0	558.8	177.8	393.7	546.1	571.5	570	3.00
660	686	203.2	406.4	609.6	203.2	419.1	596.9	622.3	550	3.24
711	737	228.6	431.8	660.4	228.6	444.5	647.7	673.1	530	3.48
762	787	228.6	457.2	711.2	228.6	469.9	698.5	723.9	500	3.72

Type FBL56H

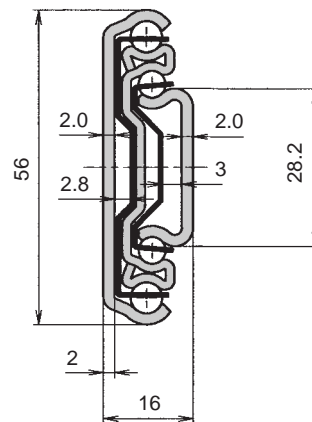


Model-Number Coding

FBL56H + 356L

Rail overall length (mm)

Model No.



Unit: mm

Rail length L (±0.8)	Stroke length (±3)	Mounting-hole dimensions							Permissible load N/set	Mass kg/set
		A	B	C	D	E	F	G		
305	330	76.2	177.8	254.0	76.2	190.5	241.3	266.7	960	1.76
356	381	101.6	203.2	304.8	88.9	215.9	292.1	317.5	950	2.04
406	432	127.0	228.6	355.6	127.0	241.3	342.9	368.3	940	2.36
457	483	127.0	279.4	406.4	127.0	292.1	393.7	419.1	920	2.64
508	533	152.4	304.8	457.2	152.4	317.5	444.5	469.9	900	2.96
559	584	177.8	330.2	508.0	177.8	342.9	495.3	520.7	880	3.24
610	635	177.8	381.0	558.8	177.8	393.7	546.1	571.5	860	3.60
660	686	203.2	406.4	609.6	203.2	419.1	596.9	622.3	840	3.84
711	737	228.6	431.8	660.4	228.6	444.5	647.7	673.1	820	4.06
762	787	228.6	457.2	711.2	228.6	469.9	698.5	723.9	784	4.44