

SR

LM Guide

B Product Specifications

Dimensional Drawing, Dimensional Table

Models SR-W, SR-WM, SR-V and SR-VM . . .	B-86
Models SR-TB, SR-TBM, SR-SB and SR-SBM...	B-88

Standard Length and Maximum Length of the LM Rail.....	B-90
Tapped-hole LM Rail Type of Model SR . .	B-91

Options	B-223
The LM Block Dimension (Dimension L) with LaCS and Seals Attached	B-226
Dedicated Bellows JS for Model SR . . .	B-241
Dedicated Bellows DS for Model SR. . .	B-242
Dedicated LM Cover TPS for Model SR..	B-249
Cap C	B-250

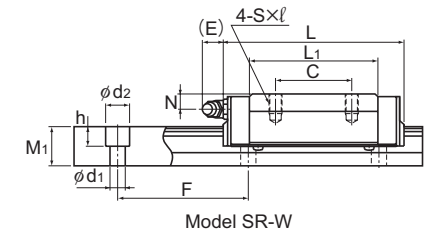
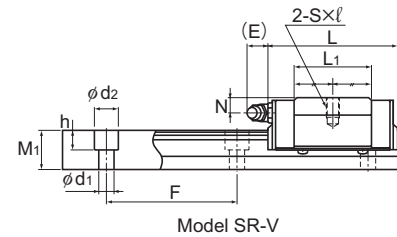
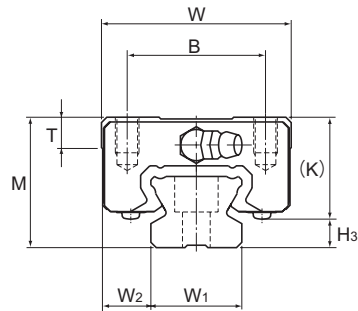
A Technical Descriptions of the Products (Separate)

Technical Descriptions

Structure and features.....	A-179
Types and Features	A-180
Characteristics of Model SR.....	A-182
Rated Loads in All Directions	A-184
Equivalent Load	A-184
Service Life	A-100
Radial Clearance Standard	A-114
Accuracy Standards	A-119
Shoulder Height of the Mounting Base and the Corner Radius	A-326
Error Allowance in the Parallelism between Two Rails	A-333
Error Allowance in Vertical Level between Two Rails	A-336

* Please see the separate "A Technical Descriptions of the Products".

Models SR-W, SR-WM, SR-V and SR-VM



Unit: mm

Model No.	Outer dimensions			LM block dimensions									Grease nipple	H ₃	LM rail dimensions					Basic load rating		Static permissible moment kN-m*					Mass		
	Height	Width	Length	B	C	S×ℓ	L ₁	T	K	N	E	Width			Height	Pitch	Length*	C	C ₀	M _a		M _b		M _c	LM block	LM rail			
	M	W	L																	W ₁ ±0.05	W ₂	M ₁	F				d ₁ ×d ₂ ×h	Max	kN
SR 15W/WM SR 15V/VM	24	34	57 40.4	26	26	M4×7	39.5 22.9	5.7	19.5	6	5.5	PB1021B	4.5	15	9.5	12.5	60	3.5×6×4.5	2500 (2500)	9.51 5.39	19.3 11.1	0.0925 0.0326	0.516 0.224	0.0567 0.0203	0.321 0.143	0.113 0.0654	0.2	0.12	1.2
SR 20W/WM SR 20V/VM	28	42	66.2 47.3	32	32	M5×8	46.7 27.8	7.2	22	6	12	B-M6F	6	20	11	15.5	60	6×9.5×8.5	4000 (3000)	12.5 7.16	25.2 14.4	0.146 0.053	0.778 0.332	0.0896 0.0329	0.481 0.21	0.194 0.11	0.3	0.2	2.1
SR 25WY/WMY SR 25VY/VMY	33	48	83 59.2	35	35	M6×9	59 35.2	7.7	26	7	12	B-M6F	7	23	12.5	18	60	7×11×9	4000 (3000)	20.3 11.7	39.5 22.5	0.286 0.103	1.52 0.649	0.175 0.0642	0.942 0.41	0.355 0.201	0.4	0.3	2.7
SR 30W/WM SR 30V/VM	42	60	96.8 67.9	40	40	M8×12	69.3 40.4	8.5	32.5	8	12	B-M6F	9.5	28	16	23	80	7×11×9	4000 (3000)	30 17.2	56.8 32.5	0.494 0.163	2.55 1.08	0.303 0.102	1.57 0.692	0.611 0.352	0.8	0.5	4.3
SR 35W/WM SR 35V/VM	48	70	111 77.6	50	50	M8×12	79 45.7	12.5	36.5	8.5	12	B-M6F	11.5	34	18	27.5	80	9×14×12	4000 (3000)	41.7 23.8	77.2 44.1	0.74 0.259	4.01 1.68	0.454 0.161	2.49 1.07	1.01 0.576	1.2	0.8	6.4
SR 45W	60	86	126	60	60	M10×15	90.5	15	47.5	11.5	16	B-PT1/8	12.5	45	20.5	35.5	105	11×17.5×14	3500	55.3	101	1.1	5.96	0.679	3.69	1.77	2.2	11.3	
SR 55W	68	100	156	75	75	M12×20	117	16.7	54.5	12	16	B-PT1/8	13.5	48	26	38	120	14×20×17	3000	89.1	157	2.27	11.3	1.39	6.98	2.87	3.6	12.8	
SR 70T	85	126	194.6	90	90	M16×25	147.6	24.5	70	12	16	B-PT1/8	15	70	28	47	150	18×26×22	3000	156	266	2.54	13.2	2.18	11.3	4.14	7	22.8	
SR 85T	110	156	180	100	80	M18×30	130	25.5	91.5	27	12	A-PT1/8	18.5	85	35.5	65.5	180	18×26×22	3000	120	224	2.54	15.1	1.25	7.47	5.74	10.1	34.9	
SR 100T	120	178	200	120	100	M20×35	150	29.5	101	32	12	A-PT1/8	19	100	39	70.3	210	22×32×25	3000	148	283	3.95	20.9	1.95	10.3	8.55	14.1	46.4	
SR 120T	110	205	235	160	120	M20×35	180	24	95	14	13.5	B-PT1/4	15	114	45.5	65	230	26×39×30	3000	279	377	5.83	32.9	2.87	16.2	13.7	—	—	
SR 150T	135	250	280	200	160	M20×35	215	24	113	17	13.5	B-PT1/4	22	144	53	77	250	33×48×36	3000	411	537	9.98	55.8	4.92	27.5	24.3	—	—	

Model number coding

SR25 W 2 UU C0 M +1240L Y P T M -II

Model number	Type of LM block	Contamination protection accessory symbol (*1)	Stainless steel LM block	LM rail length (in mm)	Stainless steel LM rail	Symbol for No. of rails used on the same plane (*4)
SR	W	UU	C0	M	+1240L	Y P T M -II
No. of LM blocks used on the same rail	Radial clearance symbol (*2)	Normal (No symbol) Light preload (C1) Medium preload (C0)	Applied to only 25	Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)	Symbol for LM rail jointed use	

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)

Note that the rail mounting holes of the Y type are different from that of non-Y types (not marked with Y).

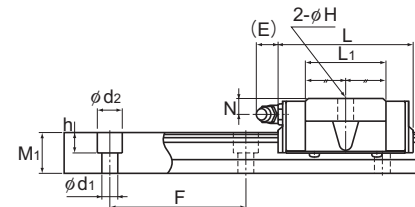
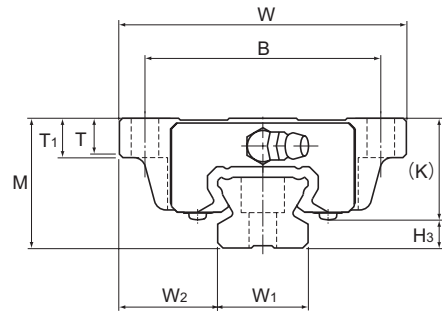
Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.

Those model numbers including and greater than SR85T are semi-standard models. If desiring these models, contact THK.

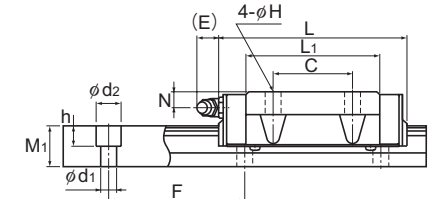
Models SR85T and SR100T are equipped with grease nipple on the side face of the LM block. The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-90.)

Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Models SR-TB, SR-TBM, SR-SB and SR-SBM



Model SR-SB



Model SR-TB

Unit: mm

Model No.	Outer dimensions			LM block dimensions										H ₃	LM rail dimensions					Basic load rating		Static permissible moment kN-m*					Mass			
	Height	Width	Length	B	C	H	L ₁	T	T ₁	K	N	E	Grease nipple		Width	Height	Pitch	Length*	C	C ₀	M _A		M _B		M _C	LM block	LM rail			
	M	W	L												W ₁ ±0.05	W ₂	M ₁	F	d ₁ ×d ₂ ×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m	
SR 15TB/TBM SR 15SB/SBM	24	52	57 40.4	41	26 —	4.5	39.5 22.9	6.1	7	19.5	6	5.5	PB1021B	4.5	15	18.5	12.5	60	3.5×6×4.5	2500 (1240)	9.51 5.39	19.3 11.1	0.0925 0.0326	0.516 0.224	0.0567 0.0203	0.321 0.143	0.113 0.0654	0.2	0.15	1.2
SR 20TB/TBM SR 20SB/SBM	28	59	66.2 47.3	49	32 —	5.5	46.7 27.8	8	9	22	6	12	B-M6F	6	20	19.5	15.5	60	6×9.5×8.5	3000 (1480)	12.5 7.16	25.2 14.4	0.146 0.053	0.778 0.332	0.0896 0.0329	0.481 0.21	0.194 0.11	0.4 0.3	2.1	
SR 25TB/TBMY SR 25SB/SBMY	33	73	83 59.2	60	35 —	7	59 35.2	9.1	10	26	7	12	B-M6F	7	23	25	18	60	7×11×9	3000 (2020)	20.3 11.7	39.5 22.5	0.286 0.103	1.52 0.649	0.175 0.0642	0.942 0.41	0.355 0.201	0.6 0.4	2.7	
SR 30TB/TBM SR 30SB/SBM	42	90	96.8 67.9	72	40 —	9	69.3 40.4	8.7	10	32.5	8	12	B-M6F	9.5	28	31	23	80	7×11×9	3000 (2520)	30 17.2	56.8 32.5	0.494 0.163	2.55 1.08	0.303 0.102	1.57 0.692	0.611 0.352	1.1 0.8	4.3	
SR 35TB/TBM SR 35SB/SBM	48	100	111 77.6	82	50 —	9	79 45.7	11.2	13	36.5	8.5	12	B-M6F	11.5	34	33	27.5	80	9×14×12	3000 (2520)	41.7 23.8	77.2 44.1	0.74 0.259	4.01 1.68	0.454 0.161	2.49 1.07	1.01 0.576	1.5 1	6.4	
SR 45TB	60	120	126	100	60	11	90.5	12.8	15	47.5	11.5	16	B-PT1/8	12.5	45	37.5	35.5	105	11×17.5×14	3000	55.3	101	1.1	5.96	0.679	3.69	1.77	2.5	11.3	
SR 55TB	68	140	156	116	75	14	117	15.3	17	54.5	12	16	B-PT1/8	13.5	48	46	38	120	14×20×17	3000	89.1	157	2.27	11.3	1.39	6.98	2.87	4.2	12.8	

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-90.)
 Static permissible moment*: 1 block: static permissible moment value with 1 LM block
 Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Model number coding

SR25 TB 2 UU C1 +1200L Y H T -II

Model number	Type of LM block	Contamination protection accessory symbol (*1)	LM rail length (in mm)	Applied to only 25	Symbol for LM rail jointed use	Symbol for No. of rails used on the same plane (*4)
No. of LM blocks used on the same rail	Radial clearance symbol (*2)	Normal (No symbol) Light preload (C1) Medium preload (C0)	Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)	Accuracy symbol (*3)		

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
 Note that the rail mounting holes of the Y type are different from that of non-Y types (not marked with Y).

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SR variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

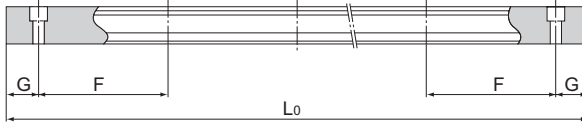


Table1 Standard Length and Maximum Length of the LM Rail for Model SR

Unit: mm

Model No.	SR 15	SR 20	SR 25	SR 30	SR 35	SR 45	SR 55	SR 70	SR 85	SR 100	SR 120	SR 150
LM rail standard length (L_0)	160	220	220	280	280	570	780	1270	1520	1550	1700	1600
	220	280	280	360	360	675	900	1570	2060	1970	2390	2100
	280	340	340	440	440	780	1020	2020	2600	2600		
	340	400	400	520	520	885	1140	2620				
	400	460	460	600	600	990	1260					
	460	520	520	680	680	1095	1380					
	520	580	580	760	760	1200	1500					
	580	640	640	840	840	1305	1740					
	640	700	700	920	920	1410	1860					
	700	760	760	1000	1000	1515	1980					
	760	820	820	1080	1080	1725	2100					
	820	940	940	1160	1160	1830	2220					
	940	1000	1000	1240	1240	1935	2340					
	1000	1060	1060	1320	1320	2040	2460					
	1060	1120	1120	1400	1400	2145	2580					
	1120	1180	1180	1480	1480	2250	2700					
	1180	1240	1240	1640	1640	2355	2820					
	1240	1300	1300	1720	1720	2460	2940					
	1300	1360	1360	1800	1800	2565						
	1360	1420	1420	1880	1880	2670						
	1420	1480	1480	1960	1960	2775						
	1480	1540	1540	2040	2040	2880						
	1540	1600	1600	2120	2120	2985						
		1660	1660	2200	2200							
		1720	1720	2280	2280							
		1780	1780	2360	2360							
		1840	1840	2440	2440							
		1900	1900	2520	2520							
		1960	1960	2600	2600							
		2020	2020	2680	2680							
	2080	2080	2760	2760								
	2140	2140	2840	2840								
		2200	2920	2920								
		2260										
		2320										
		2380										
		2440										
Standard pitch F	60	60	60	80	80	105	120	150	180	210	230	250
G	20	20	20	20	20	22.5	30	35	40	40	45	50
Max length	2500 (1240)	3000 (1480)	3000 (2020)	3000 (2520)	3000 (2520)	3000	3000	3000	3000	3000	3000	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.

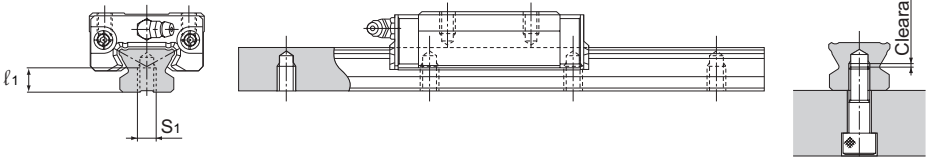
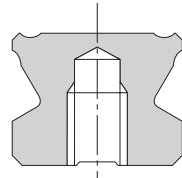
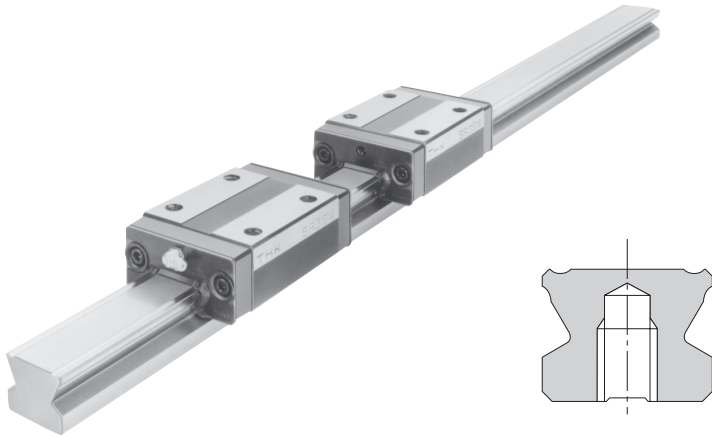
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

Note3) Those model numbers including and greater than SR85T are semi-standard models. If desiring these models, contact THK.

Note4) The figures in the parentheses indicate the maximum lengths of stainless steel made models.

Tapped-hole LM Rail Type of Model SR

The model SR variations include a type with its LM rail bottom tapped. This type is useful when desiring to mount the LM Guide from the bottom of the base and when desiring to increase the contamination protection.



- (1) A tapped-hole LM rail type is available only for high accuracy or lower grades.
- (2) Determine the bolt length so that a clearance of 2 to 5 mm is secured between the bolt end and the bottom of the tap (effective tap depth). (See figure above.)
- (3) For standard pitches of the taps, see Table1 on B-90.

Table2 Dimensions of the LM Rail Tap

Unit: mm

Model No.	S ₁	Effective tap depth l_1
SR 15	M5	7
SR 20	M6	9
SR 25	M6	10
SR 30	M8	14
SR 35	M8	16
SR 45	M12	20
SR 55	M14	22

Model number coding

SR30 W2UU +1000LH K

Symbol for tapped-hole LM rail type