



GLOBAL STANDARD PRODUCTS

LM Guide **GK Series**

LM blocks and LM rails available for individual sale



LM Guide GK Series

Interchangeable LM blocks and LM rails

What is the GK Series?

With the GK Series, LM blocks and LM rails of the same model type and size are interchangeable, so customers can flexibly combine them to suit their needs. These LM blocks and LM rails can be purchased individually.

THK offers a uniquely varied lineup of 9 model types as GK Series products.

Long-term maintenance-free operation

Caged type



Four-way equal load type
Radial type

Full-Ball type

Super-high rigidity
Ultra-high rigidity

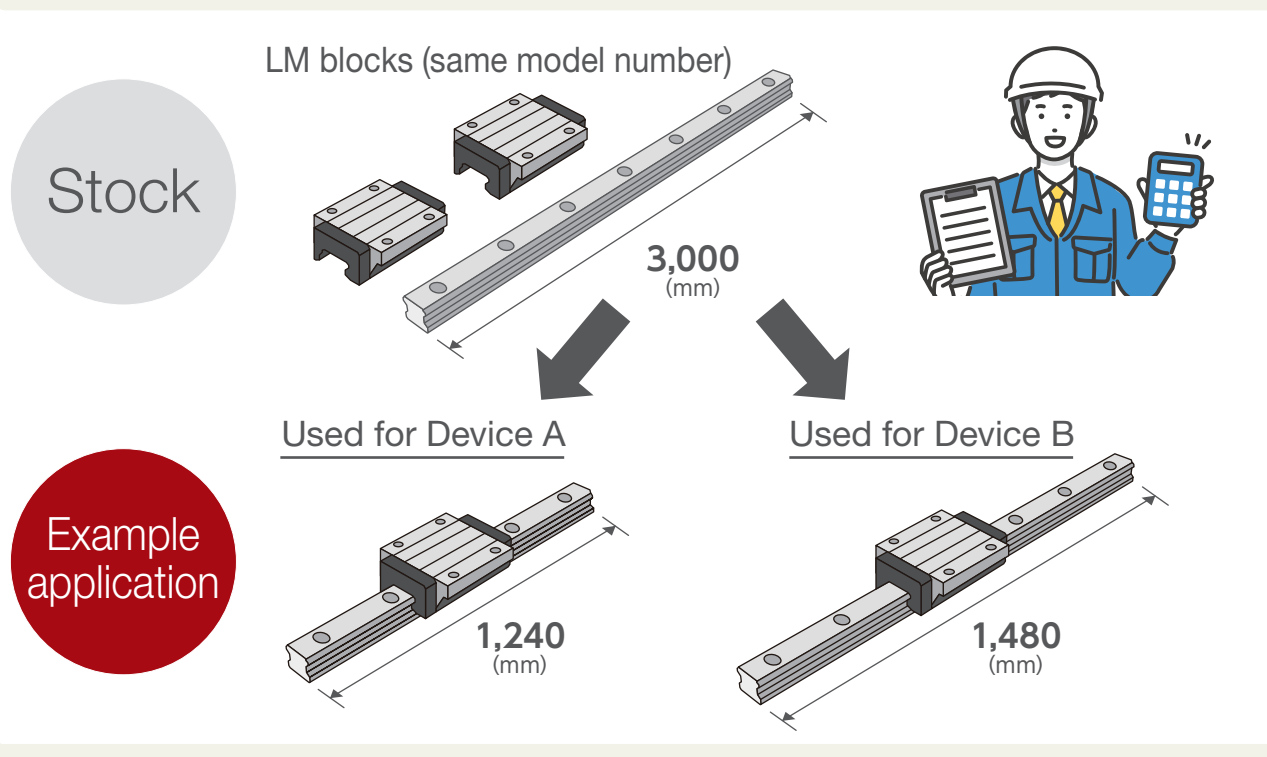
Roller type

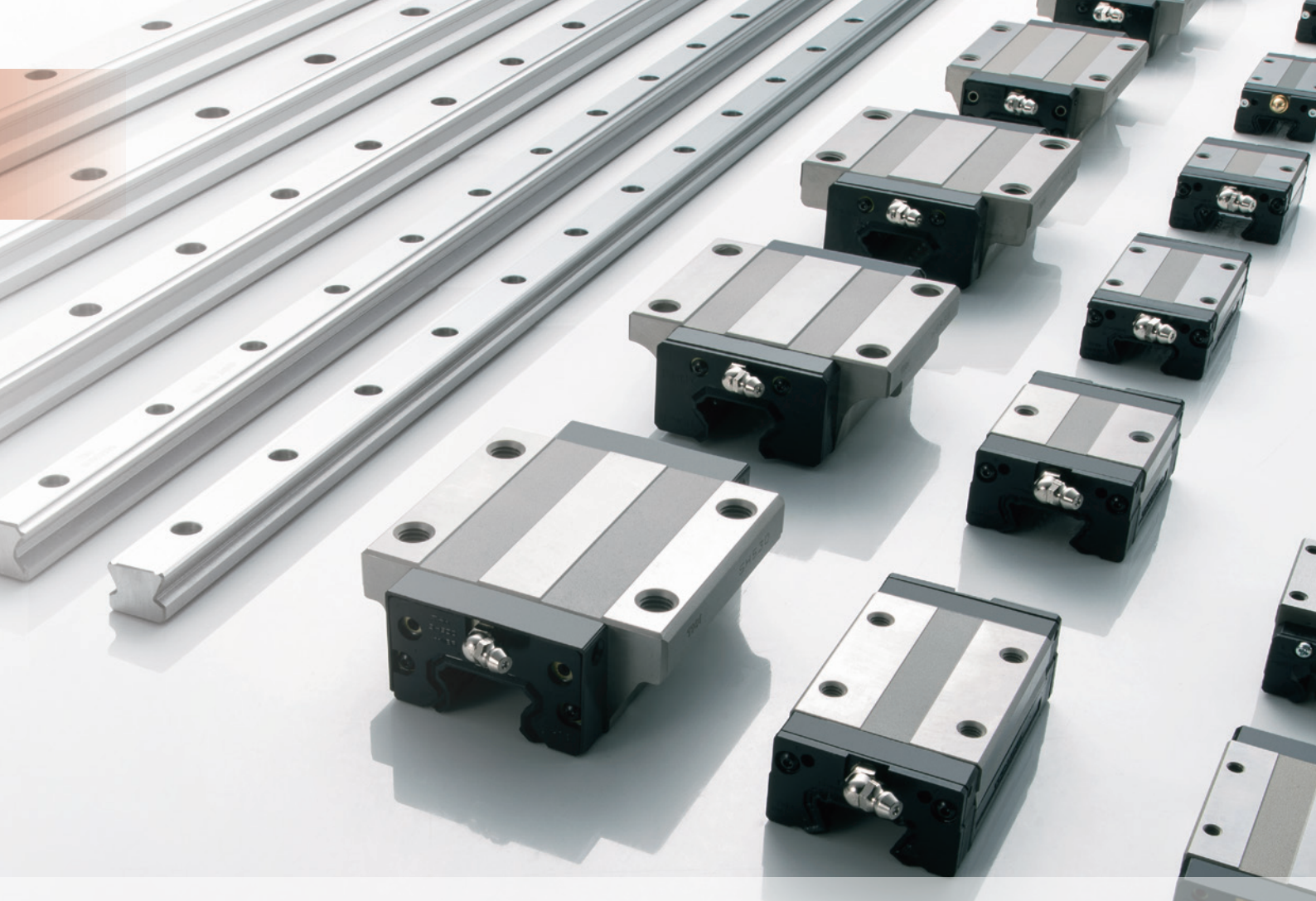
Compact/Wide
Stainless steel

Miniature type

Flexibly Combinable (Inventory Utilization Example)

You can use your stock of LM Guide components by cutting longer LM rails down to the lengths you need and assembling separate LM blocks onto them.





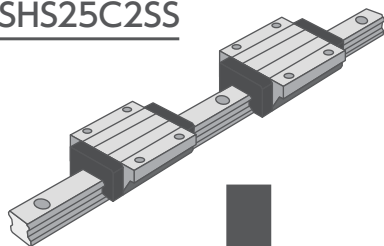
Adaptable to Design Changes (Design Change Example)

Short Lead Times (for Emergency Replacements)

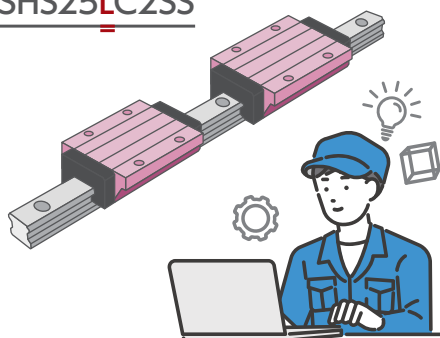
Increase rigidity and service life by simply switching over to a long type LM block.

Current
LM Guide

SHS25C2SS



SHS25LC2SS



Design change to
increase rigidity and
service life

With a ready inventory of LM blocks and LM rails, THK can quickly deliver the type and quantity that customers need when they need them.



Get replacement
parts from inventory in a hurry



Minimize equipment downtime



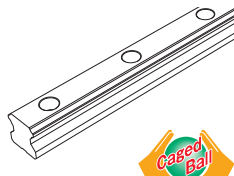
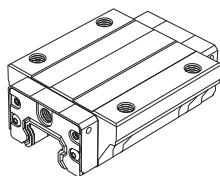
Full Product Lineup

SHS

Global Standard Size/Long-Term Maintenance-Free Operation

p. 5

Sizes: 15, 20, 25, 30, 35, 45, 55, 65



Features

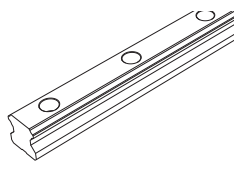
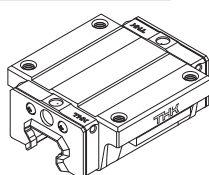
- Four-way equal load
- Self-adjustment capability
- ISO-compliant dimensions
- Available in stainless steel (sizes 15 to 25)

HSR

Global Standard

p. 9

Sizes: 8X, 10X, 12X, 15, 20, 25, 30, 35, 45, 55, 65X



Features

- Four-way equal load
- Self-adjustment capability
- De facto global standard
- Available in stainless steel¹ (sizes 15 to 35)

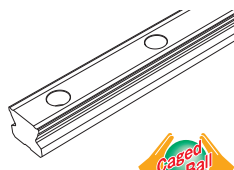
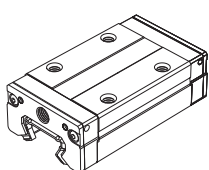
¹ Models HSR8X to 12X are made of stainless steel.

SSR

Radial Type/Long-Term Maintenance-Free Operation

p. 15

Sizes: 15X, 20X, 25X, 30X, 35X



Features

- Compact
- Self-adjustment capability
- Available in stainless steel (sizes 15X to 30X)

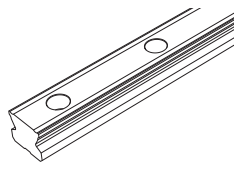
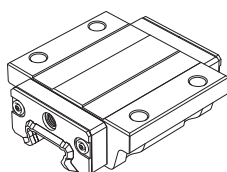
Note: The LM rails for the Model SSR and Model SR are shared.

SR

Radial Type

p. 19

Sizes: 15, 20, 25, 30, 35, 45, 55



Features

- Compact
- Self-adjustment capability
- Available in stainless steel (sizes 15 to 35)

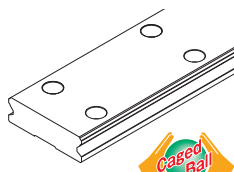
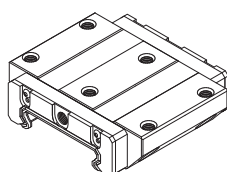
Note: The LM rails for the Model SR and Model SSR are shared.

SHW

Wide Rails/Long-Term Maintenance-Free Operation

p. 23

Sizes: 21, 27, 35, 50



Features

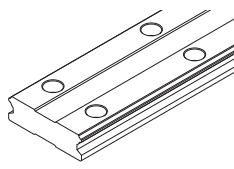
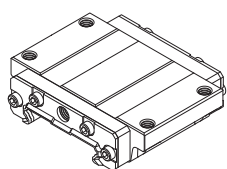
- Four-way equal load
- Self-adjustment capability
- Wide with a low center of gravity

HRW

Wide-Rail

p. 27

Sizes: 17, 21, 27, 35, 50, 60



Features

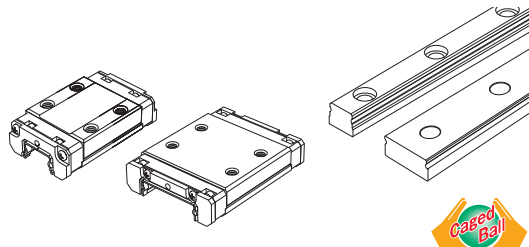
- Four-way equal load
- Self-adjustment capability
- Wide with a low center of gravity

SRS

Miniature/Long-Term Maintenance-Free Operation

p. 31

Sizes: 7, 7W, 9X(G), 9W(G), 12(G), 12W(G), 15(G), 15W(G)



Features

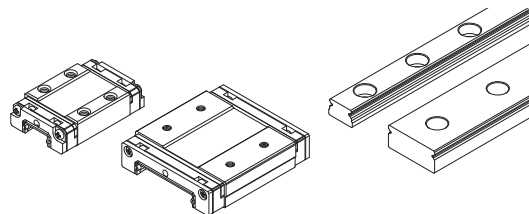
- Compact type/Wide type selectable
- Stainless steel
- Caged Ball type/Full-Ball type selectable

RSX

Miniature

p. 35

Sizes: 7, 7W, 9, 9W, 12, 12W, 15, 15W



Features

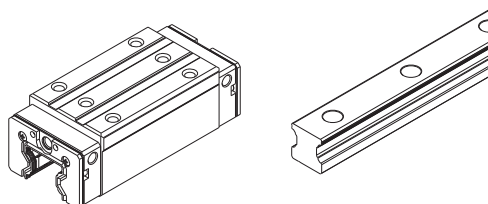
- Compact type/Wide type selectable
- Stainless steel
- Retains Balls

HDR

LM Guide Suited for Single-Axis Applications

p. 39

Sizes: 15, 20, 25, 30, 35, 45, 55, 65



Features

- High rigidity in rolling direction
- Four-way equal load
- ISO-compliant dimensions¹
- Extensive lineup of block types

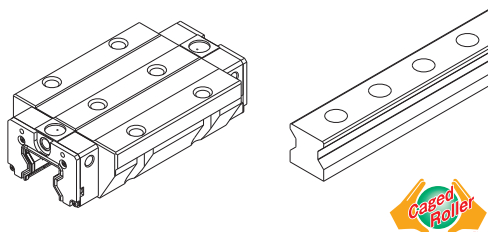
¹ Models US/UT and UV/UW do not have ISO-compliant dimensions.

SRG

Ultra-High Rigidity/Long-Term Maintenance-Free Operation

p. 45

Sizes: 15X, 20X, 25X, 30X, 35, 45, 55, 65



Features

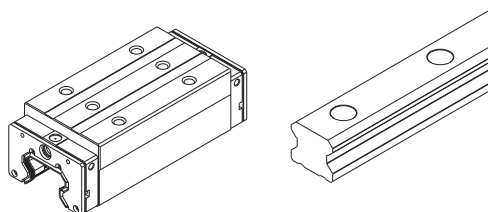
- Roller type
- Four-way equal load
- ISO-compliant dimensions
- Wide array of options

HRX

Super-high rigidity

p. 51

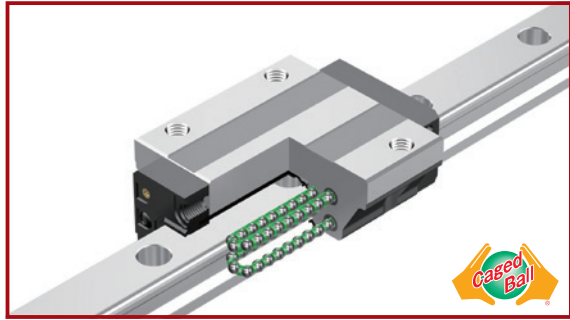
Sizes: 25, 30, 35, 45, 55, 65



Features

- Roller type
- Four-way equal load
- ISO-compliant dimensions
- Smooth motion through skewing prevention

Model SHS

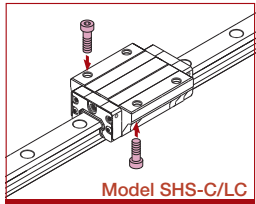


Global Standard Size/Long-Term Maintenance-Free Operation

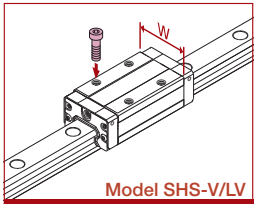
Sizes: 15, 20, 25, 30, 35, 45, 55, 65

- Four-way equal load
- Self-adjustment capability
- ISO-compliant dimensions
- Available in stainless steel (sizes 15 to 25)

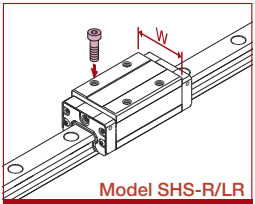
Block Types/Lineup



Model SHS-C/LC
The flange of the LM block has tapped holes. It can be mounted from the top or the bottom.



Model SHS-V/LV
The LM block has a smaller width (W) and tapped holes. It is used in places where the space for table width is limited.



Model SHS-R/LR
The LM block has a smaller width (W) and tapped holes. It is used in places where the space for table width is limited. It has the same height dimension as the Model HSR-R.

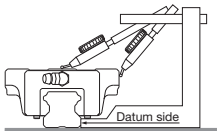
Model No.	Block type					
	Standard type			Long type		
	C	V	R	LC	LV	LR
15	○	○	○	○	○	—
20	○	○	—	○	○	—
25	○	○	○	○	○	○
30	○	○	○	○	○	○
35	○	○	○	○	○	○
45	○	○	○	○	○	○
55	○	○	○	○	○	○
65	○	○	—	○	○	—

○ : Available — : Unavailable

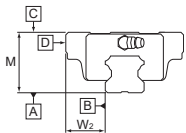
Accuracy Standards

Unit: mm

Model No.	Accuracy standard		Normal grade	Precision grade
	Item		No symbol	P
15 20	Dimensional tolerance in height M		±0.07	0 -0.03
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02	0.006
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Dimensional tolerance in width W ₂		±0.06	0 -0.02
	Difference in width W ₂		0.02	0.006
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
25 30 35	Dimensional tolerance in height M		±0.08	0 -0.04
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02	0.007
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Dimensional tolerance in width W ₂		±0.07	0 -0.03
	Difference in width W ₂		0.025	0.007
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
45 55	Dimensional tolerance in height M		±0.08	0 -0.05
	Difference in height M	Multiple blocks on a single rail (1 set)	0.025	0.007
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Dimensional tolerance in width W ₂		±0.07	0 -0.04
	Difference in width W ₂		0.03	0.007
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
65	Dimensional tolerance in height M		±0.08	0 -0.05
	Difference in height M	Multiple blocks on a single rail (1 set)	0.03	0.01
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Dimensional tolerance in width W ₂		±0.08	0 -0.05
	Difference in width W ₂		0.03	0.01
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	



Running parallelism



Measurement surface

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value	
Above	Up to	Normal grade	Precision grade
		No symbol	P
—	50	5	2
50	80	5	2
80	125	5	2
125	200	5	2
200	250	6	2.5
250	315	7	3
315	400	8	3.5
400	500	9	4.5
500	630	11	5
630	800	12	6
800	1,000	13	6.5
1,000	1,250	15	7.5
1,250	1,600	16	8
1,600	2,000	18	8.5
2,000	2,500	20	9.5
2,500	3,150	21	11
3,150	4,000	23	12
4,000	5,000	24	13
5,000	6,000	25	14
6,000	7,000	26	15

Radial Clearance Specifications Unit: μm

Code	Normal	Light preload	Medium preload
Model No.	No symbol	C1	C0
15	-5 to 0	-12 to -5	—
20	-6 to 0	-12 to -6	-18 to -12
25	-8 to 0	-14 to -8	-20 to -14
30	-9 to 0	-17 to -9	-27 to -17
35	-11 to 0	-19 to -11	-29 to -19
45	-12 to 0	-22 to -12	-32 to -22
55	-15 to 0	-28 to -16	-38 to -28
65	-18 to 0	-34 to -22	-45 to -34

Model Number Coding

LM block

SHS25 LC 1 SS C0 F M - N.GRS - P (GK)BLOCK

Model No.	Type of LM block	Number of LM blocks (only 1)	Contamination prevention accessory symbol	Radial clearance symbol	Stainless steel LM block	LM block with surface treatment	Anti-rust oil only	Accuracy symbol	GK series LM block symbol
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Standard Specifications

Standard specifications	
Accuracy grade	Normal grade/Precision grade
Radial clearance	Normal/C1/C0
Material	Carbon steel/Stainless steel: 15 to 25
Seal options	SS
Lubrication	AFB-LF Grease
Lubrication type	Front lubrication

LM rail

SHS25 - 3000L K T F M - P (GK)RAIL

Model No.	LM rail length (in mm)	Symbol for tapped-hole LM rail	Symbol for LM rail jointed use	Stainless steel LM rail	LM rail with surface treatment	Accuracy symbol	GK series LM rail symbol
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Custom Range

Custom items	
Surface treatment	AP-C
Seal options	UU/DD/ZZ/KK/HH/GG/PP
LM rail specifications	Tapped-hole rail type ¹ /Joint specifications ² /Steel tape
LM rail options	CV caps: 20 to 65 and C caps: 15 only ³
Lubrication	No grease (anti-rust oil only)
Lubrication options	QZ Lubricator
Lubrication type	Side lubrication ⁴
Contamination protection options	Bellows specifications ³

¹ See p. 58 for information about tapped-hole type rail specifications.

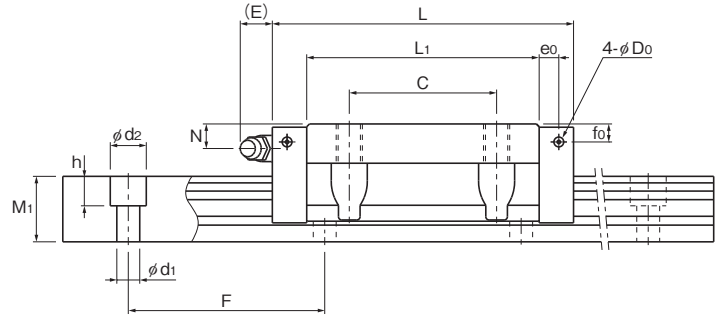
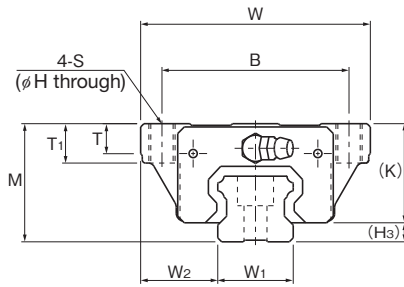
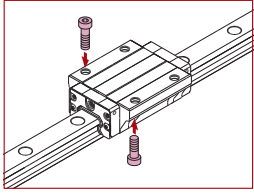
² See p. 59 to 60 for information about joint specification rails.

³ CV caps, C caps, and dedicated bellows must be acquired separately from the LM Guide.

⁴ Contact THK if you desire side lubrication.

Note: See p.55 to 60 for more information on options.

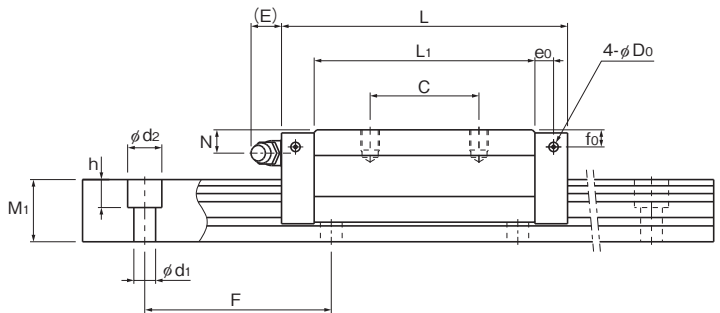
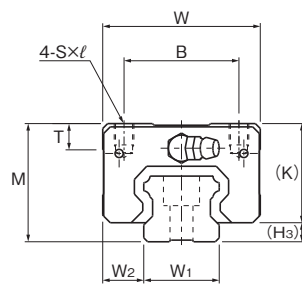
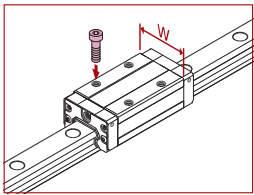
Model SHS-C/LC



Unit: mm

Model No.	External dimensions			LM block dimensions											Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN·m					Mass LM block (kg)	
	Height M	Width W	Length L	B	C	S	H	L ₁	T	T ₁	K	N	E	Grease nipple	e ₀	f ₀	D ₀			C (kN)	C ₀ (kN)	M _A		M _B		M _C		
SHS	15C 15CM	24	47	64.4	38	30	M5	4.4	48	5.9	8	21	5.5	5.5	PB1021B	4	4	3	3	16	14.2	24.2	0.175	0.898	0.175	0.898	0.16	0.23
	15LC 15LCM	24	47	79.4	38	30	M5	4.4	63	5.9	8	21	5.5	5.5	PB1021B	4	4	3	3	16	17.2	31.9	0.296	1.43	0.296	1.43	0.212	0.29
	20C 20CM	30	63	79	53	40	M6	5.4	59	7.2	10	25.4	6.5	12	B-M6F	4.3	5.3	3	4.6	21.5	22.3	38.4	0.334	1.75	0.334	1.75	0.361	0.46
	20LC 20LCM	30	63	98	53	40	M6	5.4	78	7.2	10	25.4	6.5	12	B-M6F	4.3	5.3	3	4.6	21.5	28.1	50.3	0.568	2.8	0.568	2.8	0.473	0.61
	25C 25CM	36	70	92	57	45	M8	6.8	71	9.1	12	30.2	7.5	12	B-M6F	4.5	5.5	3	5.8	23.5	31.7	52.4	0.566	2.75	0.566	2.75	0.563	0.72
	25LC 25LCM	36	70	109	57	45	M8	6.8	88	9.1	12	30.2	7.5	12	B-M6F	4.5	5.5	3	5.8	23.5	36.8	64.7	0.848	3.98	0.848	3.98	0.696	0.89
	30C 30LC	42	90	106 131	72	52	M10	8.5	80 105	11.5	15	35	8	12	B-M6F	5.8	6	5.2	7.0	31	44.8 54.2	66.6 88.8	0.786 1.36	4.08 6.6	0.786 1.36	4.08 6.6	0.865 1.15	1.34 1.66
	35C 35LC	48	100	122 152	82	62	M10	8.5	93 123	11.5	15	40.5	8	12	B-M6F	6.5	5.5	5.2	7.5	33	62.3 72.9	96.6 127	1.38 2.34	6.76 10.9	1.38 2.34	6.76 10.9	1.53 2.01	1.9 2.54
	45C 45LC	60	120	140 174	100	80	M12	10.5	106 140	14.1	18	51.1	10.5	16	B-PT1/8	8	8	5.2	8.9	37.5	82.8 100	126 166	2.05 3.46	10.1 16.3	2.05 3.46	10.1 16.3	2.68 3.53	3.24 4.19
	55C 55LC	70	140	171 213	116	95	M14	12.5	131 173	16	21	57.3	11	16	B-PT1/8	10	8	5.2	12.7	43.5	128 161	197 259	3.96 6.68	19.3 31.1	3.96 6.68	19.3 31.1	4.9 6.44	5.35 6.97
65C 65LC	90	170	221 272	142	110	M16	14.5	175 226	18.8	24	71	19	16	B-PT1/8	10	12	5.2	19.0	53.5	205 253	320 408	8.26 13.3	40.4 62.6	8.26 13.3	40.4 62.6	9.4 11.9	10.7 13.7	

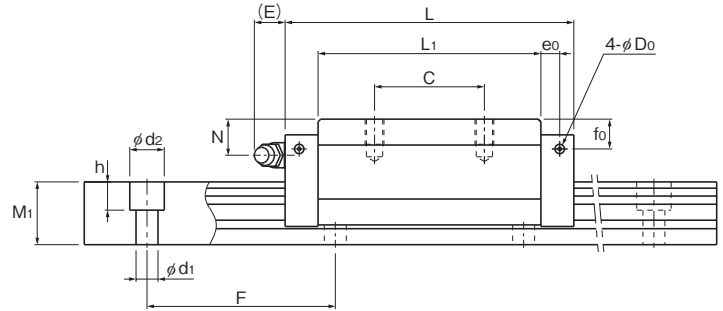
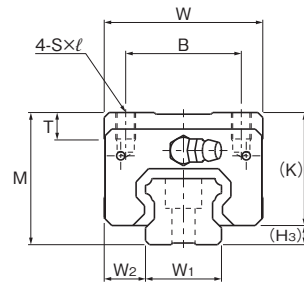
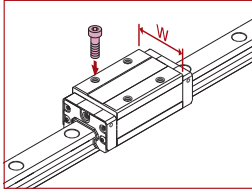
Model SHS-V/LV



Unit: mm

Model No.	External dimensions			LM block dimensions											Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN-m					Mass
	Height M	Width W	Length L	B	C	S x l	L ₁	T	K	N	E	Grease nipple	e ₀	f ₀	D ₀	C (kN)	C ₀ (kN)			M _A		M _B		M _C	LM block (kg)		
																				1 block	2 blocks	1 block	2 blocks	1 block			
15V 15VM	24	34	64.4	26	26	M4 × 4	48	5.9	21	5.5	5.5	PB1021B	4	4	3	3	9.5	14.2	24.2	0.175	0.898	0.175	0.898	0.16	0.19		
15LV 15LVM	24	34	79.4	26	34	M4 × 4	63	5.9	21	5.5	5.5	PB1021B	4	4	3	3	9.5	17.2	31.9	0.296	1.43	0.296	1.43	0.212	0.22		
20V 20VM	30	44	79	32	36	M5 × 5	59	8	25.4	6.5	12	B-M6F	4.3	5.3	3	4.6	12	22.3	38.4	0.334	1.75	0.334	1.75	0.361	0.35		
20LV 20LVM	30	44	98	32	50	M5 × 5	78	8	25.4	6.5	12	B-M6F	4.3	5.3	3	4.6	12	28.1	50.3	0.568	2.8	0.568	2.8	0.473	0.46		
25V 25VM	36	48	92	35	35	M6 × 6.5	71	8	30.2	7.5	12	B-M6F	4.5	5.5	3	5.8	12.5	31.7	52.4	0.566	2.75	0.566	2.75	0.563	0.54		
25LV 25LVM	36	48	109	35	50	M6 × 6.5	88	8	30.2	7.5	12	B-M6F	4.5	5.5	3	5.8	12.5	36.8	64.7	0.848	3.98	0.848	3.98	0.696	0.67		
30V 30LV	42	60	106 131	40	40 60	M8 × 8	80 105	8	35	8	12	B-M6F	5.8	6	5.2	7	16	44.8 54.2	66.6 88.8	0.786 1.36	4.08 6.6	0.786 1.36	4.08 6.6	0.865 1.15	0.94 1.16		
35V 35LV	48	70	122 152	50	50 72	M8 × 10	93 123	14.7	40.5	8	12	B-M6F	6.5	5.5	5.2	7.5	18	62.3 72.9	96.6 127	1.38 2.34	6.76 10.9	1.38 2.34	6.76 10.9	1.53 2.01	1.4 1.84		
45V 45LV	60	86	140 174	60	60 80	M10 × 15	106 140	14.9	51.1	10.5	16	B-PT1/8	8	8	5.2	8.9	20.5	82.8 100	126 166	2.05 3.46	10.1 16.3	2.05 3.46	10.1 16.3	2.68 3.53	2.54 3.19		
55V 55LV	70	100	171 213	75	75 95	M12 × 15	131 173	19.4	57.3	11	16	B-PT1/8	10	8	5.2	12.7	23.5	128 161	197 259	3.96 6.68	19.3 31.1	3.96 6.68	19.3 31.1	4.9 6.44	4.05 5.23		
65V 65LV	90	126	221 272	76	70 120	M16 × 20	175 226	19.5	71	19	16	B-PT1/8	10	12	5.2	19	31.5	205 253	320 408	8.26 13.3	40.4 62.6	8.26 13.3	40.4 62.6	9.4 11.9	8.41 10.7		

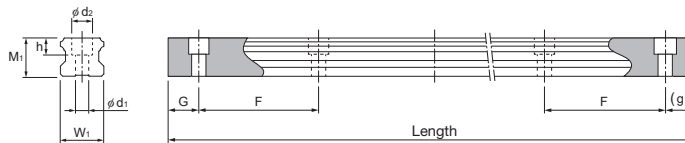
Model SHS-R/LR



Unit: mm

Model No.	External dimensions			LM block dimensions									Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN·m					Mass	
	Height	Width	Length	B	C	S × ℓ	L ₁	T	K	N	E	Grease nipple	e ₀	f ₀	D ₀			C (kN)	C ₀ (kN)	M _A	M _B	M _C	LM block			
SHS	15R 15RM	28	34	64.4	26	26	M4 × 5	48	5.9	25	9.5	5.5	PB1021B	4	8	3	3	9.5	14.2	24.2	0.175	0.898	0.175	0.898	0.16	0.22
	25R 25RM	40	48	92	35	35	M6 × 8	71	8	34.2	11.5	12	B-M6F	6	9.5	3	5.8	12.5	31.7	52.4	0.566	2.75	0.566	2.75	0.563	0.66
	25LR 25LRM	40	48	109	35	50	M6 × 8	88	8	34.2	11.5	12	B-M6F	6	9.5	3	5.8	12.5	36.8	64.7	0.848	3.98	0.848	3.98	0.696	0.8
	30R 30LR	45	60	106 131	40	40 60	M8 × 10	80 105	8	38	11	12	B-M6F	5.8	9	5.2	7	16	44.8 54.2	66.6 88.8	0.786 1.36	4.08 6.6	0.786 1.36	4.08 6.6	0.865 1.15	1.04 1.36
	35R 35LR	55	70	122 152	50	50 72	M8 × 12	93 123	14.7	47.5	15	12	B-M6F	6.5	12.5	5.2	7.5	18	62.3 72.9	96.6 127	1.38 2.34	6.76 10.9	1.38 2.34	6.76 10.9	1.53 2.01	1.8 2.34
	45R 45LR	70	86	140 174	60	60 80	M10 × 17	106 140	14.9	61.1	20.5	16	B-PT1/8	8	18	5.2	8.9	20.5	82.8 100	126 166	2.05 3.46	10.1 16.3	2.05 3.46	10.1 16.3	2.68 3.53	3.24 4.19
	55R 55LR	80	100	171 213	75	75 95	M12 × 18	131 173	19.4	67.3	21	16	B-PT1/8	10	18	5.2	12.7	23.5	128 161	197 259	3.96 6.68	19.3 31.1	3.96 6.68	19.3 31.1	4.9 6.44	5.05 6.57

LM Rail



Unit: mm

Model No.	LM rail dimensions								Mass LM rail (kg/m)
	W ₁ 0 -0.05	Height M ₁	Pitch F	d ₁ × d ₂ × h	Standard length (G, g)	Maximum length Carbon steel	Maximum length Stainless steel	Standard and maximum lengths of TC joint rails (G, g)	
SHS15	15	13	60	4.5 × 7.5 × 5.3	3,000 (20, 40)	5,000	1,540	2,940 (30, 30)	1.3
SHS20	20	16.5	60	6 × 9.5 × 8.5	3,000 (20, 40), 5,000 (20, 60)	7,000	2,300	2,940 (30, 30)	2.3
SHS25	23	20	60	7 × 11 × 9	3,000 (20, 40), 5,000 (20, 60)	7,000	2,500	2,940 (30, 30)	3.2
SHS30	28	23	80	9 × 14 × 12	3,000 (20, 20), 5,000 (20, 20)	7,000	—	2,960 (40, 40)	4.5
SHS35	34	26	80	9 × 14 × 12	3,000 (20, 20), 5,000 (20, 20)	7,000	—	2,960 (40, 40)	6.2
SHS45	45	32	105	14 × 20 × 17	3,000 (22.5, 37.5), 5,000 (22.5, 42.5)	7,000	—	2,940 (52.5, 52.5)	10.4
SHS55	53	38	120	16 × 23 × 20	3,000 (30, 90), 5,000 (30, 50)	7,000	—	3,000 (60, 60)	14.5
SHS65	63	53	150	18 × 26 × 22	3,000 (35, 115), 5,000 (35, 15)	7,000	—	3,000 (75, 75)	23.7

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

Model HSR

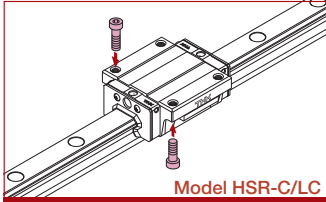
Global Standard

Sizes: 8X, 10X, 12X, 15, 20, 25, 30, 35, 45, 55, 65X

- Four-way equal load
- Self-adjustment capability
- De facto global standard
- Available in stainless steel¹ (sizes 15 to 35)

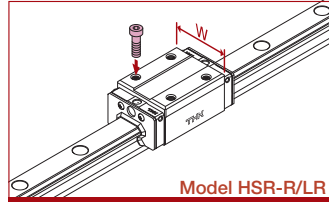
¹ Models HSR8X to 12X are made of stainless steel.

Block Types/Lineup



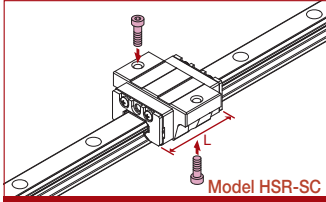
Model HSR-C/LC

The flange of the LM block has tapped holes. It can be mounted from the top or the bottom.



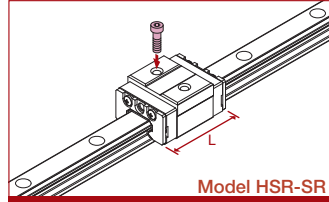
Model HSR-R/LR

With this type, the LM block has a smaller width (W) and tapped holes. It is used in places where the space for table width is limited.



Model HSR-SC

This type has a shorter overall LM block length (L) than the Model HSR-C.



Model HSR-SR

This type has a shorter overall LM block length (L) than the Model HSR-R.

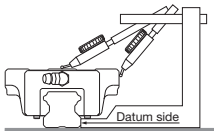
Model No.	Block type					
	Short type		Standard type		Long type	
	SC	SR	C	R	LC	LR
8X	○	○	○	○	○	○
10X	○	○	○	○	○	○
12X	○	○	○	○	○	○
15	—	—	○	○	○	○
20	—	—	○	○	○	○
25	—	—	○	○	○	○
30	—	—	○	○	○	○
35	—	—	○	○	○	○
45	—	—	○	○	○	○
55	—	—	○	○	○	○
65X	—	—	○	○	○	○

○ : Available — : Unavailable

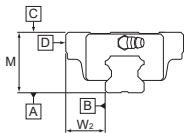
Accuracy Standards

Unit: mm

Model No.	Accuracy standard		Normal grade	Precision grade
	Item		No symbol	P
8X 10X 12X	Difference in height M	Dimensional tolerance in height M	±0.07	±0.015
		Multiple blocks on a single rail (1 set)	0.015	0.005
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Difference in width W ₂	Dimensional tolerance in width W ₂	±0.04	±0.01
		Difference in width W ₂	0.02	0.006
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
15 20	Difference in height M	Dimensional tolerance in height M	±0.07	0 -0.03
		Multiple blocks on a single rail (1 set)	0.02	0.006
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Difference in width W ₂	Dimensional tolerance in width W ₂	±0.06	0 -0.02
		Difference in width W ₂	0.02	0.006
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
25 30 35	Difference in height M	Dimensional tolerance in height M	±0.08	0 -0.04
		Multiple blocks on a single rail (1 set)	0.02	0.007
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Difference in width W ₂	Dimensional tolerance in width W ₂	±0.07	0 -0.03
		Difference in width W ₂	0.025	0.007
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
45 55	Difference in height M	Dimensional tolerance in height M	±0.08	0 -0.05
		Multiple blocks on a single rail (1 set)	0.025	0.007
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Difference in width W ₂	Dimensional tolerance in width W ₂	±0.07	0 -0.04
		Difference in width W ₂	0.03	0.007
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
65X	Difference in height M	Dimensional tolerance in height M	±0.08	0 -0.05
		Multiple blocks on a single rail (1 set)	0.03	0.01
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Difference in width W ₂	Dimensional tolerance in width W ₂	±0.08	0 -0.05
		Difference in width W ₂	0.03	0.01
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	



Running parallelism



Measurement surface

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value	
Above	Up to	Normal grade No symbol	Precision grade P
—	50	5	2
50	80	5	2
80	125	5	2
125	200	5	2
200	250	6	2.5
250	315	7	3
315	400	8	3.5
400	500	9	4.5
500	630	11	5
630	800	12	6
800	1,000	13	6.5
1,000	1,250	15	7.5
1,250	1,600	16	8
1,600	2,000	18	8.5
2,000	2,500	20	9.5
2,500	3,150	21	11
3,150	4,000	23	12
4,000	5,000	24	13
5,000	6,000	25	14
6,000	7,000	26	15

Radial Clearance Specifications Unit: μm

Code	Normal	Light preload	Medium preload
Model No.	No symbol	C1	C0
8X	-1 to +1	-4 to -1	—
10X	-2 to +2	-5 to -1	—
12X	-3 to +3	-6 to -2	—
15	-4 to +2	-12 to -4	—
20	-5 to +2	-14 to -5	-23 to -14
25	-6 to +3	-16 to -6	-26 to -16
30	-7 to +4	-19 to -7	-31 to -19
35	-8 to +4	-22 to -8	-35 to -22
45	-10 to +5	-25 to -10	-40 to -25
55	-12 to +5	-29 to -12	-46 to -29
65X	-14 to +7	-32 to -14	-50 to -32

Model Number Coding

LM block: HSR 8X to 12X

HSR12X SC 1 UU C1 M - N.GRS - P (GK)BLOCK

Model No.
Type of LM block
Number of LM blocks (only 1)
Contamination prevention accessory symbol
Radial clearance symbol
Accuracy symbol
Anti-rust oil only
Stainless steel LM block
GK series LM block symbol

LM rail: HSR 8X to 12X

HSR12X - 1480L W T M - P (GK)RAIL

Model No.
LM rail length (in mm)
Symbol for tapped-hole LM rail type
Symbol for LM rail jointed use
Accuracy symbol
Stainless steel LM rail
GK series LM rail symbol

LM block: HSR15 to 65X

HSR25 LC 1 SS C0 F M - N.GRS - P (GK)BLOCK

Model No.
Type of LM block
Number of LM blocks (only 1)
Contamination prevention accessory symbol
Radial clearance symbol
Accuracy symbol
Anti-rust oil only
Stainless steel LM block
LM block with surface treatment
GK series LM block symbol

LM rail: HSR15 to 65

HSR25 - 3000L K T F M - P (GK)RAIL

Model No.
LM rail length (in mm)
Symbol for tapped-hole LM rail
Symbol for LM rail jointed use
Accuracy symbol
Stainless steel LM rail
LM rail with surface treatment
GK series LM rail symbol

Standard Specifications: HSR 8X to 12X

Standard specifications	
Accuracy grade	Normal grade/Precision grade
Radial clearance	Normal/C1
Material	Stainless steel
Seal options	UU
Lubrication	AFF Grease
Lubrication type	Front lubrication

Custom Range

Custom items	
Seal options	SS
LM rail specifications	Tapped-hole rail type ¹ /Joint specifications ²
LM rail options	C caps: 12X only ³
Lubrication	No grease (anti-rust oil only)

Standard Specifications: HSR15 to 65X

Standard specifications	
Accuracy grade	Normal grade/Precision grade
Radial clearance	Normal/C1/C0
Material	Carbon steel/Stainless steel: 15 to 35
Seal options	SS
Lubrication	AFB-LF Grease
Lubrication type	Front lubrication

Custom Range

Custom items	
Surface treatment	AP-C
Seal options	UU/DD/ZZ/KK/HH/LL/RR/GG: 25 only
LM rail specifications	Tapped-hole rail type ¹ /Joint specifications ² /Steel tape
LM rail options	CV caps: 20 to 65 and C caps: 15 only ³
Lubrication	No grease (anti-rust oil only)
Lubrication options	QZ Lubricator
Lubrication type	Side lubrication ⁴
Contamination protection options	Bellows specifications ³

¹ See p. 58 for information about tapped-hole type rail specifications.

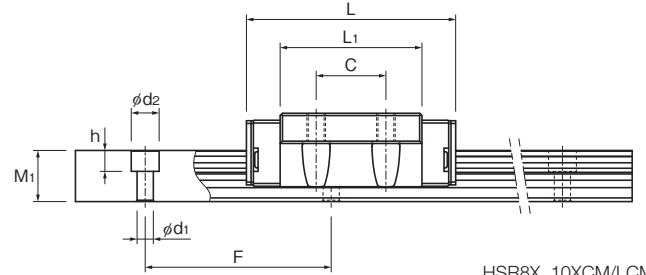
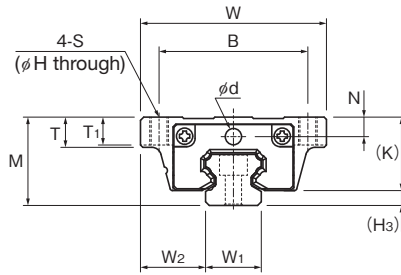
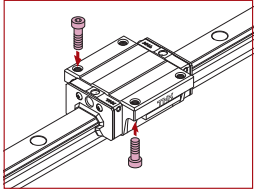
² See p. 59 to 60 for information about joint specification rails.

³ CV caps, C caps, and dedicated bellows must be acquired separately from the LM Guide.

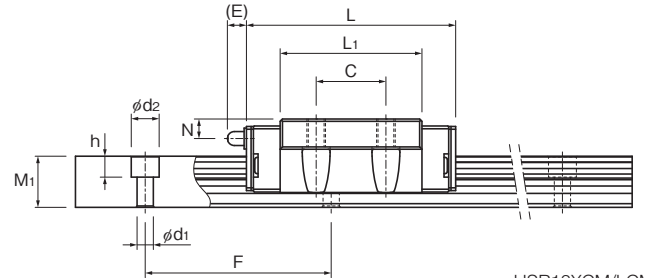
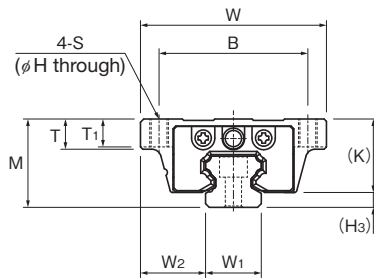
⁴ Contact THK if you desire side lubrication.

Note: See p.55 to 60 for more information on options.

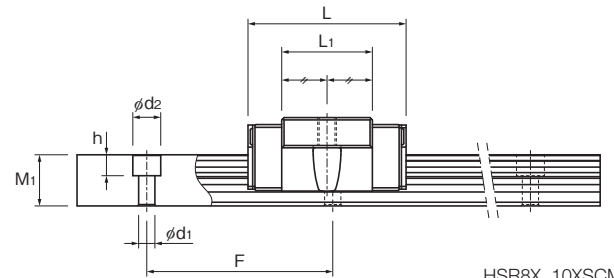
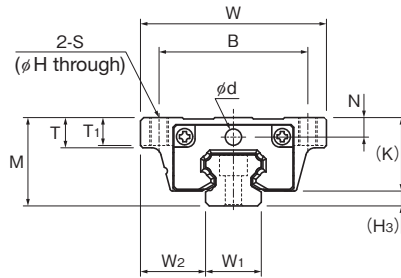
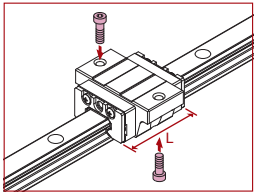
Model HSR-SC/C/LC



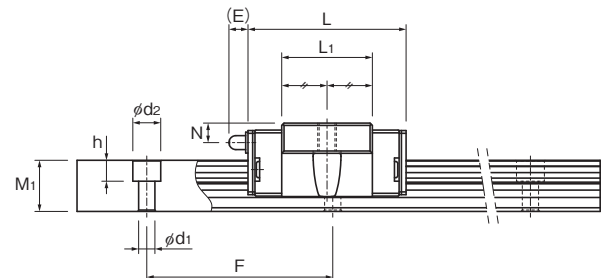
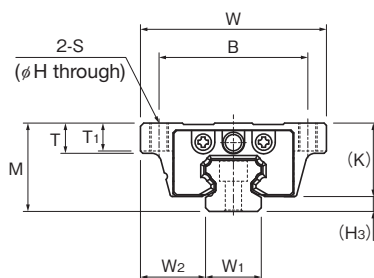
HSR8X, 10XCM/LCM



HSR12XCM/LCM



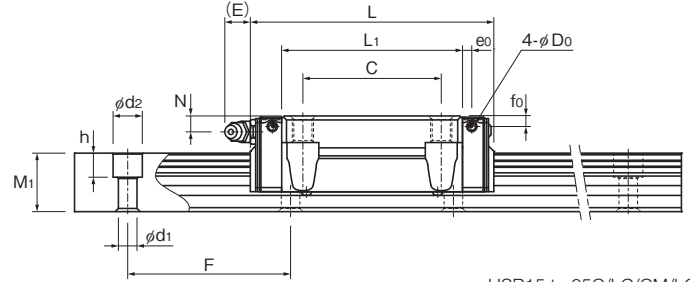
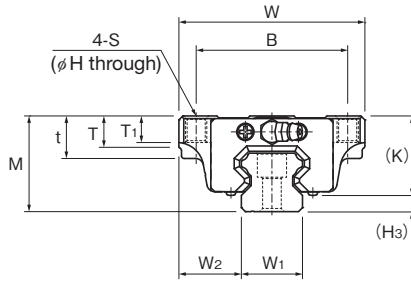
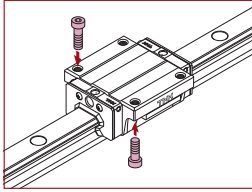
HSR8X, 10XSCM



HSR12XSCM

Unit: mm

Model No.	External dimensions			LM block dimensions													H ₃	W ₂	Basic load rating		Static permissible moment kN-m					Mass
	Height M	Width W	Length L	B	C	Mounting hole S	H	L ₁	T	T ₁	K	N	E	d	Grease nipple	C (kN)			C ₀ (kN)	M _A		M _B		M _C	LM block	
																				1 block	2 blocks	1 block	2 blocks	1 block	(kg)	
HSR	8XSCM	10	24	18	19	—	M2.3	1.9	9	4	3.5	7.9	1.6	—	2.2	—	2.1	8	0.85	1.24	0.00179	0.0148	0.00179	0.0148	0.0043	0.007
	8XCM	10	24	24	19	10	M2.3	1.9	15	4	3.5	7.9	1.6	—	2.2	—	2.1	8	1.2	2.02	0.00457	0.0297	0.00457	0.0297	0.00698	0.013
	8XLCM	10	24	30.5	19	10	M2.3	1.9	21.5	4	3.5	7.9	1.6	—	2.2	—	2.1	8	1.5	2.8	0.00913	0.0502	0.00913	0.0502	0.00964	0.018
	10XSCM	12	30	24	24	—	M3	2.5	13.1	5	4.5	9.8	2.5	—	2.2	—	2.2	10	1.54	2.18	0.00464	0.0336	0.00464	0.0336	0.00949	0.017
	10XCM	12	30	31	24	12	M3	2.5	20.1	5	4.5	9.8	2.5	—	2.2	—	2.2	10	2.16	3.54	0.0114	0.0659	0.0114	0.0659	0.0154	0.026
	10XLCM	12	30	40	24	12	M3	2.5	29.1	5	4.5	9.8	2.5	—	2.2	—	2.2	10	2.72	4.9	0.0211	0.115	0.0211	0.115	0.0213	0.038
	12XSCM	19	40	34	32	—	M4	3.3	19.5	6.5	6	15.9	4.2	4	—	PB107	3.1	14	3.95	5.39	0.0171	0.116	0.0171	0.116	0.0277	0.059
	12XCM	19	40	45	32	15	M4	3.3	30.5	6.5	6	15.9	4.2	4	—	PB107	3.1	14	5.54	8.75	0.0421	0.234	0.0421	0.234	0.0449	0.092
	12XLCM	19	40	58	32	15	M4	3.3	43.5	6.5	6	15.9	4.2	4	—	PB107	3.1	14	6.96	12.1	0.0781	0.409	0.0781	0.409	0.0622	0.132

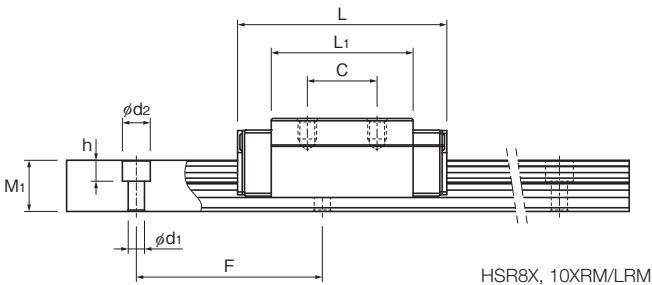
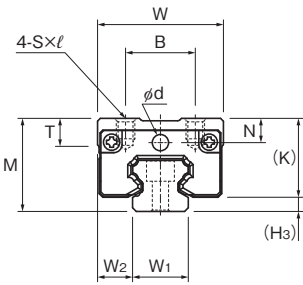
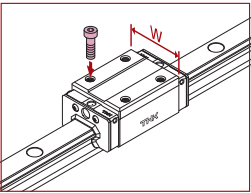


HSR15 to 65C/LC/CM/LCM

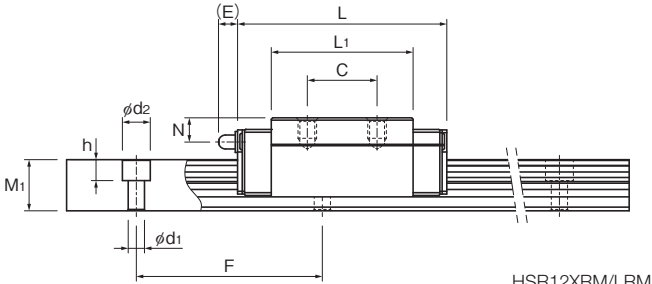
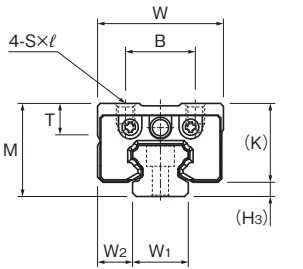
Unit: mm

Model No.	External dimensions			LM block dimensions														Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN-m					Mass
	Height	Width	Length	B	C	Mounting hole S	H	L ₁	t	T	T ₁	K	N	E	Grease nipple	e ₀	f ₀	D ₀	C (kN)	C ₀ (kN)			M _A		M _B		M _C	LM block		
	M	W	L																		1 block	2 blocks	1 block	2 blocks	1 block	(kg)				
HSR	15C 15CM	24	47	56.6	38	30	M5	4.4	38.8	11	7	7	19.3	4.3	5.5	PB1021B	3.2	3.9	3	4.7	16	10.9	15.7	0.0945	0.527	0.0945	0.527	0.0998	0.2	
	15LC 15LCM	24	47	74.6	38	30	M5	4.4	56.8	11	7	7	19.3	4.3	5.5	PB1021B	3.2	3.9	3	4.7	16	14.2	22.9	0.194	0.984	0.194	0.984	0.145	0.29	
	20C 20CM	30	63	74	53	40	M6	5.4	50.8	10	9.5	10	26	5	12	B-M6F	3.1	3.4	3	4	21.5	19.8	27.4	0.218	1.2	0.218	1.2	0.235	0.35	
	20LC 20LCM	30	63	90	53	40	M6	5.4	66.8	10	9.5	10	26	5	12	B-M6F	3.1	3.4	3	4	21.5	23.9	35.8	0.363	1.87	0.363	1.87	0.307	0.47	
	25C 25CM	36	70	83.1	57	45	M8	6.8	59.5	16	11	10	30.5	6	12	B-M6F	3.5	4	3	5.5	23.5	27.6	36.4	0.324	1.8	0.324	1.8	0.366	0.59	
	25LC 25LCM	36	70	102.2	57	45	M8	6.8	78.6	16	11	10	30.5	6	12	B-M6F	3.5	4	3	5.5	23.5	35.2	51.6	0.627	3.04	0.627	3.04	0.518	0.75	
	30C 30CM	42	90	98	72	52	M10	8.5	70.4	18	9	10	35	7	12	B-M6F	5.2	6.2	5.2	7	31	40.5	53.7	0.599	3.1	0.599	3.1	0.652	1.1	
	30LC 30LCM	42	90	120.6	72	52	M10	8.5	93	18	9	10	35	7	12	B-M6F	5.2	6.2	5.2	7	31	48.9	70.2	0.995	4.89	0.995	4.89	0.852	1.3	
	35C 35CM	48	100	109.4	82	62	M10	8.5	80.4	21	12	13	40.5	8	12	B-M6F	5.5	5.6	5.2	7.5	33.0	53.9	70.2	0.895	4.51	0.895	4.51	1.05	1.6	
	35LC 35LCM	48	100	134.8	82	62	M10	8.5	105.8	21	12	13	40.5	8	12	B-M6F	5.5	5.6	5.2	7.5	33.0	65	91.7	1.49	7.13	1.49	7.13	1.37	2.0	
	45C 45LC	60	120	138.9 170.7	100	80	M12	10.5	98 129.8	25	13	15	50	10	16	B-PT1/8	6.1	6.6	5.2	10	37.5	82.2 100	101 135	1.5 2.59	8.37 13.4	1.5 2.59	8.37 13.4	1.94 2.6	2.8 3.3	
	55C 55LC	70	140	162.9 201	116	95	M14	12.5	118 156.1	29	13.5	17	57	11	16	B-PT1/8	5.6	7.7	5.2	13	43.5	121 148	146 194	2.6 4.46	14.1 22.7	2.6 4.46	14.1 22.7	3.43 4.56	4.5 5.7	
65XC 65XLC	90	170	190.5 250	142	110	M16	14.5	138.5 198	37	21.5	23	76	19	16	B-PT1/8	6.8	14.6	5.2	14	53.5	195 249	228 323	5.08 9.81	25 45.6	5.08 9.81	25 45.6	6.2 8.79	8.5 10.7		

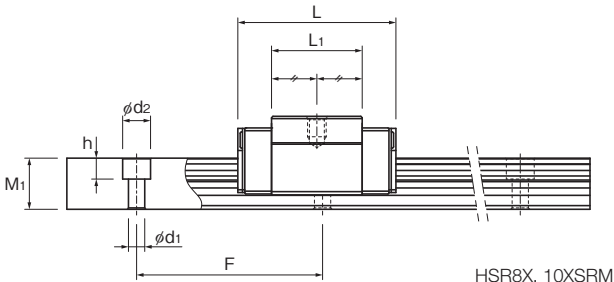
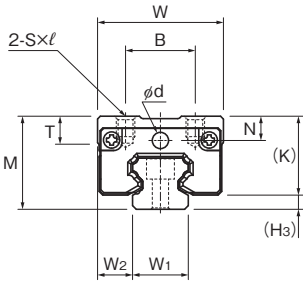
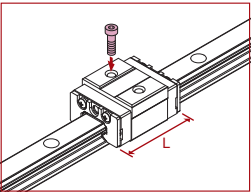
Model HSR-SR/R/LR



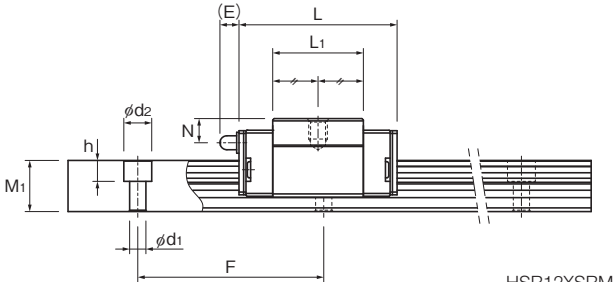
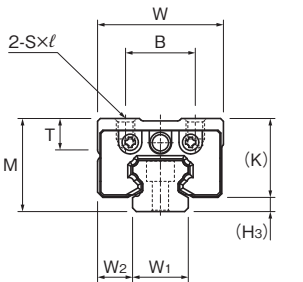
HSR8X, 10XRM/LRM



HSR12XRM/LRM



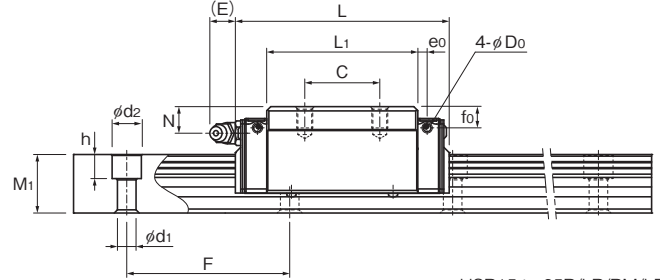
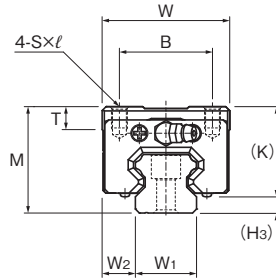
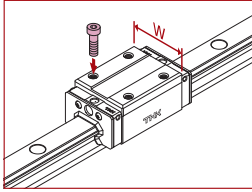
HSR8X, 10XSRM



HSR12XSRM

Unit: mm

Model No.	External dimensions			LM block dimensions										H ₃	W ₂	Basic load rating		Static permissible moment kN-m					Mass	
	Height M	Width W	Length L	B	C	S x ℓ	L ₁	T	K	N	E	d	Grease nipple			C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																		1 block	2 blocks	1 block	2 blocks	1 block		
HSR	8XSRM	11	16	18	10	—	M2 × 2.5	9	—	8.9	2.6	—	2.2	—	2.1	4	0.85	1.24	0.00179	0.0148	0.00179	0.0148	0.0043	0.006
	8XRM	11	16	24	10	10	M2 × 2.5	15	—	8.9	2.6	—	2.2	—	2.1	4	1.2	2.02	0.00457	0.0297	0.00457	0.0297	0.00698	0.01
	8XLRM	11	16	30.5	10	10	M2 × 2.5	21.5	—	8.9	2.6	—	2.2	—	2.1	4	1.5	2.8	0.00913	0.0502	0.00913	0.0502	0.00964	0.015
	10XSRM	13	20	24	13	—	M2.6 × 2.5	13.1	—	10.8	3.5	—	2.2	—	2.2	5	1.54	2.18	0.00464	0.0336	0.00464	0.0336	0.00949	0.014
	10XRM	13	20	31	13	12	M2.6 × 2.5	20.1	—	10.8	3.5	—	2.2	—	2.2	5	2.16	3.54	0.0114	0.0659	0.0114	0.0659	0.0154	0.021
	10XLRM	13	20	40	13	12	M2.6 × 2.5	29.1	—	10.8	3.5	—	2.2	—	2.2	5	2.72	4.9	0.0211	0.115	0.0211	0.115	0.0213	0.031
	12XSRM	20	27	34	15	—	M4 × 4.5	19.5	6	16.9	5.2	4	—	PB107	3.1	7.5	3.95	5.39	0.0171	0.116	0.0171	0.116	0.0277	0.045
	12XRM	20	27	45	15	15	M4 × 4.5	30.5	6	16.9	5.2	4	—	PB107	3.1	7.5	5.54	8.75	0.0421	0.234	0.0421	0.234	0.0449	0.071
	12XLRM	20	27	58	15	15	M4 × 4.5	43.5	6	16.9	5.2	4	—	PB107	3.1	7.5	6.96	12.1	0.0781	0.409	0.0781	0.409	0.0622	0.102

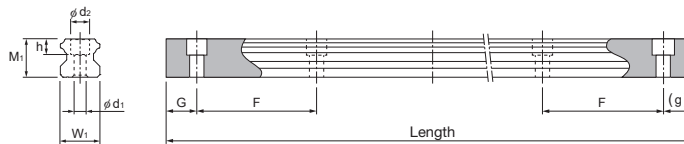


HSR15 to 65R/LR/RM/LRM

Unit: mm

Model No.	External dimensions			LM block dimensions										Pilot hole for side nipple				W ₂	Basic load rating		Static permissible moment kN-m					Mass
	Height M	Width W	Length L	B	C	S x ℓ	L ₁	T	K	N	E	Grease nipple	e ₀	f ₀	D ₀	H ₃	C (kN)		C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																				1 block	2 blocks	1 block	2 blocks	1 block		
HSR	15R 15RM	28	34	56.6	26	26	M4 × 5	38.8	6	23.3	8.3	5.5	PB1021B	3.2	7.9	3	4.7	9.5	10.9	15.7	0.0945	0.527	0.0945	0.527	0.0998	0.18
	15LR 15LRM	28	34	74.6	26	34	M4 × 5	56.8	6	23.3	8.3	5.5	PB1021B	3.2	7.9	3	4.7	9.5	14.2	22.9	0.194	0.984	0.194	0.984	0.145	0.26
	20R 20RM	30	44	74	32	36	M5 × 6	50.8	8	26	5	12	B-M6F	3.1	3.4	3	4	12	19.8	27.4	0.218	1.2	0.218	1.2	0.235	0.25
	20LR 20LRM	30	44	90	32	50	M5 × 6	66.8	8	26	5	12	B-M6F	3.1	3.4	3	4	12	23.9	35.8	0.363	1.87	0.363	1.87	0.307	0.35
	25R 25RM	40	48	83.1	35	35	M6 × 8	59.5	9	34.5	10	12	B-M6F	3.5	8	3	5.5	12.5	27.6	36.4	0.324	1.8	0.324	1.8	0.366	0.54
	25LR 25LRM	40	48	102.2	35	50	M6 × 8	78.6	9	34.5	10	12	B-M6F	3.5	8	3	5.5	12.5	35.2	51.6	0.627	3.04	0.627	3.04	0.518	0.67
	30R 30RM	45	60	98	40	40	M8 × 10	70.4	9	38	10	12	B-M6F	5.2	9.2	5.2	7	16	40.5	53.7	0.599	3.1	0.599	3.1	0.652	0.9
	30LR 30LRM	45	60	120.6	40	60	M8 × 10	93	9	38	10	12	B-M6F	5.2	9.2	5.2	7	16	48.9	70.2	0.995	4.89	0.995	4.89	0.852	1.1
	35R 35RM	55	70	109.4	50	50	M8 × 12	80.4	11.7	47.5	15	12	B-M6F	5.5	12.6	5.2	7.5	18	53.9	70.2	0.895	4.51	0.895	4.51	1.05	1.5
	35LR 35LRM	55	70	134.8	50	72	M8 × 12	105.8	11.7	47.5	15	12	B-M6F	5.5	12.6	5.2	7.5	18	65	91.7	1.49	7.13	1.49	7.13	1.37	2
	45R 45LR	70	86	138.9 170.7	60	60 80	M10 × 17	98 129.8	15	60	20	16	B-PT1/8	6.1	16.6	5.2	10	20.5	82.2 100	101 135	1.5 2.59	8.37 13.4	1.5 2.59	8.37 13.4	1.94 2.6	2.6 3.1
	55R 55LR	80	100	162.9 201	75	75 95	M12 × 18	118 156.1	20.5	67	21	16	B-PT1/8	5.6	17.7	5.2	13	23.5	121 148	146 194	2.6 4.46	14.1 22.7	2.6 4.46	14.1 22.7	3.43 4.56	4.3 5.4
	65XR 65XLR	90	126	190.5 250	76	70 120	M16 × 20	138.5 198	23	76	19	16	B-PT1/8	6.8	14.6	5.2	14	31.5	195 249	228 323	5.08 9.81	25 45.6	5.08 9.81	25 45.6	6.2 8.79	7.3 9.7

LM Rail

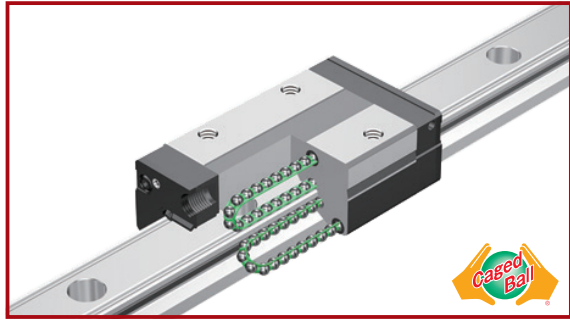


Unit: mm

Model No.	LM rail dimensions										Mass
	W ₁	Height	Pitch	d ₁ × d ₂ × h	Standard length	Maximum length		Maximum length when joined	Standard and maximum lengths of TC joint rails (G, g)	LM rail (kg/m)	
	±0,05	M ₁	F		(G, g)	Carbon steel	Stainless steel				
HSR8X	8	6	20	2.4 × 4.2 × 2.3	1,000 (7.5, 12.5)	—	1,000	2,000	—	0.3	
HSR10X	10	7	25	3.5 × 6 × 3.3	1,000 (10, 15)	—	1,000	2,000	—	0.45	
HSR12X	12	11	40	3.5 × 6 × 4.5	1,000 (15, 25), 1,480 (15, 25)	—	1,480	3,000	—	0.83	
HSR15	15	15	60	4.5 × 7.5 × 5.3	3,000 (20, 40)	3,000	1,540	—	2,940 (30, 30)	1.5	
HSR20	20	18	60	6 × 9.5 × 8.5	3,000 (20, 40)	4,000	2,300	—	2,940 (30, 30)	2.3	
HSR25	23	22	60	7 × 11 × 9	3,000 (20, 40), 5,000 (20, 60)	5,000	2,500	—	2,940 (30, 30)	3.3	
HSR30	28	26	80	9 × 14 × 12	3,000 (20, 20), 5,000 (20, 20)	7,000	2,520	—	2,960 (40, 40)	4.8	
HSR35	34	29	80	9 × 14 × 12	3,000 (20, 20), 5,000 (20, 20)	7,000	2,520	—	2,960 (40, 40)	6.6	
HSR45	45	38	105	14 × 20 × 17	3,000 (22.5, 37.5), 5,000 (22.5, 42.5)	7,000	—	—	2,940 (52.5, 52.5)	11	
HSR55	53	44	120	16 × 23 × 20	3,000 (30, 90), 5,000 (30, 50)	7,000	—	—	3,000 (60, 60)	15.1	
HSR65	63	53	150	18 × 26 × 22	3,000 (35, 115), 5,000 (35, 15)	7,000	—	—	3,000 (75, 75)	22.5	

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

Model SSR

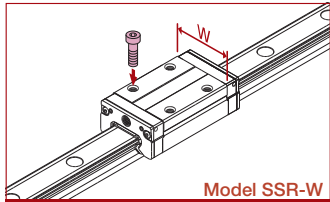


Radial Type/Long-Term Maintenance-Free Operation

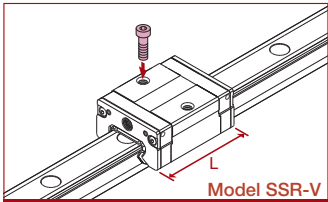
Sizes: 15X, 20X, 25X, 30X, 35X

- Compact
- Self-adjustment capability
- Available in stainless steel (sizes 15X to 30X)

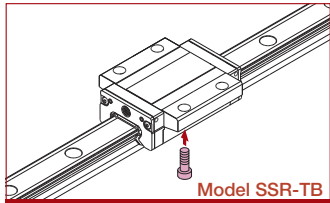
Block Types/Lineup



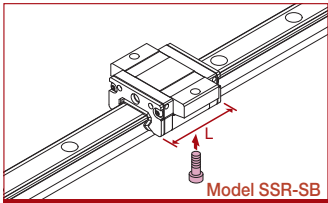
The LM block has a smaller width (W) and tapped holes.



This type has the same cross-sectional shape as the Model SR-W, but has a shorter, space-saving LM block length (L).



This type has tapped holes in the flange of its LM block and the same height dimension as the Model SR-W.



This type has the same cross-sectional shape as the Model SR-TB, but has a shorter, space-saving LM block length (L).

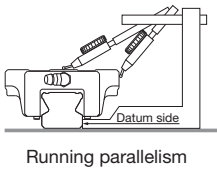
Model No.	Block type			
	Short type		Standard type	
	V	SB	W	TB
15X	○	○	○	○
20X	○	○	○	○
25X	○	○	○	○
30X	○	○	○	○
35X	○	○	○	○

○ : Available — : Unavailable

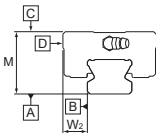
Accuracy Standards

Unit: mm

Model No.	Accuracy standard		Normal grade
	Item		No symbol
15X 20X	Dimensional tolerance in height M		±0.07
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.06
	Difference in width W ₂		0.02
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		
25X 30X 35X	Dimensional tolerance in height M		±0.08
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.07
	Difference in width W ₂		0.025
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		



Running parallelism



Measurement surface

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value
Above	Up to	Normal grade
		No symbol
—	50	5
50	80	5
80	125	5
125	200	5
200	250	6
250	315	7
315	400	8
400	500	9
500	630	11
630	800	12
800	1,000	13
1,000	1,250	15
1,250	1,600	16
1,600	2,000	18
2,000	2,500	20
2,500	3,150	21
3,150	4,000	23
4,000	5,000	24
5,000	6,000	25
6,000	7,000	26

Radial Clearance Specifications Unit: μm

Code	Normal	Light preload
Model No.	No symbol	C1
15X	-4 to +2	-10 to -4
20X	-5 to +2	-12 to -5
25X	-6 to +3	-15 to -6
30X	-7 to +4	-18 to -7
35X	-8 to +4	-20 to -8

Model Number Coding

LM block

SSR25X W 1 SS C1 F M - N.GRS (GK)BLOCK

Model No. Type of LM block	Number of LM blocks (only 1)	Contamination prevention accessory symbol	Radial clearance symbol	Stainless steel LM block	LM block with surface treatment	Anti-rust oil only	GK series LM block symbol
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Standard Specifications

Standard specifications	
Accuracy grade	Normal grade
Radial clearance	Normal/C1
Material	Carbon steel/Stainless steel: V/W type, 15X to 30X ¹
Seal options	SS
LM rail mounting hole specification	15: M4 (symbol: Y) 25: M6 (symbol: Y)
Lubrication	AFB-LF Grease
Lubrication type	Front lubrication

LM rail

SR25 - 3000L Y K T F M (GK)RAIL

Model No. LM rail length (in mm)	Only applies to 15 and 25	Symbol for tapped-hole LM rail	Stainless steel LM rail	LM rail with surface treatment	Symbol for LM rail jointed use	GK series LM rail symbol
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Note: The LM rails for the Model SSR and Model SR are shared.

Custom Range

Custom items	
Surface treatment	AP-C
Seal options	UU/DD/ZZ/KK/HH/GG/PP
LM rail specifications	Tapped-hole rail type ² /Joint specifications ³ /Steel tape
LM rail mounting hole specification	15: M3 (no symbol) 25: M5 (no symbol)
LM rail options	CV caps: 25 to 35 and C caps: 15, 20 ⁴
Lubrication	No grease (anti-rust oil only)
Lubrication options	QZ Lubricator
Lubrication type	Side lubrication ⁵
Contamination protection options	Bellows specifications ⁴

¹ For the Model SSR35X, only the LM rail is available in stainless steel.

² See p. 58 for information about tapped-hole type rail specifications.

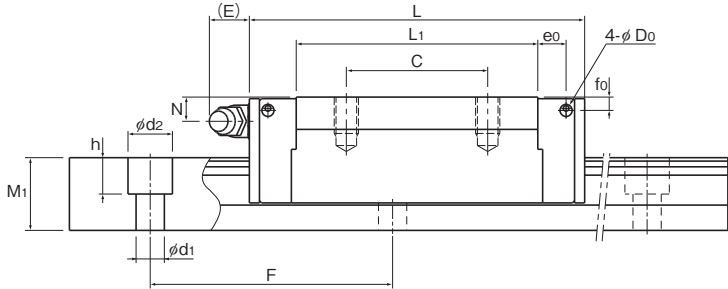
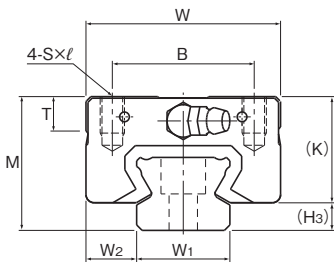
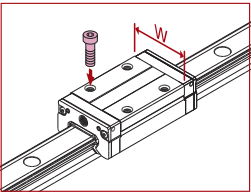
³ See p. 59 to 60 for information about joint specification rails.

⁴ CV caps, C caps, and dedicated bellows must be acquired separately from the LM Guide.

⁵ Contact THK if you desire side lubrication.

Note: See p.55 to 60 for more information on options.

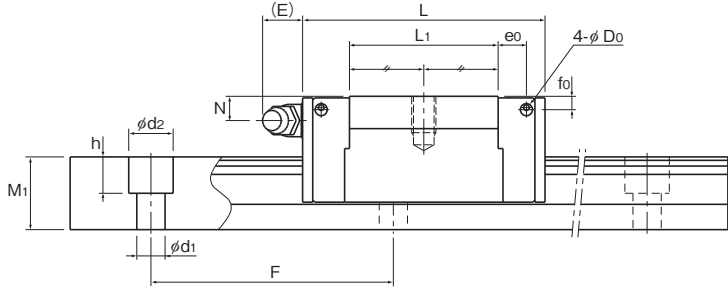
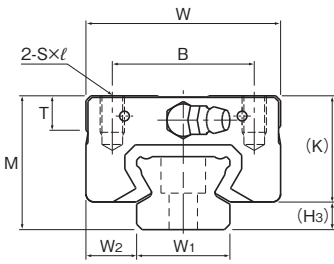
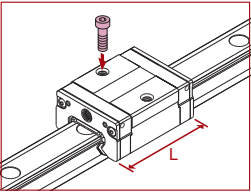
Model SSR-W



Unit: mm

Model No.		External dimensions			LM block dimensions										Pilot hole for side nipple			H ₃		W ₂		Basic load rating		Static permissible moment kN·m					Mass			
		Height	Width	Length	B	C	S × l	L ₁	T	K	N	E	Grease nipple	f ₀								e ₀	D ₀	C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																										1 block	2 blocks	1 block				2 blocks
SSR	15XW 15XWM	24	34	56.9	26	26	M4 × 7	39.9	6.5	19.5	4.5	5.5	PB1021B	2.7	4.5	3	4.5	9.5	14.7	16.5	0.0792	0.44	0.0486	0.274	0.0962	0.15						
	20XW 20XWM	28	42	66.5	32	32	M5 × 8	46.6	8.2	22	5.5	12	B-M6F	2.9	5.2	3	6	11	19.6	23.4	0.138	0.723	0.0847	0.448	0.18	0.25						
	25XW 25XWM	33	48	83	35	35	M6 × 9	59.8	8.4	26.2	6	12	B-M6F	3.3	6.8	3	6.8	12.5	31.5	36.4	0.258	1.42	0.158	0.884	0.33	0.4						
	30XW 30XWM	42	60	97	40	40	M8 × 12	70.7	11.3	32.5	8	12	B-M6F	4.5	7.6	4	9.5	16	46.5	52.7	0.446	2.4	0.274	1.49	0.571	0.8						
	35XW	48	70	110.9	50	50	M8 × 12	80.5	13	36.5	8.5	12	B-M6F	4.7	8.8	4	11.5	18	64.6	71.6	0.711	3.72	0.437	2.31	0.936	1.1						

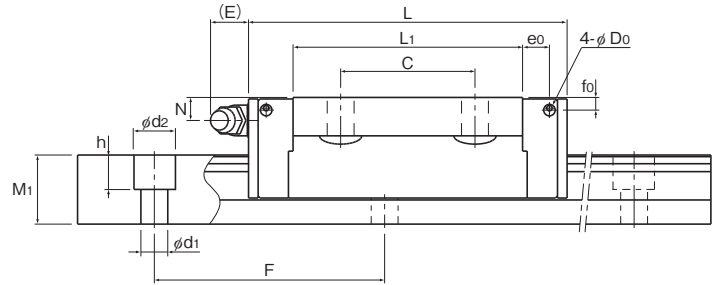
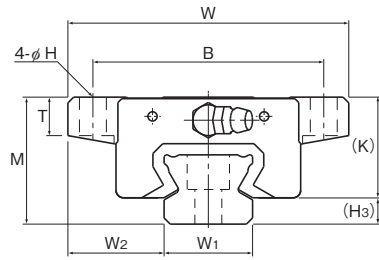
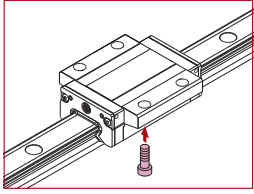
Model SSR-V



Unit: mm

Model No.	External dimensions				LM block dimensions										Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN·m				Mass LM block (kg)
	Height M	Width W	Length L	B	S × l	L ₁	T	K	N	E	Grease nipple	C (K)	C ₀ (K _N)	1 block						2 blocks		M _C				
														M _A	M _B	M _C	M _D									
SSR	15XV 15XVM	24	34	40.3	26	M4 × 7	23.3	6.5	19.5	4.5	5.5	PB1021B	2.7	4.5	3	4.5	9.5	9.1	9.7	0.0303	0.119	0.0189	0.122	0.0562	0.08	
	20XV 20XVM	28	42	47.7	32	M5 × 8	27.8	8.2	22	5.5	12	B-M6F	2.9	5.2	3	6	11	13.4	14.4	0.0523	0.336	0.0326	0.213	0.111	0.14	
	25XV 25XVM	33	48	60	35	M6 × 9	36.8	8.4	26.2	6	12	B-M6F	3.3	6.8	3	6.8	12.5	21.7	22.5	0.104	0.661	0.0652	0.419	0.204	0.23	
	30XV 30XVM	42	60	66.7	40	M8 × 12	40.4	11.5	32.5	8	12	B-M6F	4.5	7.6	4	9.5	16	34.8	34.4	0.186	1.12	0.116	0.711	0.376	0.43	
	35XV	48	70	77.5	50	M8 × 12	47.1	16.2	36.5	8.5	12	B-M6F	4.7	8.8	4	11.5	18	48.3	46.7	0.295	1.77	0.184	1.12	0.615	0.6	

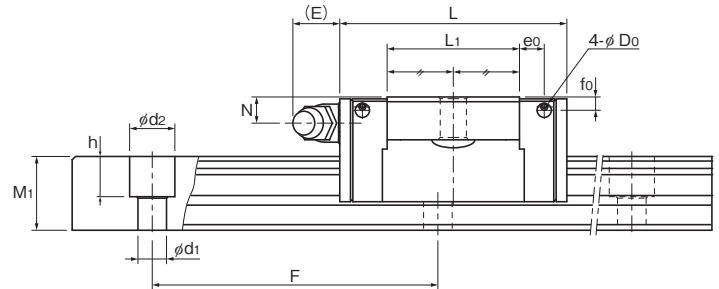
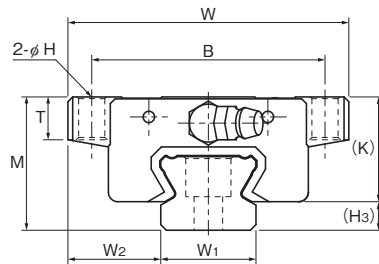
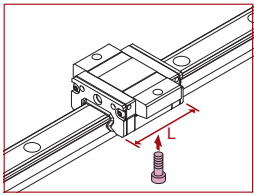
Model SSR-TB



Unit: mm

Model No.	External dimensions			LM block dimensions									Pilot hole for side nipple			H _s	W ₂	Basic load rating		Static permissible moment kN-m					Mass	
	Height M	Width W	Length L	B	C	H	L ₁	T	K	N	E	Grease nipple	f ₀	e ₀	D ₀			C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																				1 block	2 blocks	1 block	2 blocks	1 block		
SSR	15XTB	24	52	56.9	41	26	4.5	39.9	7	19.5	4.5	5.5	PB1021B	2.7	4.5	3	4.5	18.5	14.7	16.5	0.0792	0.44	0.0486	0.274	0.0962	0.19
	20XTB	28	59	66.5	49	32	5.5	46.6	9	22	5.5	12	B-M6F	2.9	5.2	3	6	19.5	19.6	23.4	0.138	0.723	0.0847	0.448	0.18	0.31
	25XTB	33	73	83	60	35	7	59.8	10	26.2	6	12	B-M6F	3.3	6.8	3	6.8	25	31.5	36.4	0.258	1.42	0.158	0.884	0.33	0.53
	30XTB	42	90	97	72	40	9	70.7	10	32.5	8	12	B-M6F	4.5	7.6	4	9.5	31	46.5	52.7	0.446	2.4	0.274	1.49	0.571	0.87
	35XTB	48	100	110.9	82	50	9	80.5	13	36.5	8.5	12	B-M6F	4.7	8.8	4	11.5	33	64.6	71.6	0.711	3.72	0.437	2.31	0.936	1.33

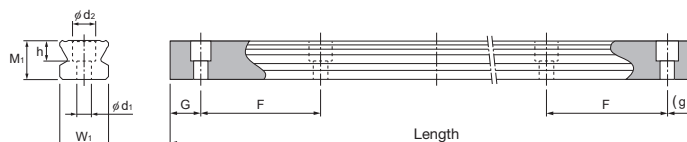
Model SSR-SB



Unit: mm

Model No.	External dimensions			LM block dimensions								Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN-m					Mass	
	Height M	Width W	Length L	B	H	L ₁	T	K	N	E	Grease nipple	f ₀	e ₀	D ₀			C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																			1 block	2 blocks	1 block	2 blocks	1 block		
SSR	15XSB	24	52	40.3	41	4.5	23.3	7	19.5	4.5	5.5	PB1021B	2.7	4.5	3	4.5	18.5	9.1	9.7	0.0303	0.1192	0.0189	0.122	0.0562	0.11
	20XSB	28	59	47.7	49	5.5	27.8	9	22	5.5	12	B-M6F	2.8	5.2	3	6	19.5	13.4	14.4	0.0523	0.336	0.0326	0.213	0.111	0.18
	25XSB	33	73	60	60	7	36.8	10	26.2	6	12	B-M6F	3.3	7	3	6.8	25	21.7	22.5	0.104	0.661	0.0652	0.419	0.204	0.31
	30XSB	42	90	66.7	72	9	40.4	10	32.5	8	12	B-M6F	4.5	7.6	4	9.5	31	34.8	34.4	0.186	1.12	0.116	0.711	0.376	0.52
	35XSB	48	100	77.5	82	9	47.1	13	36.5	8.5	12	B-M6F	4.7	8.8	4	11.5	33	48.3	46.7	0.295	1.77	0.184	1.12	0.615	0.77

LM Rail

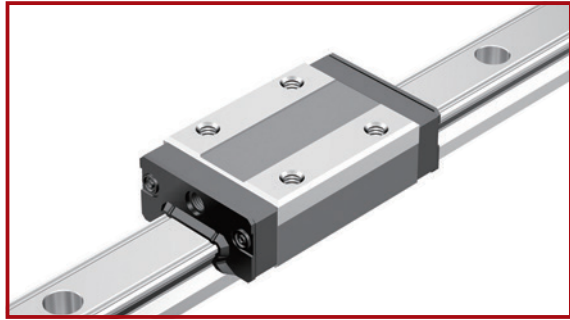


Unit: mm

Model No.	LM rail dimensions							Mass LM rail (kg/m)
	W ₁ ±0.05	Height M ₁	Pitch F	d ₁ × d ₂ × h	Standard length (G, g)		Maximum length Carbon steel Stainless steel	
SR15	15	12.5	60	4.5 × 7.5 × 5.3	3,000 (20, 40), 5,000 (20, 60)		5,000	1,240
SR20	20	15.5	60	6 × 9.5 × 8.5	3,000 (20, 40), 5,000 (20, 60)		7,000	1,480
SR25	23	18	60	7 × 11 × 9	3,000 (20, 40), 5,000 (20, 60)		7,000	2,020
SR30	28	23	80	7 × 11 × 9	3,000 (20, 20), 5,000 (20, 20)		7,000	2,520
SR35	34	27.5	80	9 × 14 × 12	3,000 (20, 20), 5,000 (20, 20)		7,000	2,520

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.
The LM rails for the Model SSR and Model SR are shared.

Model SR

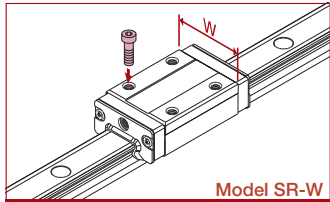


Radial Type

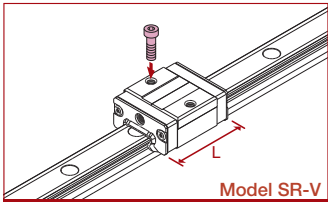
Sizes: 15, 20, 25, 30, 35, 45, 55

- Compact
- Self-adjustment capability
- Available in stainless steel (sizes 15 to 35)

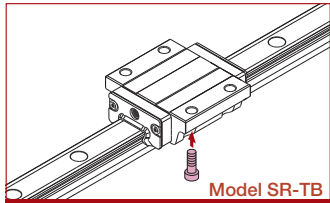
Block Types/Lineup



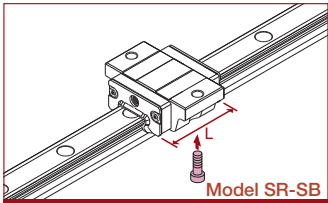
The LM block has a smaller width (W) and tapped holes.



This type has the same cross-sectional shape as the Model SR-W, but has a shorter, space-saving LM block length (L).



This type has tapped holes in the flange of its LM block, with the same height dimension as the Model SR-W.



This type has the same cross-sectional shape as the Model SR-TB, but has a shorter, space-saving LM block length (L).

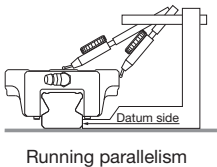
Model No.	Block type			
	Short type		Standard type	
	V	SB	W	TB
15	○	○	○	○
20	○	○	○	○
25	○	○	○	○
30	○	○	○	○
35	○	○	○	○
45	—	—	○	○
55	—	—	○	○

○ : Available — : Unavailable

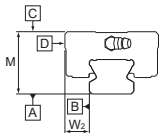
Accuracy Standards

Unit: mm

Model No.	Accuracy standard		Normal grade
	Item		No symbol
15 20	Dimensional tolerance in height M		±0.07
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.06
	Difference in width W ₂		0.02
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		
25 30 35	Dimensional tolerance in height M		±0.08
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.07
	Difference in width W ₂		0.025
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		
45 55	Dimensional tolerance in height M		±0.08
	Difference in height M	Multiple blocks on a single rail (1 set)	0.025
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.07
	Difference in width W ₂		0.03
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		



Running parallelism



Measurement surface

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value
Above	Up to	Normal grade
		No symbol
—	50	5
50	80	5
80	125	5
125	200	5
200	250	6
250	315	7
315	400	8
400	500	9
500	630	11
630	800	12
800	1,000	13
1,000	1,250	15
1,250	1,600	16
1,600	2,000	18
2,000	2,500	20
2,500	3,150	21
3,150	4,000	23
4,000	5,000	24
5,000	6,000	25
6,000	7,000	26

Radial Clearance Specifications Unit: μm

Code	Normal	Light preload
Model No.	No symbol	C1
15	-4 to +2	-10 to -4
20	-5 to +2	-12 to -5
25	-6 to +3	-15 to -6
30	-7 to +4	-18 to -7
35	-8 to +4	-20 to -8
45	-10 to +5	-24 to -10
55	-12 to +5	-28 to -12

Model Number Coding

LM block

SR25 W 1 SS C1 F M - N.GRS (GK)BLOCK

Model No.
Type of LM block
Number of LM blocks (only 1)
Contamination prevention accessory symbol
Radial clearance symbol
Stainless steel LM block
LM block with surface treatment
Anti-rust oil only
GK series LM block symbol

Standard Specifications

Standard specifications	
Accuracy grade	Normal grade
Radial clearance	Normal/C1
Material	Carbon steel/Stainless steel: 15 to 35
Seal options	SS
LM rail mounting hole specification	15: M4 (symbol: Y) 25: M6 (symbol: Y)
Lubrication	AFB-LF Grease
Lubrication type	Front lubrication

LM rail

SR25 - 3000L Y K T F M (GK)RAIL

Model No.
LM rail length (in mm)
Only applies to 15 and 25
Symbol for tapped-hole LM rail
Stainless steel LM rail
LM rail with surface treatment
Symbol for LM rail jointed use
GK series LM rail symbol

Note: The LM rails for the Model SR and Model SSR are shared.

Custom Range

Custom items	
Surface treatment	AP-C
Seal options	UU/DD/ZZ/KK/LL: 15 to 25/RR: 15 to 25
LM rail specifications	Tapped-hole rail type ¹ /Joint specifications ² /Steel tape
LM rail options	CV caps: 25 to 55 and C caps: 15, 20 ³
LM rail mounting hole specification	15: M3 (no symbol) 25: M5 (no symbol)
Lubrication	No grease (anti-rust oil only)
Contamination protection options	Bellows specifications ³

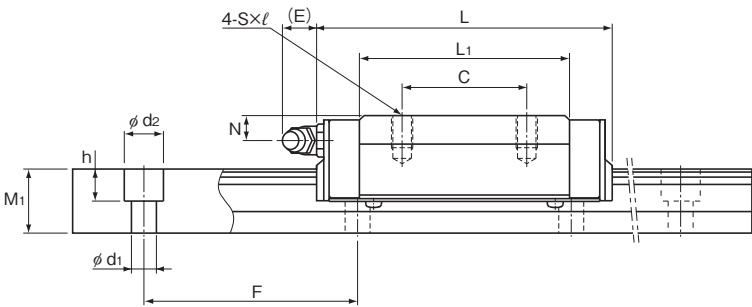
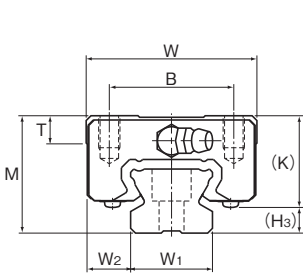
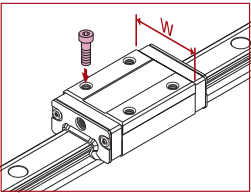
¹ See p. 58 for information about tapped-hole type rail specifications.

² See p. 59 to 60 for information about joint specification rails.

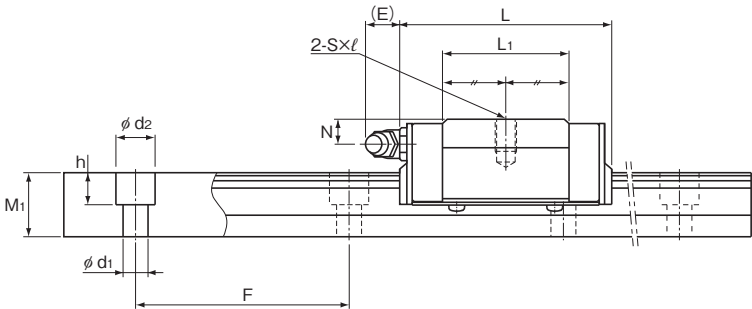
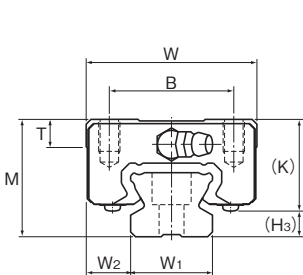
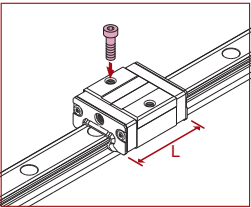
³ CV caps, C caps, and dedicated bellows must be acquired separately from the LM Guide.

Note: See p.55 to 60 for more information on options.

Model SR-W/V



SR-W

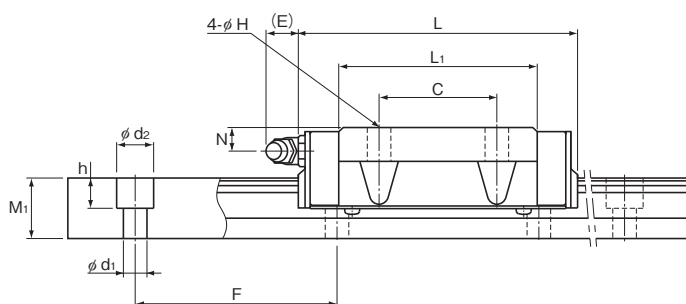
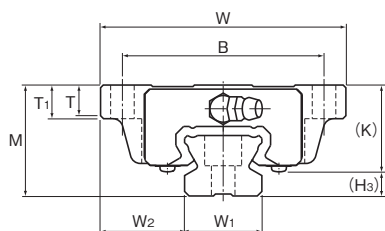
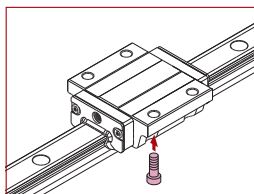


SR-V

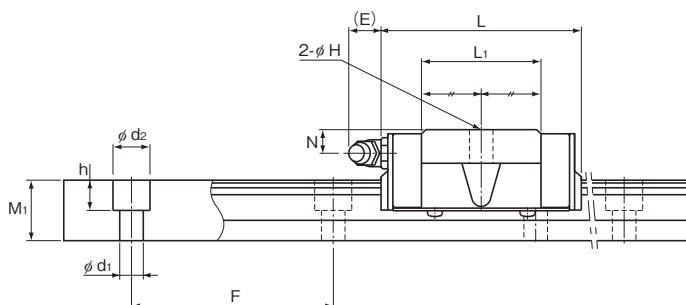
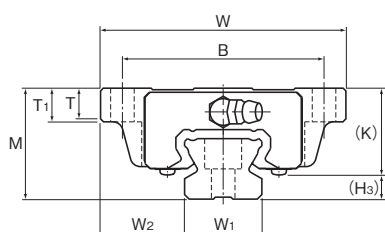
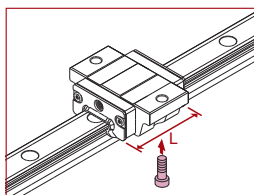
Unit: mm

Model No.	External dimensions			LM block dimensions									H ₃	W ₂	Basic load rating		Static permissible moment kN·m					Mass	
	Height	Width	Length	B	C	S × l	L ₁	T	K	N	E	Grease nipple			C (kN)	C ₀ (kN)	M _A		M _B		M _C		LM block (kg)
	M	W	L															1 block	2 blocks	1 block	2 blocks	1 block	
SR	15V/VM 15W/WM	24	34	40.4 57	26	— 26	M4 × 7	22.9 39.5	5.7	18.2	6	5.5	PB1021B	5.8	9.5	9.1 13.8	11.7 20.5	0.0344 0.0984	0.234 0.551	0.0215 0.0604	0.149 0.343	0.0694 0.122	0.12 0.2
	20V/VM 20W/WM	28	42	47.3 66.2	32	— 32	M5 × 8	27.8 46.7	7.2	22	6	12	B-M6F	6	11	13.4 19.2	17.2 28.6	0.064 0.167	0.396 0.887	0.0397 0.102	0.25 0.55	0.135 0.224	0.2 0.3
	25V/VM 25W/WM	33	48	59.2 83	35	— 35	M6 × 9	35.2 59	7.7	26	7	12	B-M6F	7	12.5	21.6 30.9	26.8 44.7	0.125 0.326	0.773 1.74	0.0774 0.2	0.488 1.08	0.245 0.408	0.3 0.4
	30V/VM 30W/WM	42	60	67.9 96.8	40	— 40	M8 × 12	40.4 69.3	8.5	32.5	8	12	B-M6F	9.5	16	29.5 45.6	34.4 64.4	0.173 0.564	1.15 2.92	0.108 0.346	0.735 1.8	0.376 0.703	0.5 0.8
	35V/VM 35W/WM	48	70	77.6 111	50	— 50	M8 × 12	45.7 79	12.5	36.5	8.5	12	B-M6F	11.5	18	40.9 60.4	46.7 81.8	0.275 0.785	1.79 4.27	0.171 0.482	1.14 2.65	0.615 1.08	0.8 1.2
	45W	60	86	126	60	60	M10 × 15	90.5	15	47.5	11.5	16	B-PT1/8	12.5	20.5	80.4	107	1.17	6.34	0.721	3.94	1.89	2.2
	55W	68	100	156	75	75	M12 × 20	117	16.7	54.5	12	16	B-PT1/8	13.5	26	136	179	2.61	13	1.6	8.05	3.33	3.6

Model SR-TB/SB



SR-TB

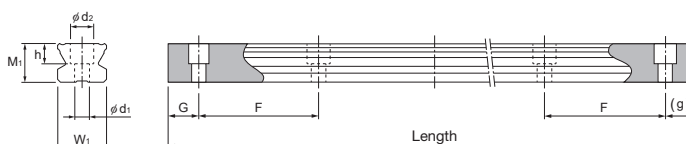


SR-SB

Unit: mm

Model No.	External dimensions			LM block dimensions											H ₃	W ₂	Basic load rating		Static permissible moment kN-m					Mass LM block (kg)
	Height	Width	Length	B	C	H	L ₁	T	T ₁	K	N	E	Grease nipple	C (kN)			C ₀ (kN)	M _A		M _B		M _C		
	M	W	L																1 block	2 blocks	1 block	2 blocks	1 block	
SR	15SB/SBM 15TB/TBM	24	52	40.4 57	41	— 26	4.5	22.9 39.5	6.1	7	18.2	6	5.5	PB1021B	5.8	18.5	9.1 13.8	11.7 20.5	0.0344 0.0984	0.234 0.551	0.0215 0.0604	0.149 0.343	0.0694 0.122	0.15 0.2
	20SB/SBM 20TB/TBM	28	59	47.3 66.2	49	— 32	5.5	27.8 46.7	8	9	22	6	12	B-M6F	6	19.5	13.4 19.2	17.2 28.6	0.064 0.167	0.396 0.887	0.0397 0.102	0.25 0.55	0.135 0.224	0.3 0.4
	25SB/SBM 25TB/TBM	33	73	59.2 83	60	— 35	7	35.2 59	9.1	10	26	7	12	B-M6F	7	25	21.6 30.9	26.8 44.7	0.125 0.326	0.773 1.74	0.0774 0.2	0.488 1.08	0.245 0.408	0.4 0.6
	30SB/SBM 30TB/TBM	42	90	67.9 96.8	72	— 40	9	40.4 69.3	8.7	10	32.5	8	12	B-M6F	9.5	31	29.5 45.6	34.4 64.4	0.173 0.564	1.15 2.92	0.108 0.346	0.735 1.8	0.376 0.703	0.8 1.1
	35SB/SBM 35TB/TBM	48	100	77.6 111	82	— 50	9	45.7 79	11.2	13	36.5	8.5	12	B-M6F	11.5	33	40.9 60.4	46.7 81.8	0.275 0.785	1.79 4.27	0.171 0.482	1.14 2.65	0.615 1.08	1 1.5
	45TB	60	120	126	100	60	11	90.5	12.8	15	47.5	11.5	16	B-PT1/8	12.5	37.5	80.4	107	1.17	6.34	0.721	3.94	1.89	2.5
	55TB	68	140	156	116	75	14	117	15.3	17	54.5	12	16	B-PT1/8	13.5	46	136	179	2.61	13	1.6	8.05	3.33	4.2

LM Rail

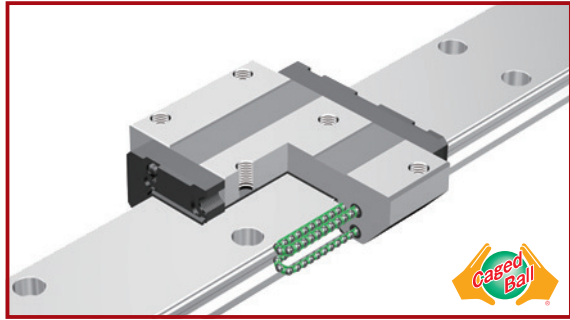


Unit: mm

Model No.	LM rail dimensions								Crit. Mass
	W ₁	Height	Pitch	d ₁ × d ₂ × h	Standard length (G, g)	Maximum length		Standard and maximum lengths of TC joint rails (G, g)	Mass LM rail (kg/m)
	±0.05	M ₁	F			Carbon steel	Stainless steel		
SR15	15	12.5	60	4.5 × 7.5 × 5.3	3,000 (20, 40), 5,000 (20, 60)	5,000	1,240	2,940 (30, 30)	1.2
SR20	20	15.5	60	6 × 9.5 × 8.5	3,000 (20, 40), 5,000 (20, 60)	7,000	1,480	2,940 (30, 30)	2.1
SR25	23	18	60	7 × 11 × 9	3,000 (20, 40), 5,000 (20, 60)	7,000	2,020	2,940 (30, 30)	2.7
SR30	28	23	80	7 × 11 × 9	3,000 (20, 20), 5,000 (20, 20)	7,000	2,520	2,960 (40, 40)	4.3
SR35	34	27.5	80	9 × 14 × 12	3,000 (20, 20), 5,000 (20, 20)	7,000	2,520	2,960 (40, 40)	6.4
SR45	45	35.5	105	11 × 17.5 × 14	3,000 (22.5, 37.5), 5,000 (22.5, 42.5)	7,000	—	2,940 (52.5, 52.5)	11.3
SR55	48	38	120	14 × 20 × 17	3,000 (30, 90), 5,000 (30, 50)	7,000	—	3,000 (60, 60)	12.8

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.
The LM rails for the Model SR and Model SSR are shared.

Model SHW

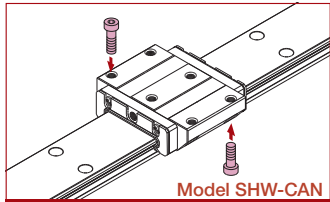


Wide Rails/Long-Term Maintenance-Free Operation

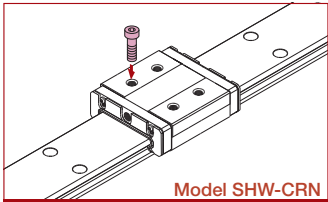
Sizes: 21, 27, 35, 50

- Four-way equal load
- Self-adjustment capability
- Wide with a low center of gravity

Block Types/Lineup



The flange of the LM block has tapped holes. It can be mounted from the top or the bottom.



Model SHW17CRN has four tapped holes in the LM block. Models SHW27/35/50CR have six tapped holes in the LM block.

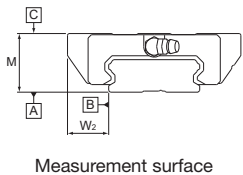
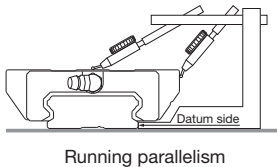
Model No.	Standard type	
	CAN	CRN
21	○	○
27	○	○
35	○	○
50	○	○

○ : Available — : Unavailable

Accuracy Standards

Unit: mm

Model No.	Accuracy standard		Normal grade
	Item		No symbol
21	Dimensional tolerance in height M		±0.07
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.06
	Difference in width W ₂		0.02
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		
27 35	Dimensional tolerance in height M		±0.08
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.07
	Difference in width W ₂		0.025
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		
50	Dimensional tolerance in height M		±0.08
	Difference in height M	Multiple blocks on a single rail (1 set)	0.025
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.07
	Difference in width W ₂		0.03
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		



See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value
Above	Up to	Normal grade
		No symbol
—	50	5
50	80	5
80	125	5
125	200	5
200	250	6
250	315	7
315	400	8
400	500	9
500	630	11
630	800	12
800	1,000	13
1,000	1,250	15
1,250	1,600	16
1,600	2,000	18
2,000	2,500	20
2,500	3,150	21
3,150	4,000	23
4,000	5,000	24
5,000	6,000	25
6,000	7,000	26

Radial Clearance Specifications Unit: μm

Code	Normal	Light preload	Medium preload
Model No.	No symbol	C1	C0
21	-4 to +2	-8 to -4	—
27	-5 to +2	-11 to -5	—
35	-8 to +4	-18 to -8	-28 to -18
50	-10 to +5	-24 to -10	-38 to -24

Model Number Coding

LM block

SHW21 CAN 1 SS C1 F - N.GRS (GK)BLOCK

Model No.	Type of LM block	Number of LM blocks (only 1)	Contamination prevention accessory symbol	Radial clearance symbol	LM block with surface treatment	GK series LM block symbol	No grease (anti-rust oil only)
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Standard Specifications

Standard specifications	
Accuracy grade	Normal grade
Radial clearance	Normal/C1/C0
Material	Carbon steel
Seal options	SS
Lubrication	AFB-LF Grease
Lubrication type	Front lubrication

LM rail

SHW21 - 3000L W T F (GK)RAIL

Model No.	LM rail length (in mm)	Symbol for tapped-hole LM rail	LM rail with surface treatment	Symbol for LM rail jointed use	GK series LM rail symbol
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Custom Range

Custom items	
Surface treatment	AP-C
Seal options	UU/DD/ZZ/KK/HH/GG:21, 27/PP:21, 27
LM rail specifications	Tapped-hole rail type ¹ /Joint specifications ²
LM rail options	CV caps: 35, 50 and C caps: 21, 27 ³
Lubrication	No grease (anti-rust oil only)
Contamination protection options	Bellows specifications ³

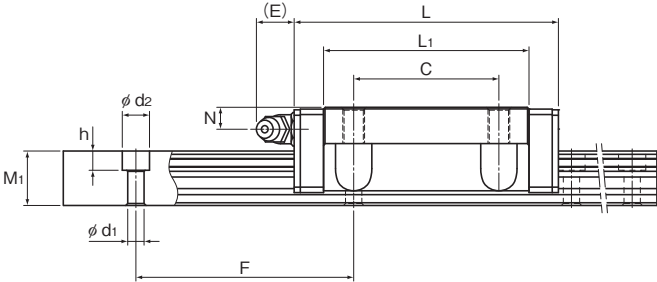
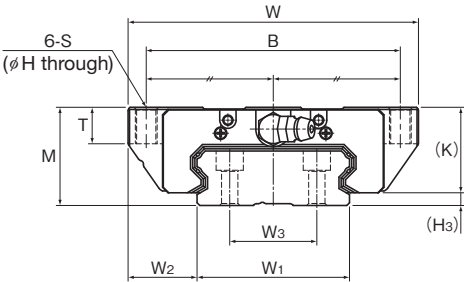
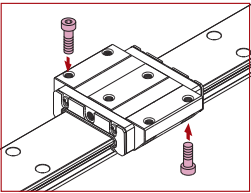
¹ See p. 58 for information about tapped-hole type rail specifications.

² See p. 59 to 60 for information about joint specification rails.

³ CV caps, C caps, and dedicated bellows must be acquired separately from the LM Guide.

Note: See p.55 to 60 for more information on options.

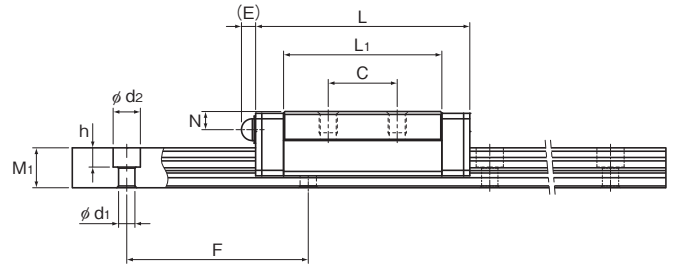
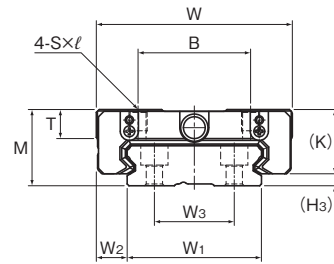
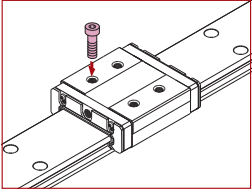
Model SHW-CAN



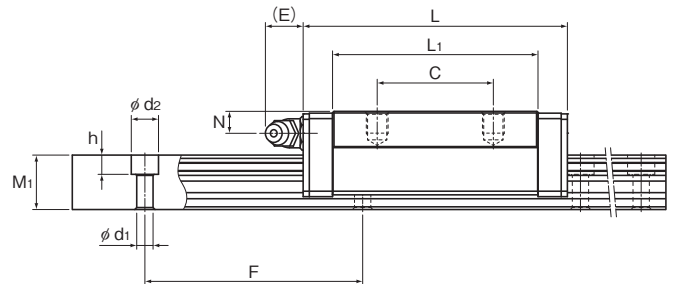
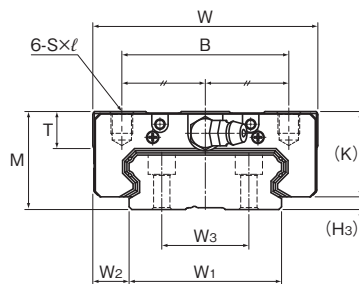
Unit: mm

Model No.	External dimensions			LM block dimensions										H _s	W ₂	Basic load rating		Static permissible moment kN-m					Mass	
	Height M	Width W	Length L	B	C	S	H	L ₁	T	K	N	E	Grease nipple			C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																		1 block	2 blocks	1 block	2 blocks	1 block		
SHW	21CAN	21	68	59	60	29	M5	4.4	43.6	8	17.7	5	5.5	PB1021B	3.3	15.5	8.24	12.8	0.0806	0.434	0.0806	0.434	0.229	0.24
	27CAN	27	80	72.8	70	40	M6	5.3	56.6	10	23.5	6	12	B-M6F	3.5	19	16	22.7	0.187	0.949	0.187	0.949	0.455	0.47
	35CAN	35	120	107	107	60	M8	6.8	83	14	31	7.6	12	B-M6F	4	25.5	35.5	49.2	0.603	3	0.603	3	1.63	1.4
	50CAN	50	162	141	144	80	M10	8.6	107	18	46	14	16	B-PT1/8	4	36	70.2	91.4	1.46	7.37	1.46	7.37	3.97	3.7

Model SHW-CRN



SHW21CRN

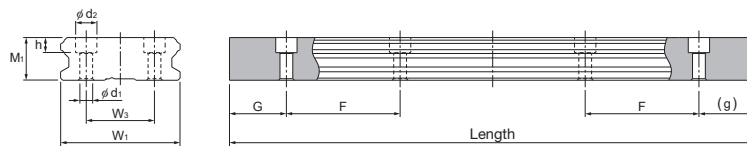


SHW27 to 50CRN

Unit: mm

Model No.	External dimensions			LM block dimensions									H ₃	W ₂	Basic load rating		Static permissible moment kN·m					Mass	
	Height M	Width W	Length L	B	C	S × ℓ	L ₁	T	K	N	E	Grease nipple			C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																	1 block	2 blocks	1 block	2 blocks	1 block		
SHW	21CRN	21	54	59	31	19	M5 × 6	43.6	8	17.7	5	5.5	PB1021B	3.3	8.5	8.24	12.8	0.0806	0.434	0.0806	0.434	0.229	0.19
	27CRN	27	62	72.8	46	32	M6 × 6	56.6	10	23.5	6	12	B-M6F	3.5	10	16	22.7	0.187	0.949	0.187	0.949	0.455	0.36
	35CRN	35	100	107	76	50	M8 × 8	83	14	31	7.6	12	B-M6F	4	15.5	35.5	49.2	0.603	3	0.603	3	1.63	1.2
	50CRN	50	130	141	100	65	M10 × 15	107	18	46	14	16	B-PT1/8	4	20	70.2	91.4	1.46	7.37	1.46	7.37	3.97	3

LM Rail

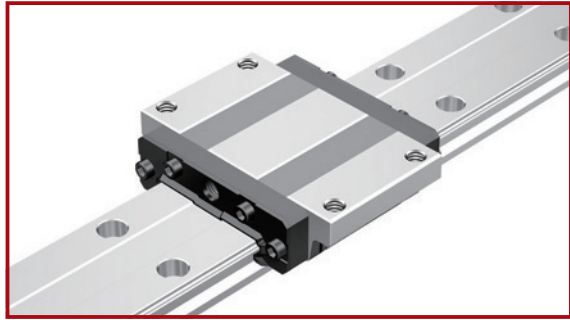


Unit: mm

Model No.	LM rail dimensions							Mass LM rail (kg/m)
	W ₁ 0 -0.05	W ₃	Height M ₁	Pitch F	d ₁ × d ₂ × h	Standard length (G, g)	Maximum length	
SHW21	37	22	11	50	4.5 × 7.5 × 5.3	3,000 (15, 35)	3,000	2.9
SHW27	42	24	15	60	4.5 × 7.5 × 5.3	3,000 (20, 40), 4,080 (20, 40)	5,000	4.5
SHW35	69	40	19	80	7 × 11 × 9	3,000 (20, 20), 4,040 (20, 20)	7,000	9.6
SHW50	90	60	24	80	9 × 14 × 12	3,000 (20, 20), 4,040 (20, 20)	4,500	15

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

Model HRW

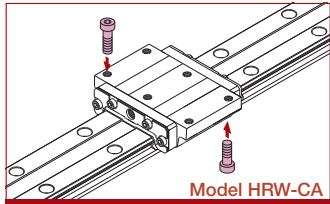


Wide Rail

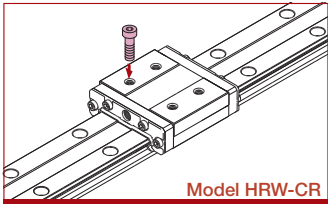
Sizes: 17, 21, 27, 35, 50, 60

- Four-way equal load
- Self-adjustment capability
- Wide with a low center of gravity

Block Types/Lineup



The flange of the LM block has tapped holes. It can be mounted from the top or the bottom.



Model HRW17/21CR has four tapped holes in the LM block. Models HRW27/35/50CR have six tapped holes in the LM block.

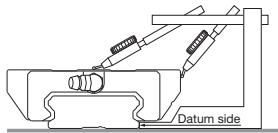
Model No.	Standard type	
	CA	CR
17	○	○
21	○	○
27	○	○
35	○	○
50	○	○
60	○	—

○ : Available — : Unavailable

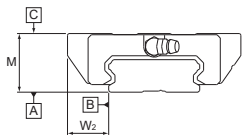
Accuracy Standards

Unit: mm

Model No.	Accuracy standard		Normal grade
	Item		No symbol
17 21	Dimensional tolerance in height M		±0.07
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.06
	Difference in width W ₂		0.02
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		
27 35	Dimensional tolerance in height M		±0.08
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.07
	Difference in width W ₂		0.025
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		
50 60	Dimensional tolerance in height M		±0.08
	Difference in height M	Multiple blocks on a single rail (1 set)	0.025
		Multiple blocks on multiple rails (multiple sets)	0.04
	Dimensional tolerance in width W ₂		±0.07
	Difference in width W ₂		0.03
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
	Running parallelism of surface D against surface B		



Running parallelism



Measurement surface

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value
Above	Up to	Normal grade
		No symbol
—	50	5
50	80	5
80	125	5
125	200	5
200	250	6
250	315	7
315	400	8
400	500	9
500	630	11
630	800	12
800	1,000	13
1,000	1,250	15
1,250	1,600	16
1,600	2,000	18
2,000	2,500	20
2,500	3,150	21
3,150	4,000	23
4,000	5,000	24
5,000	6,000	25
6,000	7,000	26

Radial Clearance Specifications Unit: μm

Code	Normal	Light preload	Medium preload
Model No.	No symbol	C1	C0
17	-3 to +2	-7 to -3	—
21	-4 to +2	-8 to -4	—
27	-5 to +2	-11 to -5	—
35	-8 to +4	-18 to -8	-28 to -18
50	-10 to +5	-24 to -10	-38 to -24
60	-12 to +5	-24 to -12	-42 to -27

Model Number Coding

LM block

HRW21 CA 1 UU C1 F M - N.GRS (GK)BLOCK

Model No.	Type of LM block	Number of LM blocks (only 1)	Contamination prevention accessory symbol	Radial clearance symbol	Stainless steel LM block	LM block with surface treatment	No grease (anti-rust oil only)	GK series LM block symbol
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Standard Specifications

Standard specifications	
Accuracy grade	Normal grade
Radial clearance	Normal/C1/C0
Material	Carbon steel/Stainless steel: 17 to 35
Seal options	UU: 17, 21/SS: 27 to 60
Lubrication	AFB-LF Grease
Lubrication type	Front lubrication

LM rail

HRW21 - 3000L W T F M (GK)RAIL

Model No.	LM rail length (in mm)	Symbol for tapped-hole LM rail	Stainless steel LM rail	LM rail with surface treatment	Symbol for LM rail jointed use	GK series LM rail symbol
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Custom Range

Custom items	
Surface treatment	AP-C
Seal options	UU/DD/ZZ/KK
LM rail specifications	Tapped-hole rail type ¹ /Joint specifications ²
LM rail options	CV caps: 35 to 60 and C caps: 21, 27 ³
Lubrication	No grease (anti-rust oil only)
Contamination protection options	Bellows specifications: 17 to 50 ³

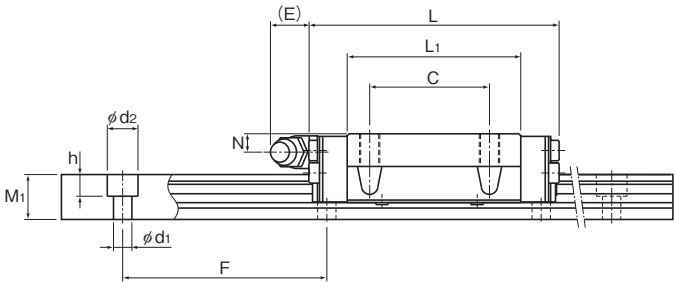
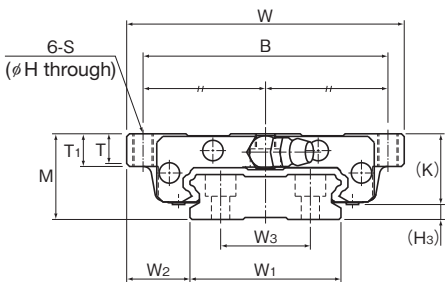
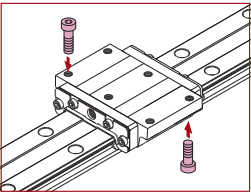
¹ See p. 58 for information about tapped-hole type rail specifications.

² See p. 59 to 60 for information about joint specification rails.

³ CV caps, C caps, and dedicated bellows must be acquired separately from the LM Guide.

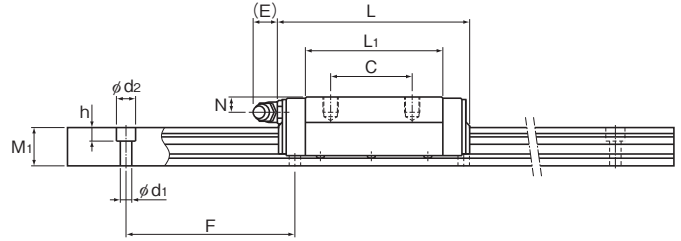
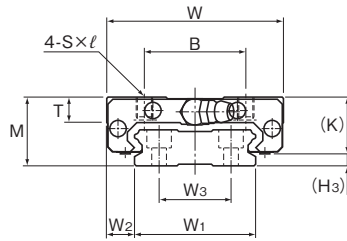
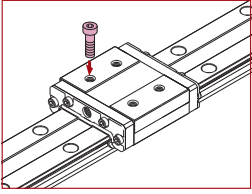
Note: See p.55 to 60 for more information on options.

Model HRW-CA

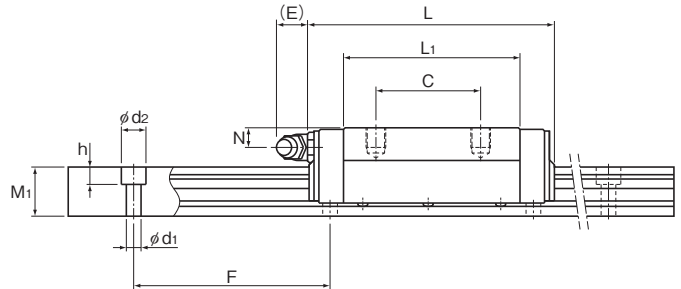
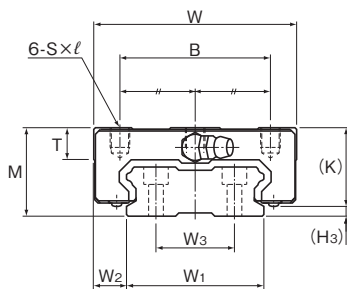


Unit: mm																									
Model No.		External dimensions			LM block dimensions										H ₃	W ₂	Basic load rating		Static permissible moment kN·m					Mass	
		Height	Width	Length	B	C	S	H	L ₁	T	T ₁	K	N	E			Grease nipple	C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block (kg)
																				1 block	2 blocks	1 block	2 blocks	1 block	
HRW	17CA 17CAM	17	60	50.8	53	26	M4	3.3	33.6	5.5	6	14.5	4	2	PB107	2.5	13.5	5.53	9.1	0.0464	0.272	0.0464	0.272	0.144	0.15
	21CA 21CAM	21	68	58.8	60	29	M5	4.4	40	7.3	8	18	4.5	12	B-M6F	3	15.5	8.02	12.9	0.0784	0.445	0.0784	0.445	0.219	0.25
	27CA 27CAM	27	80	72.8	70	40	M6	5.3	51.8	9.5	10	24	6	12	B-M6F	3	19	14.2	21.6	0.166	0.923	0.166	0.923	0.423	0.5
	35CA 35CAM	35	120	106.6	107	60	M8	6.8	77.6	13	14	31	8	12	B-M6F	4	25.5	33.8	48.6	0.559	3.03	0.559	3.03	1.59	1.4
	50CA	50	162	140.5	144	80	M10	8.6	103.5	16.5	18	46.6	14	16	B-PT1/8	3.4	36	62.4	86.3	1.32	7.08	1.32	7.08	3.67	4
	60CA	60	200	158.9	180	80	M12	10.5	117.5	23.5	25	53.5	15	16	B-PT1/8	6.5	40	80.3	109	1.88	10.1	1.88	10.1	6.17	5.7

Model HRW-CR



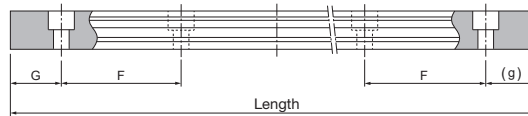
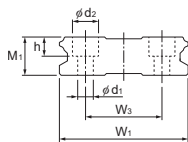
HRW17, 21CR/CRM



HRW27, 35CR/CRM, HRW50CR

Unit: mm																							
Model No.	External dimensions			LM block dimensions									H ₃	W ₂	Basic load rating		Static permissible moment kN-m					Mass	
	Height M	Width W	Length L	B	C	S x l	L ₁	T	K	N	E	Grease nipple			C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																	1 block	2 blocks	1 block	2 blocks	1 block		
HRW	17CR 17CRM	17	50	50.8	29	15	M4 × 5	33.6	6	14.5	4	2	PB107	2.5	8.5	5.53	9.1	0.0464	0.272	0.0464	0.272	0.144	0.12
	21CR 21CRM	21	54	58.8	31	19	M5 × 6	40	8	18	4.5	12	B-M6F	3	8.5	8.02	12.9	0.0784	0.445	0.0784	0.445	0.219	0.19
	27CR 27CRM	27	62	72.8	46	32	M6 × 6	51.8	10	24	6	12	B-M6F	3	10	14.2	21.6	0.166	0.923	0.166	0.923	0.423	0.37
	35CR 35CRM	35	100	106.6	76	50	M8 × 8	77.6	14	31	8	12	B-M6F	4	15.5	33.8	48.6	0.559	3.03	0.559	3.03	1.59	1.2
	50CR	50	130	140.5	100	65	M10 × 15	103.5	18	46.6	14	16	B-PT1/8	3.4	20	62.4	86.3	1.32	7.08	1.32	7.08	3.67	3.2

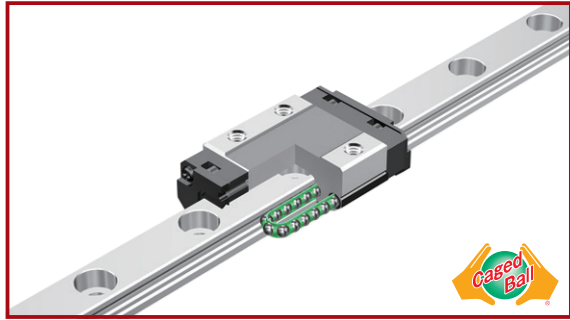
LM Rail



Unit: mm									
Model No.	LM rail dimensions								Mass
	W ₁ ±0.05	W ₃	Height M ₁	Pitch F	d ₁ × d ₂ × h	Standard length (G, g)	Maximum length		LM rail (kg/m)
							Carbon steel	Stainless steel	
HRW17	33	18	9	40	4.5 × 7.5 × 5.3	2,200 (15, 25)	2,200	1,300	2.1
HRW21	37	22	11	50	4.5 × 7.5 × 5.3	3,000 (15, 35)	3,000	1,300	2.9
HRW27	42	24	15	60	4.5 × 7.5 × 5.3	3,000 (20, 40), 4,080 (20, 40)	7,000	1,900	4.3
HRW35	69	40	19	80	7 × 11 × 9	3,000 (20, 20), 4,040 (20, 20)	7,000	2,120	9.9
HRW50	90	60	24	80	9 × 14 × 12	3,000 (20, 20), 4,040 (20, 20)	7,000	—	14.6
HRW60	120	80	31	105	11 × 17.5 × 14	3,000 (22.5, 37.5), 3,945 (22.5, 37.5)	4,000	—	27.8

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

Model SRS

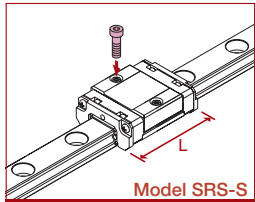


Miniature/Long-Term Maintenance-Free Operation

Sizes: 7, 7W, 9X(G), 9W(G), 12(G), 12W(G), 15(G), 15W(G)

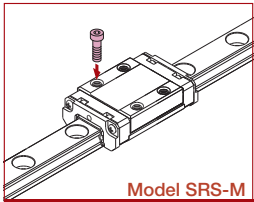
- Compact type/wide type selectable
- Stainless steel
- Caged Ball type/Full-Ball type selectable

Block Types/Lineup



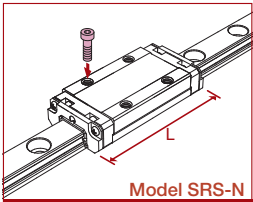
Model SRS-S

This type has a shorter overall LM block length (L) than the Model SRS-M.



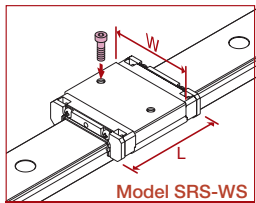
Model SRS-M

This model is the standard type of SRS.



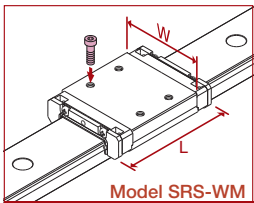
Model SRS-N

This type has a longer overall LM block length (L) and a larger load rating and permissible moment than the Model SRS-M.



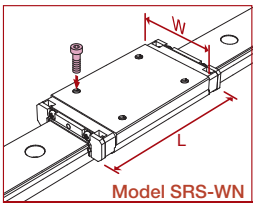
Model SRS-WS

This model has a longer overall LM block length (L), a greater width, and a larger load rating and permissible moment than the Model SRS-S.



Model SRS-WM

This type has a longer overall LM block length (L), a greater width, and a larger load rating and permissible moment than the Model SRS-M.



Model SRS-WN

This type has a longer overall LM block length (L) and a larger rated load and permissible moment than the Model SRS-WM.

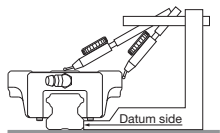
Model No.	Block type					
	Short type		Standard type		Long type	
	S	WS	M	WM	N	WN
7	—	—	○	○	—	—
9(X)	○	○	○	○	○	○
9(X)G	○	○	○	○	○	○
12	○	○	○	○	○	○
12G	○	○	○	○	○	○
15	○	○	○	○	○	○
15G	○	○	○	○	○	○

○ : Available — : Unavailable

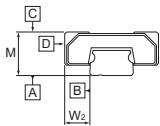
Accuracy Standards

Unit: mm

Model No.	Block type	Accuracy standard		Normal grade
		Item		No symbol
7 7W 9X(G) 9W(G) 12(G) 12W(G) 15(G) 15W(G)	S/M	Dimensional tolerance in height M		±0.04
		Difference in height M	Multiple blocks on a single rail (1 set)	0.03
			Multiple blocks on multiple rails (multiple sets)	0.05
		Dimensional tolerance in width W ₂		±0.04
		Difference in width W ₂		0.03
		Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
		Running parallelism of surface D against surface B		
9X(G) 9W(G) 12(G) 12W(G) 15(G) 15W(G)	N	Dimensional tolerance in height M		±0.06
		Difference in height M	Multiple blocks on a single rail (1 set)	0.03
			Multiple blocks on multiple rails (multiple sets)	0.05
		Dimensional tolerance in width W ₂		±0.06
		Difference in width W ₂		0.03
		Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
		Running parallelism of surface D against surface B		



Running parallelism



Measurement surface

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value
Above	Up to	Normal grade No symbol
—	40	8
40	70	10
70	100	11
100	130	12
130	160	13
160	190	14
190	220	15
220	250	16
250	280	17
280	310	17
310	340	18
340	370	18
370	400	19
400	430	20
430	460	20
460	520	21
520	550	22
550	640	22
640	670	23
670	700	23
700	820	23
820	850	24
850	970	24
970	1,030	25
1,030	1,150	25
1,150	1,330	26
1,330	1,420	27
1,420	1,510	27
1,510	1,830	28
1,830	2,000	28

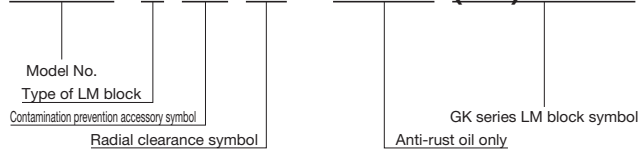
Radial Clearance Specifications Unit: μm

Code	Normal	Light preload
Model No.	No symbol	C1
7	-2 to +2	-3 to 0
9(X)	-2 to +2	-4 to 0
12	-3 to +3	-6 to 0
15	-5 to +5	-10 to 0

Model Number Coding

LM block

SRS9X N UU C1 - N.GRS (GK)BLOCK

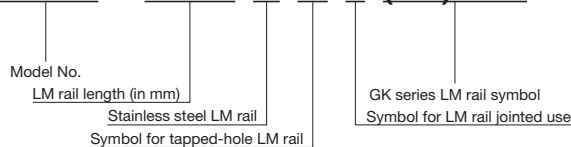


Standard Specifications

Standard specifications	
Accuracy grade	Normal grade
Radial clearance	Normal/C1
Material	Stainless steel
Seal options	UU
Lubrication	AFF Grease
Lubrication type	Front lubrication

LM rail

SRS9X - 1000L M W T (GK)RAIL



Custom Range

Custom items	
Seal options	SS: 9X to 15, 7W to 15W/HH: 9X to 15, 9W to 15W
LM rail specifications	Tapped-hole rail type ¹ /Joint specifications ²
LM rail options	C caps: 9W, 12, 15 ³
Lubrication	No grease (anti-rust oil only)
Lubrication options	Lubrication unit QZ: 9X to 15, 7W to 15W

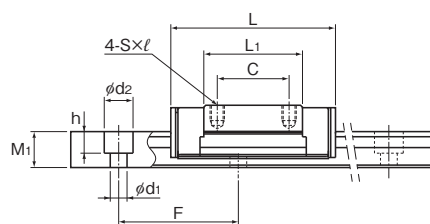
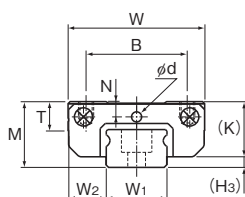
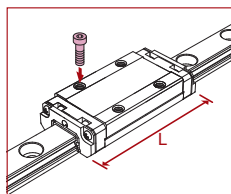
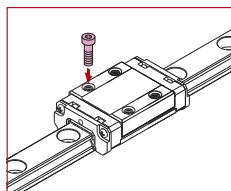
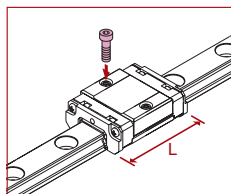
¹ See p. 58 for information about tapped-hole type rail specifications.

² See p. 59 to 60 for information about joint specification rails.

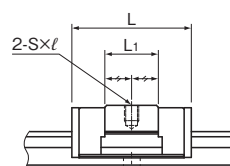
³ C caps must be acquired separately from the LM Guide.

Note: See p.55 to 60 for more information on options.

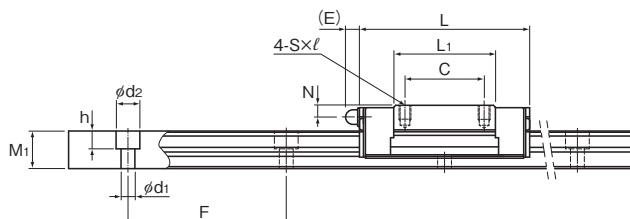
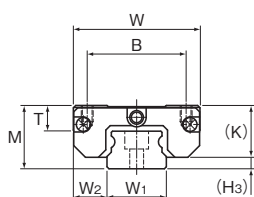
Model SRS-S/M/N



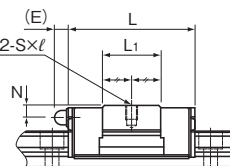
SRS7M, 9XM/XN, 12M/N, 15M/N



SRS9XS, 12S, 15S/M/N



SRS15GM/GN

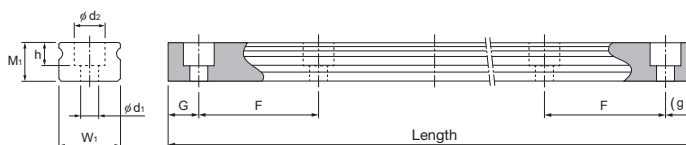


SRS15GS

Unit: mm

Model No.	External dimensions			LM block dimensions											H ₃	W ₂	Basic load rating		Static permissible moment N·m					Mass
	Height M	Width W	Length L	B	C	S × ℓ	L ₁	T	K	N	E	Lubrication hole d	Grease nipple	C (kN)			C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																		1 block	2 blocks	1 block	2 blocks	1 block		
SRS	7M	8	17	23.4	12	8	M2 × 2.3	13.4	3.3	6.7	1.6	—	1.2	—	1.3	5	1.51	1.29	3.09	17.2	3.69	17.3	5.02	0.009
	9XS 9XGS	10	20	21.5	15	—	M3 × 2.8	10.5	4.5	8.5	2.4	—	1.6	—	1.5	5.5	1.78 1.37	1.53 1.53	3.15 2.85	22.2 22.6	3.61 3.27	25.6 26	7.04 7.04	0.009
	9XM 9XGM	10	20	30.8	15	10	M3 × 2.8	19.8	4.5	8.5	2.4	—	1.6	—	1.5	5.5	2.69 2.22	2.75 3.06	9.31 9.87	52.2 57.9	10.7 11.4	60.3 66.9	12.7 14.1	0.016
	9XN 9XGN	10	20	40.8	15	16	M3 × 2.8	29.8	4.5	8.5	2.4	—	1.6	—	1.5	5.5	3.48 2.94	3.98 4.59	18.7 21.1	96.5 111	21.6 24.4	112 128	18.3 21.1	0.024
	12S 12GS	13	27	25	20	—	M3 × 3.2	11.2	5.7	11	3	—	2	—	2.1	7.5	2.70 2.07	2.10 2.10	4.62 4.17	37.5 38.1	4.62 4.17	37.5 38.1	13.8 13.8	0.017
	12M 12GM	13	27	34.4	20	15	M3 × 3.2	20.6	5.7	11	3	—	2	—	2.1	7.5	4.00 3.36	3.53 3.55	12.0 12.1	78.5 79.0	12.0 12.1	78.5 79.0	23.1 23.2	0.027
	12N 12GN	13	27	47.1	20	20	M3 × 3.2	33.3	5.7	11	3	—	2	—	2.1	7.5	5.82 4.72	5.30 6.83	28.4 34.8	151 195	28.4 34.8	151 195	34.7 44.7	0.049
	15S 15GS	16	32	32	25	—	M3 × 3.5	14.7	6.5	13.3	3	— 4	3 —	— PB107	2.7	8.5	4.50 4.01	3.39 4.24	9.54 12.6	77.5 92.7	9.54 12.6	77.5 92.7	24.1 30.1	0.033
	15M 15GM	16	32	43	25	20	M3 × 3.5	25.7	6.5	13.3	3	— 4	3 —	— PB107	2.7	8.5	6.66 5.59	5.7 5.72	26.2 24.8	154 158	26.2 24.8	154 158	40.4 40.6	0.047
	15N 15GN	16	32	60.8	25	25	M3 × 3.5	43.5	6.5	13.3	3	— 4	3 —	— PB107	2.7	8.5	9.71 8.27	8.55 11.9	59.7 82.3	312 433	59.7 82.3	312 433	60.7 84.5	0.095

LM Rail

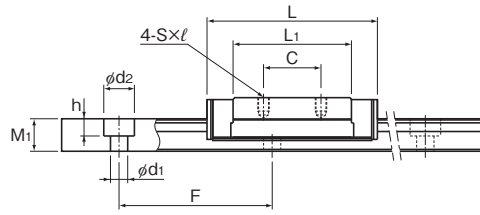
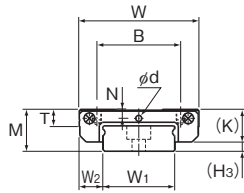
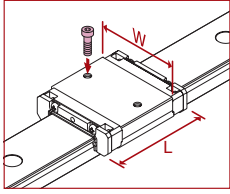


Unit: mm

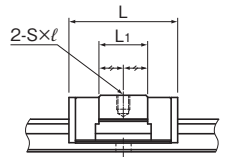
Model No.	LM rail dimensions							Gravit. m
	W ₁	Height	Pitch	d ₁ × d ₂ × h	Standard length	Maximum length	Maximum length when joined	Mass
	0 -0.02	M ₁	F		(G, g)			LM rail (kg/m)
SRS7	7	4.7	15	2.4 × 4.2 × 2.3	490 (5, 5)	490	—	0.25
SRS9X	9	5.5	20	3.5 × 6 × 3.3	1,000 (7.5, 12.5), 2,000 (7.5, 12.5)	2,000	2,000	0.36
SRS12	12	7.5	25	3.5 × 6 × 4.5	1,000 (10, 15), 2,000 (10, 15)	2,000	3,000	0.65
SRS15	15	9.5	40	3.5 × 6 × 4.5	1,000 (10, 15), 2,000 (10, 15)	2,000	3,000	0.96

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

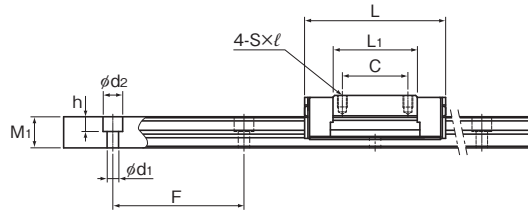
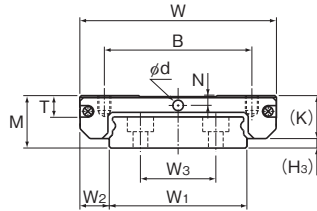
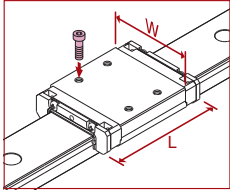
Model SRS-WS/WM/WN



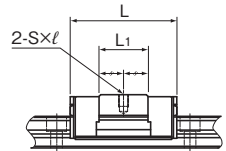
SRS7WM, 9WM/WN, 12WM/WN



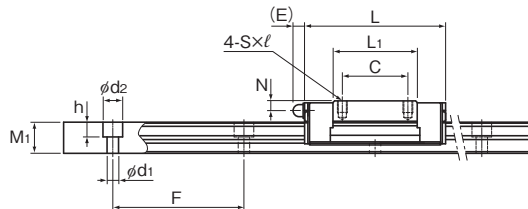
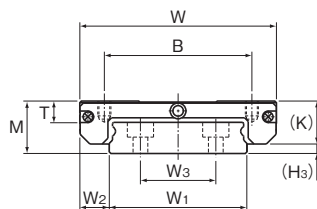
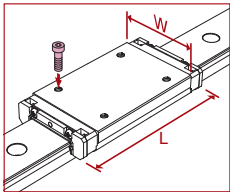
SRS9 to 15WS



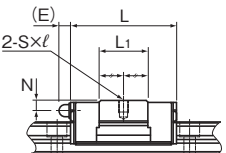
SRS15WM/WN



SRS15WS



SRS15WGM/WGN

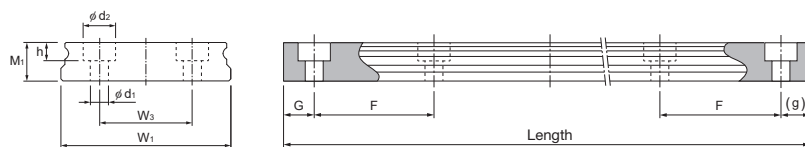


SRS15WS

Unit: mm

Model No.	External dimensions			LM block dimensions											H ₃	W ₂	Basic load rating		Static permissible moment N·m					Mass
	Height M	Width W	Length L	B	C	S × ℓ	L ₁	T	K	N	E	Lubrication hole d	Grease nipple	C (kN)			C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																		1 block	2 blocks	1 block	2 blocks	1 block		
SRS	7WM	9	25	31	19	10	M3 × 2.8	20.4	3.8	7.2	1.8	—	1.2	—	1.8	5.5	2.01	1.94	6.47	36.4	7.71	42.3	14.33	0.018
	9WS 9WGS	12	30	26.5	21	—	M3 × 2.8	14.5	4.9	9.1	2.3	—	1.6	—	2.9	6	2.03 1.73	1.84 2.14	4.49 5.15	32.1 36.9	5.15 5.92	38.9 42.6	17.4 20.2	0.018
	9WM 9WGM	12	30	39	21	12	M3 × 2.8	27	4.9	9.1	2.3	—	1.6	—	2.9	6	3.29 2.67	3.34 3.35	14.0 13.9	78.6 69.7	16.2 16.6	91.0 96.7	31.5 31.7	0.031
	9WN 9WGN	12	30	50.7	23	24	M3 × 2.8	38.7	4.9	9.1	2.3	—	1.6	—	2.9	6	4.20 3.48	4.37 5.81	25.1 33.2	130 172	29.1 40	151 208	41.3 54.9	0.049
	12WS 12WGS	14	40	30.5	28	—	M3 × 3.5	16.9	5.7	11	3	—	2	—	3	8	3.58 3.05	3.15 3.68	9.77 11.1	63 72.6	9.77 11.1	63 72.6	39.5 46.2	0.034
	12WM 12WGM	14	40	44.5	28	15	M3 × 3.5	30.9	5.7	11	3	—	2	—	3	8	5.48 4.46	5.3 5.32	26.4 25.7	143 146	26.4 25.7	143 146	66.5 66.8	0.055
	12WN 12WGN	14	40	59.5	28	28	M3 × 3.5	45.9	5.7	11	3	—	2	—	3	8	7.13 5.93	7.07 9.46	49.2 64.7	249 332	49.2 64.7	249 332	88.7 119	0.091
	15WS 15WGS	16	60	41.5	45	—	M4 × 4.5	24.9	6.5	13.3	3	—	3 —	— PB107	2.7	9	6.64 5.59	5.94 6.78	25.4 29	158 178	25.4 29	158 178	123 140	0.087
	15WM 15WGM	16	60	55.5	45	20	M4 × 4.5	38.9	6.5	13.3	3	—	3 —	— PB107	2.7	9	9.12 7.43	8.55 8.59	51.2 52.7	290 293	51.2 52.7	290 293	176 178	0.13
	15WN 15WGN	16	60	74.5	45	35	M4 × 4.5	57.9	6.5	13.3	3	—	3 —	— PB107	2.7	9	12.4 9.87	12.1 15.3	106 133	532 671	106 133	532 671	250 317	0.201

LM Rail

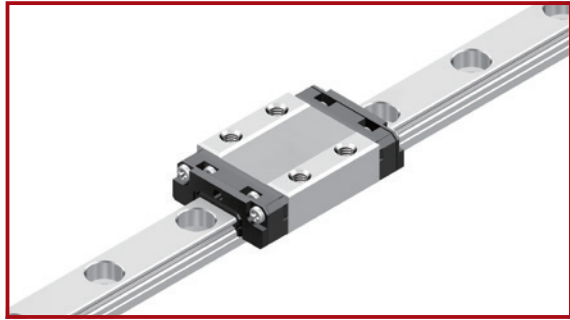


Unit: mm

Model No.	LM rail dimensions								Mass LM rail (kg/m)
	W ₁ 0 -0.02	W ₃	Height M ₁	Pitch F	d ₁ × d ₂ × h	Standard length (G, g)	Maximum length	Maximum length when joined	
SRS7W	14	—	5.2	30	3.5 × 6 × 3.2	500 (10, 10)	500	2,000	0.56
SRS9W	18	—	7.5	30	3.5 × 6 × 4.5	1,000 (10, 30), 2,000 (10, 10)	2,000	2,000	1.01
SRS12W	24	—	8.5	40	4.5 × 8 × 4.5	1,000 (15, 25), 2,000 (15, 25)	2,000	3,000	1.52
SRS15W	42	23	9.5	40	4.5 × 8 × 4.5	1,000 (15, 25), 2,000 (15, 25)	2,000	3,000	2.87

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

Model RSX

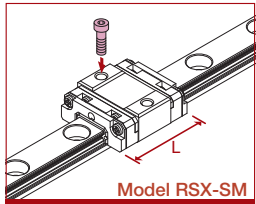


Miniature

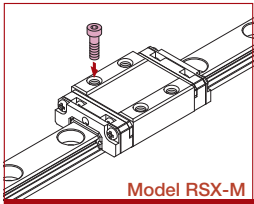
Sizes: 7, 7W, 9, 9W, 12, 12W, 15, 15W

- Compact type/wide type selectable
- Stainless steel
- Retains balls

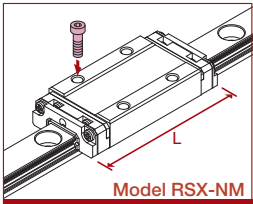
Block Types/Lineup



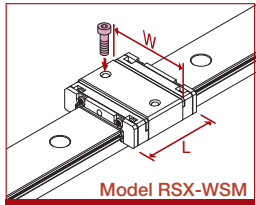
This type has a shorter overall LM block length (L) than the Model RSX-M.



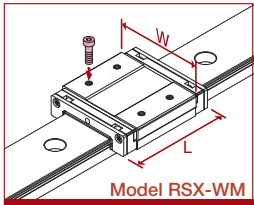
The standard type of RSX.



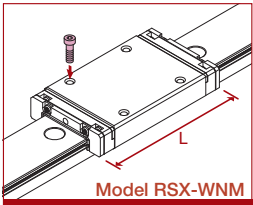
This type has a longer overall LM block length (L) and a larger load rating and permissible moment than the Model RSX-M.



This type has a longer overall LM block length (L), a greater width (W), and a larger load rating and permissible moment than the Model RSX-M.



This type has a longer overall LM block length (L), a greater width and a larger load rating and permissible moment than the Model RSX-M.



This type has a longer overall LM block length (L) and a larger load rating and permissible moment than the Model RSX-WM.

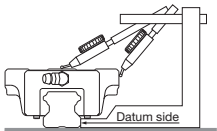
Model No.	Block type					
	Short type		Standard type		Long type	
	SM	WSM	M	WM	NM	WNM
7	○	○	○	○	○	○
9	○	○	○	○	○	○
12	○	○	○	○	○	○
15	○	○	○	○	○	○

○ : Available — : Unavailable

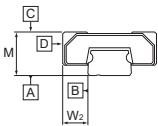
Accuracy Standards

Unit: mm

Model No.	Block type	Accuracy standard		Normal grade
		Item		No symbol
7 7W 9 9W 12 12W 15 15W	SM/M	Dimensional tolerance in height M		±0.04
		Difference in Height M	Multiple blocks on a single rail (1 set)	0.03
			Multiple blocks on multiple rails (multiple sets)	0.05
		Dimensional tolerance in width W ₂		±0.04
		Difference in width W ₂		0.03
		Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
		Running parallelism of surface D against surface B		
7 7W 9 9W 12 12W 15 15W	NM	Dimensional tolerance in height M		±0.06
		Difference in Height M	Multiple blocks on a single rail (1 set)	0.03
			Multiple blocks on multiple rails (multiple sets)	0.05
		Dimensional tolerance in width W ₂		±0.06
		Difference in width W ₂		0.03
		Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.
		Running parallelism of surface D against surface B		



Running parallelism



Measurement surface

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value
Above	Up to	Normal grade No symbol
—	40	8
40	70	10
70	100	11
100	130	12
130	160	13
160	190	14
190	220	15
220	250	16
250	280	17
280	310	17
310	340	18
340	370	18
370	400	19
400	430	20
430	460	20
460	520	21
520	550	22
550	640	22
640	670	23
670	700	23
700	820	23
820	850	24
850	970	24
970	1030	25
1030	1,150	25
1,150	1,330	26
1,330	1,420	27
1,420	1,510	27
1,510	1,830	28
1,830	2,000	28

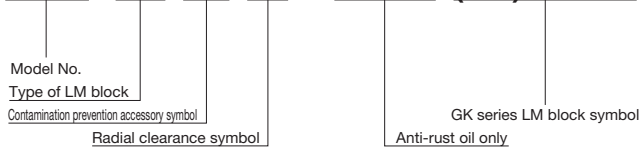
Radial Clearance Specifications Unit: μm

Code	Normal	Light preload
Model No.	No symbol	C1
7	-2 to +2	-3 to 0
9	-2 to +2	-4 to 0
12	-3 to +3	-6 to 0
15	-5 to +5	-10 to 0

Model Number Coding

LM block

RSX9 NM UU C1 - N.GRS (GK)BLOCK

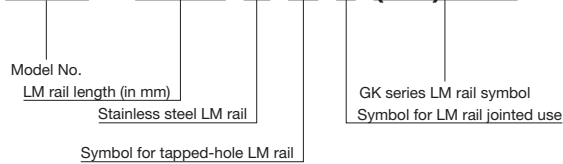


Standard Specifications

Standard specifications	
Accuracy grade	Normal grade
Radial clearance	Normal/C1
Material	Stainless steel
Seal options	UU
Lubrication	AFF Grease
Lubrication type	Front lubrication

LM rail

RSX9 - 1000L M W T (GK)RAIL



Custom Range

Custom items	
LM rail specifications	Tapped-hole rail type ¹ /Joint specifications ²
LM rail options	C caps: 9W, 12, 15 ³
Lubrication	No grease (anti-rust oil only)

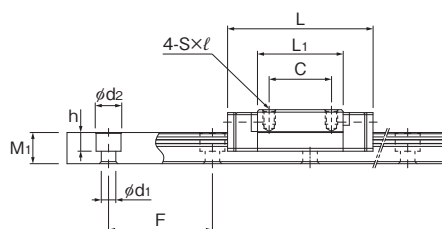
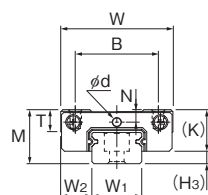
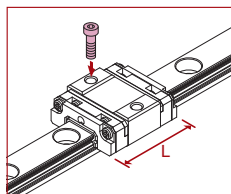
¹ See p. 58 for information about tapped-hole type rail specifications.

² See p. 59 to 60 for information about joint specification rails.

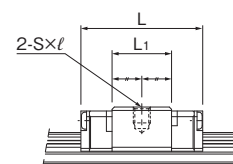
³ C caps must be acquired separately from the LM Guide.

Note: See p.55 to 60 for more information on options.

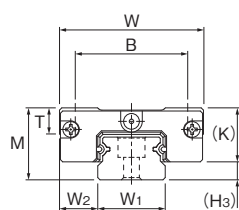
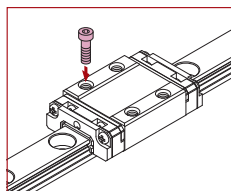
Model RSX-SM/M/NM



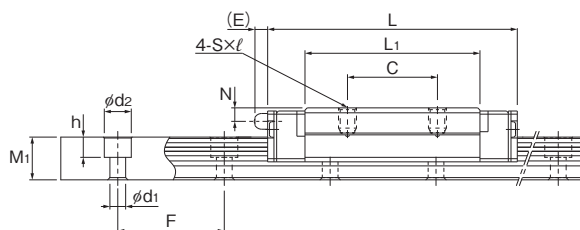
RSX7M/NM, 9M/NM, 12M/NM



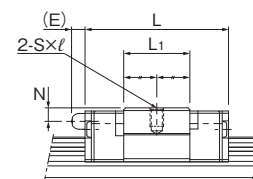
RSX7SM, 9SM, 12SM



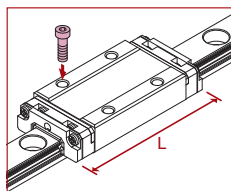
RSX15M



RSX15M/NM



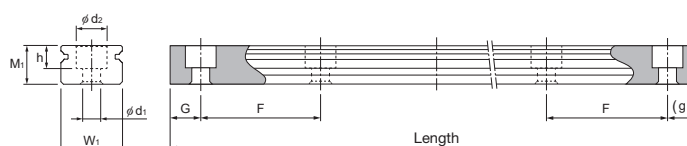
RSX15SM



Unit: mm

Model No.	External dimensions			LM block dimensions										H ₃	W ₂	Basic load rating		Static permissible moment N·m					Mass	
	Height M	Width W	Length L	B	C	S × ℓ	L ₁	T	K	N	E	Lubrication hole d	Grease nipple			C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																		1 block	2 blocks	1 block	2 blocks	1 block		
RSX	7SM	8	17	19	12	—	M2 × 2.6	9	—	6.5	1.7	—	1.2	—	1.5	5	0.95	1.16	1.96	14.7	2.25	16.9	4.49	0.005
	7M	8	17	23.4	12	8	M2 × 2.6	13.4	—	6.5	1.7	—	1.2	—	1.5	5	1.16	1.54	3.27	23.1	3.77	26.7	5.96	0.008
	7NM	8	17	31	12	13	M2 × 2.6	21	—	6.5	1.7	—	1.2	—	1.5	5	1.63	2.51	8.08	48.4	9.32	56	9.71	0.012
	9SM	10	20	21.5	15	—	M3 × 2.8	10.5	—	7.8	2.4	—	1.6	—	2.2	5.5	1.37	1.53	2.85	22.6	3.27	26	7.04	0.008
	9M	10	20	30.8	15	10	M3 × 2.8	19.8	—	7.8	2.4	—	1.6	—	2.2	5.5	2.22	3.06	9.87	57.9	11.4	66.9	14.1	0.018
	9NM	10	20	40.8	15	16	M3 × 2.8	29.8	—	7.8	2.4	—	1.6	—	2.2	5.5	2.94	4.59	21.1	111	24.4	128	21.1	0.024
	12SM	13	27	25.6	20	—	M3 × 3.5	11.2	5.3	10	3	—	2	—	3	7.5	2.07	2.1	4.17	38.1	4.17	38.1	13.8	0.015
	12M	13	27	35	20	15	M3 × 3.5	20.6	5.3	10	3	—	2	—	3	7.5	3.36	4.21	14.2	92.5	14.2	92.5	27.6	0.037
	12NM	13	27	47.7	20	20	M3 × 3.5	33.3	5.3	10	3	—	2	—	3	7.5	4.72	6.83	34.8	195	34.8	195	44.7	0.047
	15SM	16	32	31.9	25	—	M3 × 4	14.7	5.8	12	3	4	—	PB107	4	8.5	4.01	4.24	12.6	92.6	12.6	92.6	30.1	0.03
15M	16	32	42.9	25	20	M3 × 4	25.7	5.8	12	3	4	—	PB107	4	8.5	5.59	6.78	29	186	29	186	48.1	0.069	
15NM	16	32	60.7	25	25	M3 × 4	43.5	5.8	12	3	4	—	PB107	4	8.5	8.27	11.8	82.1	432	82.1	432	84.3	0.089	

LM Rail

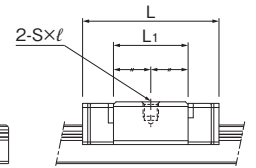
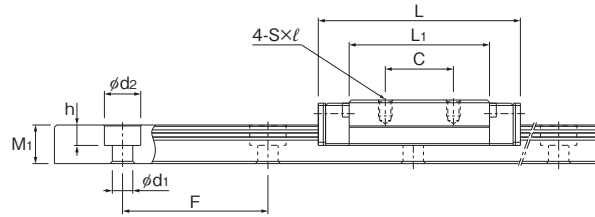
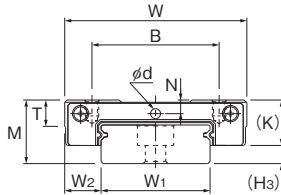
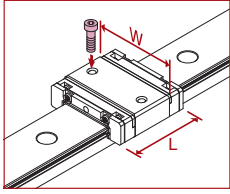


Unit: mm

Model No.	LM rail dimensions							Mass
	W ₁ 0 -0.02	Height M ₁	Pitch F	d ₁ × d ₂ × h	Standard length (G, g)		Maximum length	LM rail (kg/m)
RSX7	7	4.7	15	2.4 × 4.2 × 2.3	490 (5, 5)		490	0.227
RSX9	9	5.5	20	3.5 × 6 × 3.3	1,000 (7.5, 12.5), 2,000 (7.5, 12.5)		2,000	0.32
RSX12	12	7.5	25	3.5 × 6 × 4.5	1,000 (10, 15), 2,000 (10, 15)		2,000	0.65
RSX15	15	9.5	40	3.5 × 6 × 4.5	1,000 (10, 15), 2,000 (10, 15)		2,000	0.96

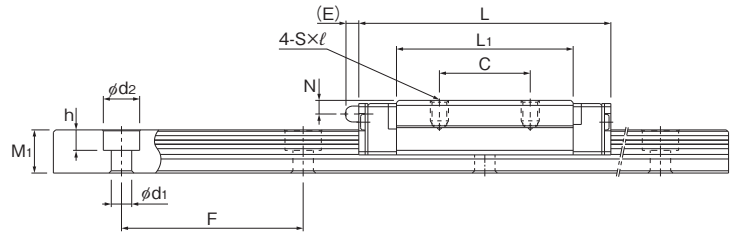
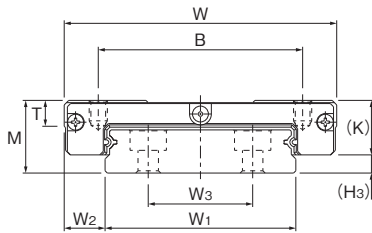
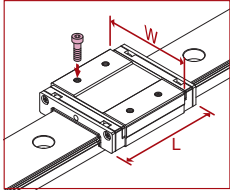
Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

Model RSX-WSM/WM/WNM

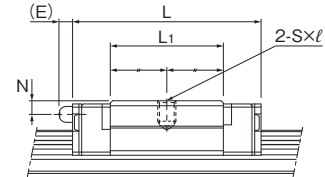
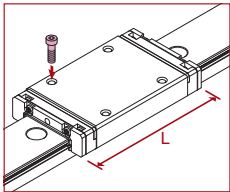


RSX7WM/NM, 9WM/NM, 12WM/NM

RSX7WSM, 9WSM, 12WSM



RSX15WM/NM

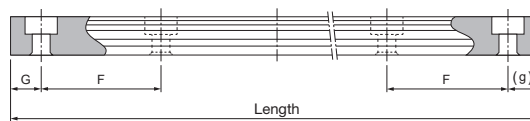
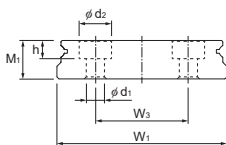


RSX15WSM

Unit: mm

Model No.	External dimensions			LM block dimensions										H ₃	W ₂	Basic load rating		Static permissible moment N·m					Mass	
	Height M	Width W	Length L	B	C	S × ℓ	L ₁	T	K	N	E	Lubrication hole d	Grease nipple			C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																		1 block	2 blocks	1 block	2 blocks	1 block		
RSX	7WSM	9	25	22.5	19	—	M3 × 2.8	11.9	—	7	1.8	—	1.2	—	2	5.5	1.06	1.35	2.58	20	2.96	23.1	9.95	0.011
	7WM	9	25	31	19	10	M3 × 2.8	20.4	—	7	1.8	—	1.2	—	2	5.5	1.63	2.51	8.08	46.9	9.32	54.2	18.5	0.018
	7WNM	9	25	40.9	19	17	M3 × 2.8	30.3	—	7	1.8	—	1.2	—	2	5.5	2.12	3.66	16.6	87.7	19.2	101	27	0.027
	9WSM	12	30	26.5	21	—	M3 × 2.8	14.5	—	8.3	2.3	—	1.6	—	3.7	6	1.73	2.14	5.15	36.9	5.92	42.6	20.2	0.018
	9WM	12	30	39	21	12	M3 × 2.8	27	—	8.3	2.3	—	1.6	—	3.7	6	2.8	4.28	18.5	99.3	21.4	115	40.5	0.035
	9WNM	12	30	50.7	23	24	M3 × 2.8	38.7	—	8.3	2.3	—	1.6	—	3.7	6	3.48	5.81	33.2	172	38.3	199	54.9	0.048
	12WSM	14	40	30.5	28	—	M3 × 3.5	16.9	4.5	10	3	—	2	—	4	8	3.05	3.68	11.1	72.6	11.1	72.6	46.2	0.033
	12WM	14	40	44.5	28	15	M3 × 3.5	30.9	4.5	10	3	—	2	—	4	8	4.46	6.31	30	171	30	171	79.2	0.075
	12WNM	14	40	59.5	28	28	M3 × 3.5	45.9	4.5	10	3	—	2	—	4	8	5.93	9.46	64.7	332	64.7	332	119	0.091
	15WSM	16	60	41.5	45	—	M4 × 4.5	24.9	5.6	12	3	4	—	PB107	4	9	5.59	6.78	29	178	29	178	140	0.083
	15WM	16	60	55.5	45	20	M4 × 4.5	38.9	5.6	12	3	4	—	PB107	4	9	7.43	10.1	61.4	343	61.4	343	211	0.17
	15WNM	16	60	74.5	45	35	M4 × 4.5	57.9	5.6	12	3	4	—	PB107	4	9	9.87	15.2	133	670	133	670	316	0.195

LM Rail

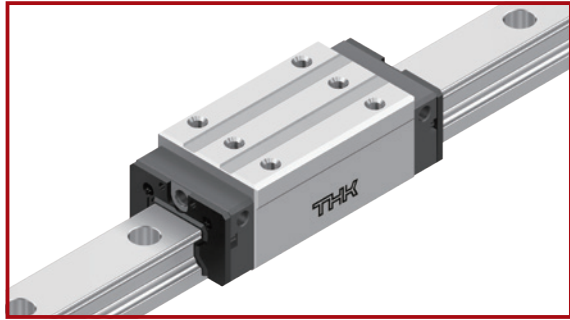


Unit: mm

Model No.	LM rail dimensions								Mass LM rail (kg/m)
	W ₁ 0 -0.02	W ₃	Height M ₁	Pitch F	Standard length (G, g)		Maximum length	Maximum length when joined	
RSX7W	14	—	5.2	30	3.5 × 6 × 3.2		500	2,000	0.54
RSX9W	18	—	7.5	30	3.5 × 6 × 4.5		2,000	2,000	1.01
RSX12W	24	—	8.5	40	4.5 × 8 × 4.5		2,000	3,000	1.52
RSX15W	42	23	9.5	40	4.5 × 8 × 4.5		2,000	3,000	2.87

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

Model HDR



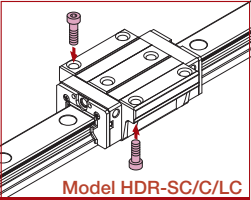
LM Guide Suited for Single-Axis Applications

Sizes: 15, 20, 25, 30, 35, 45, 55, 65

- High rigidity in rolling direction
- Four-way equal load
- ISO-compliant dimensions¹
- Extensive lineup of block types

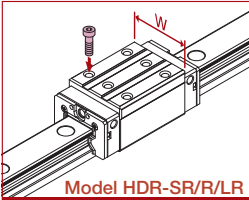
¹ Models US/UT and UW/UW do not have ISO-compliant dimensions.

Block Types/Lineup



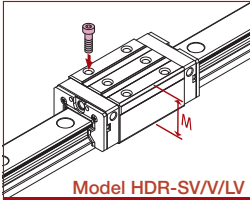
Model HDR-SC/C/LC

The flange of this LM block has tapped holes. It can be mounted from the top or the bottom.



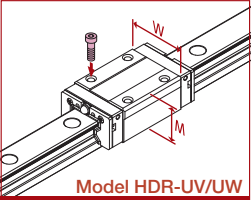
Model HDR-SR/R/LR

With this type, the LM block has a smaller width (W) and tapped holes. It is ideal for compact designs.



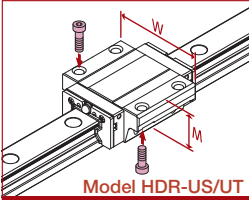
Model HDR-SV/V/LV

This type has a shorter height (M) than the Model HDR-R/LR and a more compact design.



Model HDR-UV/UW

This type conforms to the height (M) and block width (W) of the compact-type Model SR-V/W, which features a low cross-sectional height. The M dimension is even shorter than that of the Model HDR-V/LV.



Model HDR-US/UT

This type conforms to the height (M) and block width (W) of the compact-type Model SR-SB/TB, which features a low cross-sectional height. The M dimension is even shorter than that of the Model HDR-C/LC.

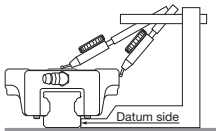
Model No.	Block type												
	Short type					Standard type					Long type		
	SC	SR	SV	UV	US	C	R	V	UW	UT	LC	LR	LV
15	○	—	○	—	—	○	○	○	—	—	○	○	○
20	○	○	—	○	○	○	○	—	○	○	○	○	—
25	○	—	○	○	○	○	○	○	○	○	○	○	○
30	○	—	○	—	—	○	○	○	—	—	○	○	○
35	○	—	○	—	—	○	○	○	—	—	○	○	○
45	—	—	—	—	—	○	○	○	—	—	○	○	○
55	—	—	—	—	—	○	○	○	—	—	○	○	○
65	—	—	—	—	—	○	○	—	—	—	○	○	—

○ : Available — : Unavailable

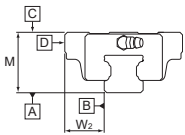
Accuracy Standards

Unit: mm

Model No.	Accuracy standards		Normal grade	Precision grade
	Item		No symbol	P
15 20	Dimensional tolerance in height M		±0.07	0 -0.03
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02	0.006
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Dimensional tolerance in width W ₂		±0.06	0 -0.02
	Difference in width W ₂		0.02	0.006
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
25 30 35	Dimensional tolerance in height M		±0.08	0 -0.04
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02	0.007
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Dimensional tolerance in width W ₂		±0.07	0 -0.03
	Difference in width W ₂		0.025	0.007
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
45 55	Dimensional tolerance in height M		±0.08	0 -0.05
	Difference in height M	Multiple blocks on a single rail (1 set)	0.025	0.007
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Dimensional tolerance in width W ₂		±0.07	0 -0.04
	Difference in width W ₂		0.03	0.007
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
65	Dimensional tolerance in height M		±0.08	0 -0.05
	Difference in height M	Multiple blocks on a single rail (1 set)	0.03	0.01
		Multiple blocks on multiple rails (multiple sets)	0.04	0.025
	Dimensional tolerance in width W ₂		±0.08	0 -0.05
	Difference in width W ₂		0.03	0.01
	Running parallelism of surface C against surface A Running parallelism of surface D against surface B		See the table on the next page for LM rail length and running parallelism by accuracy standard.	



Running parallelism



Measurement surface

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value	
Above	Up to	Normal grade No symbol	Precision grade P
—	50	5	2
50	80	5	2
80	125	5	2
125	200	5	2
200	250	6	2.5
250	315	7	3
315	400	8	3.5
400	500	9	4.5
500	630	11	5
630	800	12	6
800	1,000	13	6.5
1,000	1,250	15	7.5
1,250	1,600	16	8
1,600	2,000	18	8.5
2,000	2,500	20	9.5
2,500	3,150	21	11
3,150	4,000	23	12
4,000	5,000	24	13
5,000	6,000	25	14
6,000	7,000	26	15

Radial Clearance Specifications Unit: μm

Code	Normal	Light preload	Medium preload
Model No.	No symbol	C1	C0
15	-6 to 0	-10 to -6	—
20	-8 to 0	-14 to -8	-18 to -14
20U	-9 to 0	-14 to -9	-18 to -14
25	-9 to 0	-16 to -11	-21 to -16
25U	-10 to 0	-17 to -13	-22 to -17
30	-11 to 0	-18 to -13	-22 to -18
35	-13 to 0	-20 to -15	-25 to -20
45	-18 to 0	-29 to -22	-37 to -29
55	-20 to 0	-34 to -27	-42 to -34
65	-23 to 0	-39 to -28	-49 to -39

Model Number Coding

LM block

HDR25 LC 1 SS C0 F M - Z - A - P (GK)BLOCK

Model No.
Type of LM block
Number of LM blocks (only 1)
Contamination prevention accessory symbol
Radial clearance symbol
Stainless steel LM ball
LM block with surface treatment
GK series LM block symbol
Accuracy symbol
Grease nipple symbol (with front and side lubrication)
With plate cover

LM rail

HDR25 - 3000L Z T F - P (GK)RAIL

Model No.
LM rail length (in mm)
With plate cover
Symbol for LM rail jointed use
GK series LM rail symbol
Accuracy symbol
LM rail with surface treatment

Standard Specifications

Standard specifications	
Accuracy grade	Normal grade/Precision grade
Radial clearance	Normal/C1/C0
Material	Carbon steel/Stainless steel: ball only
Seal options	SS
Lubrication	AFB-LF Grease
Lubrication type	Front lubrication specification

Custom Range

Custom items	
Surface treatment	AP-C
Seal options	UU/DD/ZZ/KK/HH
LM rail specifications	Tapped-hole rail type ¹ /Joint specifications ² /Plate cover
LM rail options	CV caps: 20 to 65 and C caps: 15 only ³
Lubrication	No grease (anti-rust oil only)
Lubrication options	QZ Lubricator
Lubrication type	Side lubrication ⁴ /Front and side lubrication specification
Contamination protection options	Bellows specifications ³

¹ See p. 58 for information about tapped-hole type rail specifications.

² See p. 59 to 60 for information about joint specification rails.

³ CV caps, C caps, and dedicated bellows must be acquired separately from the LM Guide.

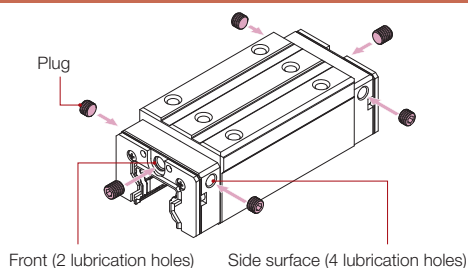
⁴ Contact THK if you desire side lubrication.

Note: See p.55 to 60 for more information on options.

Front lubrication and side lubrication specifications/Lineup

This product can be lubricated from the side, and you can select the location of the lubrication hole that best suits your requirements.

Note: If front and side lubrication is selected, either A-M4/ A-MT6 (symbol: A) or B-M4/B-MT6 (symbol: B) grease nipples will be included.



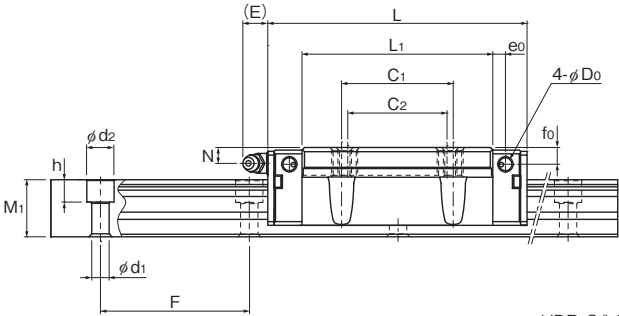
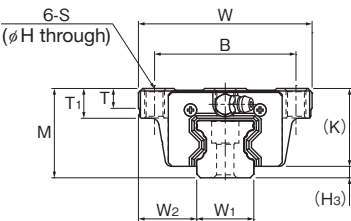
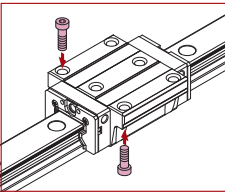
Model No.	Block type								
	Short type			Standard type			Long type		
	SC	SR	SV	C	R	V	LC	LR	LV
15	○	—	○	○	○	○	○	○	○
20	○	○	—	○	○	—	○	○	—
25	○	—	○	○	○	○	○	○	○
30	○	—	○	○	○	○	○	○	○
35	○	—	○	○	○	○	○	○	○

○ : Available — : Unavailable

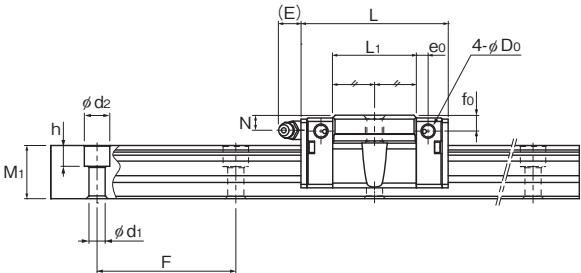
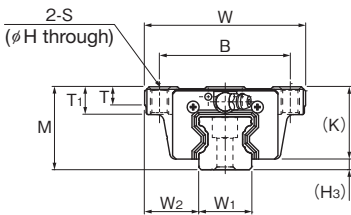
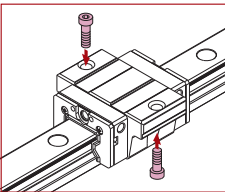
A-M4×0.7 (M4×0.7)	A-MT6×1 (MT6×1)	B-M4×0.7 (M4×0.7)	B-MT6×1 (MT6×1)
M4×0.7	MT6×1	M4×0.7	MT6×1

Model No.	Front lubrication hole	Side lubrication hole
15	A-M4×0.7	B-M4×0.7
20	A-M4×0.7	B-M4×0.7
25	A-MT6×1	B-MT6×1
30	A-MT6×1	B-MT6×1
35	A-MT6×1	B-MT6×1

Model HDR-SC/C/LC



HDR-C/LC

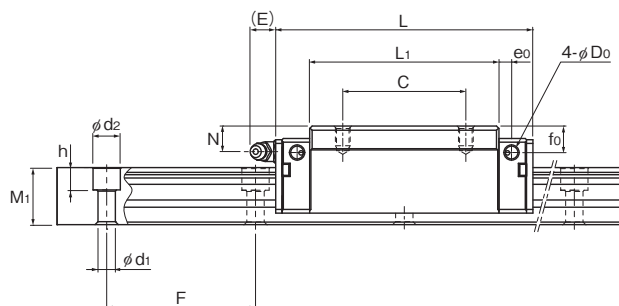
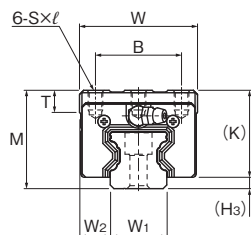
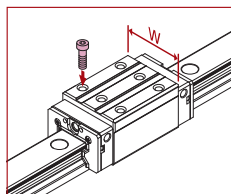


HDR-SC

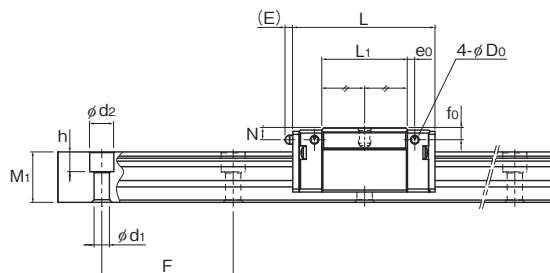
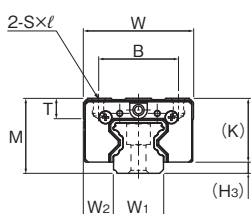
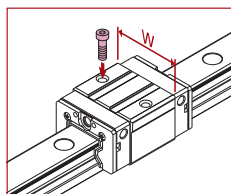
Unit: mm

Model No.	External dimensions			LM block dimensions														Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN·m					Mass
	Height M	Width W	Length L	B	C ₁	C ₂	S	H	L ₁	T	T ₁	K	N	E	Grease nipple	e ₀	f ₀	D ₀	C (kN)	C ₀ (kN)			M _A		M _B		M _C	LM block (kg)		
																					1 block	2 blocks	1 block	2 blocks	1 block					
HDR	15SC	24	47	43	38	—	—	M5	4.4	21.6	5.9	9.9	20.2	3.5	3.4	PB107	3.5	3.6	2.9	3.8	16	7.07	8.43	0.031	0.246	0.031	0.246	0.084	0.11	
	15C	24	47	61.4	38	30	26	M5	4.4	40	5.9	9.9	20.2	3.5	3.4	PB107	3.5	3.6	2.9	3.8	16	10.9	15.7	0.098	0.601	0.098	0.601	0.155	0.21	
	15LC	24	47	74.9	38	30	26	M5	4.4	53.5	5.9	9.9	20.2	3.5	3.4	PB107	3.5	3.6	2.9	3.8	16	13.7	21.7	0.182	0.984	0.182	0.984	0.215	0.28	
	20SC	30	63	57.3	53	—	—	M6	5.4	34.1	7.2	9.9	25.5	4.7	3	PB107	3	4.7	2.9	4.5	21.5	15.3	19	0.114	0.688	0.114	0.688	0.241	0.3	
	20C	30	63	74.9	53	40	35	M6	5.4	51.7	7.2	9.9	25.5	4.7	3	PB107	3	4.7	2.9	4.5	21.5	19.8	27.4	0.227	1.27	0.227	1.27	0.348	0.46	
	20LC	30	63	90.7	53	40	35	M6	5.4	67.5	7.2	9.9	25.5	4.7	3	PB107	3	4.7	2.9	4.5	21.5	23.9	35.8	0.378	1.97	0.378	1.97	0.456	0.59	
	25SC	36	70	63.9	57	—	—	M8	6.8	36.3	8	11.9	31.4	6.4	10	B-M6F	5.1	6.8	5.2	4.6	23.5	20.8	24.3	0.159	0.968	0.159	0.968	0.353	0.43	
	25C	36	70	87.6	57	45	40	M8	6.8	60	8	11.9	31.4	6.4	10	B-M6F	5.1	6.8	5.2	4.6	23.5	29.2	39.5	0.392	2.13	0.392	2.13	0.574	0.71	
	25LC	36	70	104.5	57	45	40	M8	6.8	76.9	8	11.9	31.4	6.4	10	B-M6F	5.1	6.8	5.2	4.6	23.5	33.8	48.6	0.582	3.09	0.582	3.09	0.707	0.9	
	30SC	42	90	73.5	72	—	—	M10	8.5	41.9	8	14.9	36.3	7.5	9.5	B-M6F	4.8	7.5	5.2	5.7	31	28.8	33.1	0.252	1.57	0.252	1.57	0.588	0.74	
	30C	42	90	102.1	72	52	44	M10	8.5	70.5	8	14.9	36.3	7.5	9.5	B-M6F	4.8	7.5	5.2	5.7	31	40.5	53.7	0.623	3.38	0.623	3.38	0.956	1.25	
	30LC	42	90	124.1	72	52	44	M10	8.5	92.5	8	14.9	36.3	7.5	9.5	B-M6F	4.8	7.5	5.2	5.7	31	48.9	70.2	1.04	5.26	1.04	5.26	1.25	1.61	
	35SC	48	100	84.2	82	—	—	M10	8.5	48.2	11.5	14.9	41.8	9.5	9.3	B-M6F	5.6	9.5	5.2	6.2	33	38.3	43.2	0.376	2.35	0.376	2.35	0.95	1.05	
	35C	48	100	116.5	82	62	52	M10	8.5	80.5	11.5	14.9	41.8	9.5	9.3	B-M6F	5.6	9.5	5.2	6.2	33	53.9	70.2	0.93	5.03	0.93	5.03	1.54	1.76	
	35LC	48	100	139.5	82	62	52	M10	8.5	103.5	11.5	14.9	41.8	9.5	9.3	B-M6F	5.6	9.5	5.2	6.2	33	62.4	86.4	1.38	7.32	1.38	7.32	1.9	2.23	
	45C	60	120	145.6	100	80	60	M12	10.5	104.2	14.1	17.9	50.5	10.5	14.3	B-PT1/8	8	10.5	5.2	9.5	37.5	86.9	110	1.82	9.82	1.82	9.82	3	3.08	
	45LC	60	120	177.3	100	80	60	M12	10.5	135.9	14.1	17.9	50.5	10.5	14.3	B-PT1/8	8	10.5	5.2	9.5	37.5	105	143	3.03	15.3	3.03	15.3	3.93	4	
	55C	70	140	179.2	116	95	70	M14	12.5	134.2	16	20.9	58	12	14.3	B-PT1/8	9	12	5.2	12	43.5	135	170	3.61	18.6	3.61	18.6	5.51	5.21	
	55LC	70	140	217.3	116	95	70	M14	12.5	172.3	16	20.9	58	12	14.3	B-PT1/8	9	12	5.2	12	43.5	161	219	5.84	28.5	5.84	28.5	7.09	6.66	
	65C	90	170	199.2	142	110	82	M16	14.5	144.8	18.8	23.9	77.3	19	14.3	B-PT1/8	10	19	5.2	12.7	53.5	195	228	5.27	28	5.27	28	8.79	9.38	
	65LC	90	170	258.8	142	110	82	M16	14.5	204.4	18.8	23.9	77.3	19	14.3	B-PT1/8	10	19	5.2	12.7	53.5	249	323	10.2	50.3	10.2	50.3	12.5	13.15	

Model HDR-SR/R/LR



HDR-R/LR

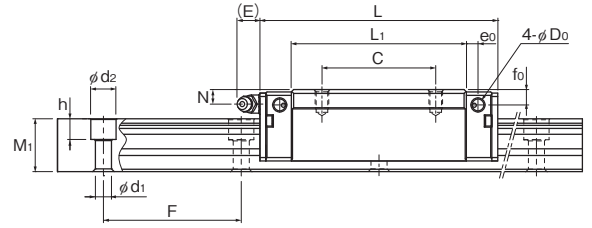
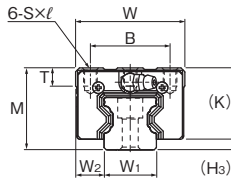
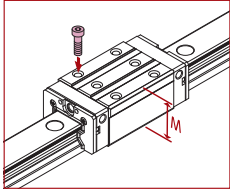


HDR-SR

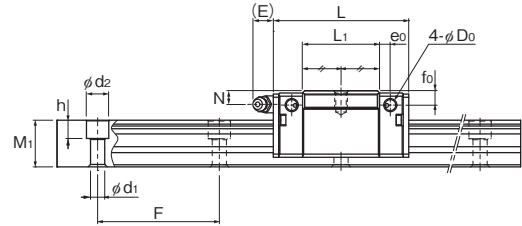
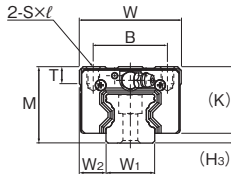
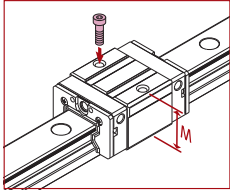
Unit: mm

Model No.	External dimensions			LM block dimensions										Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN·m					Mass
	Height M	Width W	Length L	B	C	S × l	L ₁	T	K	N	E	Grease nipple	e ₀	f ₀	D ₀	C (kN)			C ₀ (kN)	M _A		M _B		M _C	LM block	
																				1 block	2 blocks	1 block	2 blocks	1 block	(kg)	
HDR	15R	28	34	61.4	26	26	M4 × 5	40	6	24.2	7.5	3.4	PB107	3.5	7.6	2.9	3.8	9.5	10.9	15.7	0.098	0.601	0.098	0.601	0.155	0.19
	15LR	28	34	74.9	26	26	M4 × 5	53.5	6	24.2	7.5	3.4	PB107	3.5	7.6	2.9	3.8	9.5	13.7	21.7	0.182	0.984	0.182	0.984	0.215	0.28
	20SR	30	44	57.3	32	-	M5 × 7.5	34.1	8	25.5	4.7	3	PB107	3	4.7	2.9	4.5	12	15.3	19	0.114	0.688	0.114	0.688	0.241	0.24
	20R	30	44	74.9	32	36	M5 × 6	51.7	8	25.5	4.7	3	PB107	3	4.7	2.9	4.5	12	19.8	27.4	0.227	1.27	0.227	1.27	0.348	0.36
	20LR	30	44	90.7	32	50	M5 × 6	67.5	8	25.5	4.7	3	PB107	3	4.7	2.9	4.5	12	23.9	35.8	0.378	1.97	0.378	1.97	0.456	0.42
	25R	40	48	87.6	35	35	M6 × 8	60	9	35.4	10.4	10	B-M6F	5.1	10.6	5.2	4.6	12.5	29.2	39.5	0.392	2.13	0.392	2.13	0.574	0.64
	25LR	40	48	104.5	35	50	M6 × 8	76.9	9	35.4	10.4	10	B-M6F	5.1	10.6	5.2	4.6	12.5	33.8	48.6	0.582	3.09	0.582	3.09	0.707	0.74
	30R	45	60	102.1	40	40	M8 × 10	70.5	9	39.3	10.5	9.5	B-M6F	4.8	10.5	5.2	5.7	16	40.5	53.7	0.623	3.38	0.623	3.38	0.956	1.06
	30LR	45	60	124.1	40	60	M8 × 10	92.5	9	39.3	10.5	9.5	B-M6F	4.8	10.5	5.2	5.7	16	48.9	70.2	1.04	5.26	1.04	5.26	1.25	1.37
	35R	55	70	116.5	50	50	M8 × 12	80.5	11.8	48.8	16.5	9.3	B-M6F	5.6	16.5	5.2	6.2	18	53.9	70.2	0.93	5.03	0.93	5.03	1.54	1.75
	35LR	55	70	139.5	50	72	M8 × 12	103.5	11.8	48.8	16.5	9.3	B-M6F	5.6	16.5	5.2	6.2	18	62.4	86.4	1.38	7.32	1.38	7.32	1.9	2.04
	45R	70	86	145.6	60	60	M10 × 17	104.2	15	60.5	20.5	14.3	B-PT1/8	8	20.5	5.2	9.5	20.5	86.9	110	1.82	9.82	1.82	9.82	3	3.16
	45LR	70	86	177.3	60	80	M10 × 17	135.9	15	60.5	20.5	14.3	B-PT1/8	8	20.5	5.2	9.5	20.5	105	143	3.03	15.3	3.03	15.3	3.93	4.07
	55R	80	100	179.2	75	75	M12 × 18	134.2	20.5	68	22	14.3	B-PT1/8	9	22	5.2	12	23.5	135	170	3.61	18.6	3.61	18.6	5.51	5.28
	55LR	80	100	217.3	75	95	M12 × 18	172.3	20.5	68	22	14.3	B-PT1/8	9	22	5.2	12	23.5	161	219	5.84	28.5	5.84	28.5	7.09	6.72
65R	90	126	199.2	76	70	M16 × 20	144.8	23	77.3	19	14.3	B-PT1/8	10	19	5.2	12.7	31.5	195	228	5.27	28	5.27	28	8.79	8.03	
65LR	90	126	258.8	76	120	M16 × 20	204.4	23	77.3	19	14.3	B-PT1/8	10	19	5.2	12.7	31.5	249	323	10.2	50.3	10.2	50.3	12.5	11.17	

Model HDR-SV/V/LV



HDR-V/LV

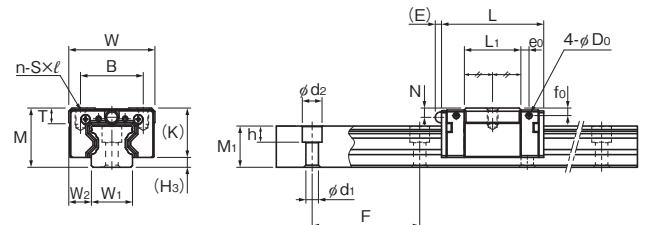
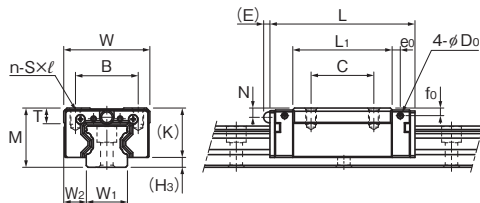
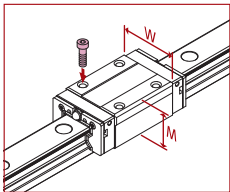


HDR-SV

Unit: mm

Model No.	External dimensions			LM block dimensions									Pilot hole for side nipple			H _s	W ₂	Basic load rating		Static permissible moment kN-m				Mass LM block (kg)		
	Height M	Width W	Length L	B	C	S × ℓ	L ₁	T	K	N	E	Grease nipple	e ₀	f ₀	D ₀			C (kN)	C ₀ (kN)	M _A 1 block	M _A 2 blocks	M _B 1 block	M _B 2 blocks		M _C 1 block	
HDR	15SV	24	34	43	26	-	M4 × 6	21.6	5.9	20.2	3.5	3.4	PB107	3.5	3.6	2.9	3.8	9.5	7.07	8.43	0.031	0.246	0.031	0.246	0.084	0.08
	15V	24	34	61.4	26	26	M4 × 4	40	5.9	20.2	3.5	3.4	PB107	3.5	3.6	2.9	3.8	9.5	10.9	15.7	0.098	0.601	0.098	0.601	0.155	0.15
	15LV	24	34	74.9	26	26	M4 × 4	53.5	5.9	20.2	3.5	3.4	PB107	3.5	3.6	2.9	3.8	9.5	13.7	21.7	0.182	0.984	0.182	0.984	0.215	0.2
	25SV	36	48	63.9	35	-	M6 × 9	36.3	8	31.4	6.4	10	B-M6F	5.1	6.8	5.2	4.6	12.5	20.8	24.3	0.159	0.968	0.159	0.968	0.353	0.3
	25V	36	48	87.6	35	35	M6 × 8	60	8	31.4	6.4	10	B-M6F	5.1	6.8	5.2	4.6	12.5	29.2	39.5	0.392	2.13	0.392	2.13	0.574	0.51
	25LV	36	48	104.5	35	50	M6 × 8	76.9	8	31.4	6.4	10	B-M6F	5.1	6.8	5.2	4.6	12.5	33.8	48.6	0.582	3.09	0.582	3.09	0.707	0.62
	30SV	42	60	73.5	40	-	M8 × 12	41.9	8	36.3	7.5	9.5	B-M6F	4.8	7.5	5.2	5.7	16	28.8	33.1	0.252	1.57	0.252	1.57	0.588	0.44
	30V	42	60	102.1	40	40	M8 × 10	70.5	8	36.3	7.5	9.5	B-M6F	4.8	7.5	5.2	5.7	16	40.5	53.7	0.623	3.38	0.623	3.38	0.956	0.74
	30LV	42	60	124.1	40	60	M8 × 10	92.5	8	36.3	7.5	9.5	B-M6F	4.8	7.5	5.2	5.7	16	48.9	70.2	1.04	5.26	1.04	5.26	1.25	1
	35SV	48	70	84.2	50	-	M8 × 13	48.2	11.5	41.8	9.5	9.3	B-M6F	5.6	9.5	5.2	6.2	18	38.3	43.2	0.376	2.35	0.376	2.35	0.95	0.8
	35V	48	70	116.5	50	50	M8 × 12	80.5	11.5	41.8	9.5	9.3	B-M6F	5.6	9.5	5.2	6.2	18	53.9	70.2	0.93	5.03	0.93	5.03	1.54	1.34
	35LV	48	70	139.5	50	72	M8 × 12	103.5	11.5	41.8	9.5	9.3	B-M6F	5.6	9.5	5.2	6.2	18	62.4	86.4	1.38	7.32	1.38	7.32	1.9	1.65
	45V	60	86	145.6	60	60	M10 × 15	104.2	14.9	50.5	10.5	14.3	B-PT1/8	8	10.5	5.2	9.5	20.5	86.9	110	1.82	9.82	1.82	9.82	3	2.47
	45LV	60	86	177.3	60	80	M10 × 15	135.9	14.9	50.5	10.5	14.3	B-PT1/8	8	10.5	5.2	9.5	20.5	105	143	3.03	15.3	3.03	15.3	3.93	3.17
55V	70	100	179.2	75	75	M12 × 15	134.2	19.4	58	12	14.3	B-PT1/8	9	12	5.2	12	23.5	135	170	3.61	18.6	3.61	18.6	5.51	4.25	
55LV	70	100	217.3	75	95	M12 × 15	172.3	19.4	58	12	14.3	B-PT1/8	9	12	5.2	12	23.5	161	219	5.84	28.5	5.84	28.5	7.09	5.4	

Model HDR-UV/UW



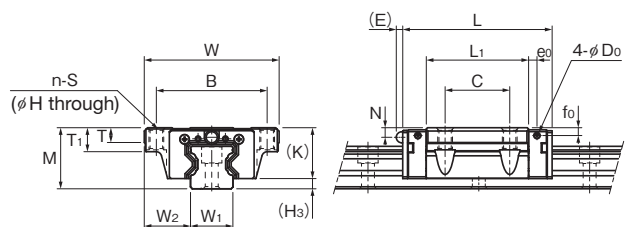
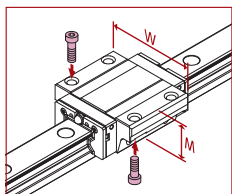
HDR-UW

HDR-UV

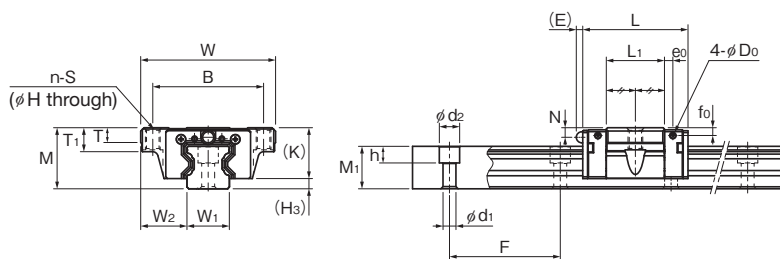
Unit: mm

Model No.	External dimensions			LM block dimensions										Pilot hole for side nipple			H _s	W ₂	Basic load rating		Static permissible moment kN-m					Mass LM block (kg)
	Height M	Width W	Length L	B	C	n	S × ℓ	L ₁	T	K	N	E	Grease nipple	e ₀	f ₀	D ₀			C (kN)	C ₀ (kN)	M _A 1 block	M _A 2 blocks	M _B 1 block	M _B 2 blocks	M _C 1 block	
20UV	28	42	49	32	-	2	M5 × 7	26.3	8	22.6	3.8	3	PB107	3.55	3.56	2.9	5.4	11	12.8	14.8	0.072	0.477	0.072	0.477	0.188	0.18
20UW	28	42	68.8	32	32	4	M5 × 7	46.1	8	22.6	3.8	3	PB107	3.55	3.56	2.9	5.4	11	18.7	25.3	0.195	1.078	0.195	1.078	0.322	0.28
25UV	33	48	57	35	-	2	M6 × 9	31.5	8	27.5	5.1	3.5	PB1021B	4.55	4.16	2.9	5.5	12.5	18.9	21.3	0.124	0.795	0.124	0.795	0.309	0.23
25UW	33	48	80.9	35	35	4	M6 × 9	55.4	8	27.5	5.1	3.5	PB1021B	4.55	4.16	2.9	5.5	12.5	27.6	36.4	0.337	1.822	0.337	1.822	0.53	0.38

Model HDR-US/UT



HDR-UT

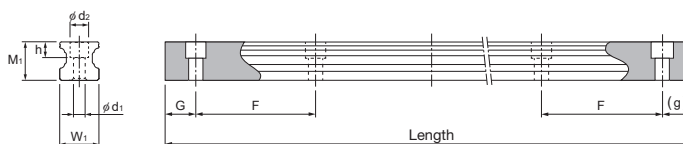


HDR-US

Unit: mm

Model No.	External dimensions			LM block dimensions													Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN·m					Mass
	Height M	Width W	Length L	B	C	n	H	S	L ₁	T	T ₁	K	N	E	Grease nipple	e ₀	f ₀	D ₀	C (kN)			C ₀ (kN)	M _A		M _B		M _C	LM block (kg)	
																							1 block	2 blocks	1 block	2 blocks	1 block		
HDR	20US	28	59	49	49	—	2	5.4	M6	26.3	7.2	9.9	22.6	3.8	3	PB107	3.55	3.56	2.9	5.4	19.5	12.8	14.8	0.072	0.477	0.072	0.477	0.188	0.24
	20UT	28	59	68.8	49	32	4	5.4	M6	46.1	7.2	9.9	22.6	3.8	3	PB107	3.55	3.56	2.9	5.4	19.5	18.7	25.3	0.195	1.078	0.195	1.078	0.322	0.35
	25US	33	73	57	60	—	2	6.8	M8	31.5	8	11.9	27.5	5.1	3.5	PB1021B	4.55	4.16	2.9	5.5	25	18.9	21.3	0.124	0.795	0.124	0.795	0.309	0.46
	25UT	33	73	80.9	60	35	4	6.8	M8	55.4	8	11.9	27.5	5.1	3.5	PB1021B	4.55	4.16	2.9	5.5	25	27.6	36.4	0.337	1.822	0.337	1.822	0.53	0.65

LM Rail

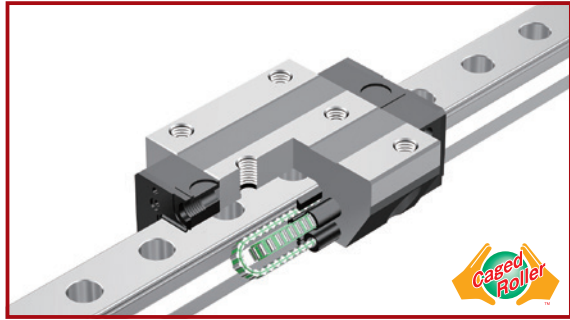


Unit: mm

Model No.	LM rail dimensions							Mass LM rail (kg/m)
	W ₁ 0 -0.05	Height M ₁	Pitch F	d ₁ × d ₂ × h	Standard length (G, g)	Maximum length	Standard and maximum lengths of TC joint rails (G, g)	
HDR15	15	15.6	60	4.5 × 7.5 × 5.3	3,000 (20, 40)	3,000	2,940 (30, 30)	1.5
HDR20	20	20.1	60	6 × 9.5 × 8.5	3,000 (20, 40)	4,000	2,940 (30, 30)	2.5
HDR25	23	23	60	7 × 11 × 9	3,000 (20, 40), 5,000 (20, 60)	5,000	2,940 (30, 30)	3.4
HDR30	28	26	80	9 × 14 × 12	3,000 (20, 20), 5,000 (20, 20)	7,000	2,960 (40, 40)	4.8
HDR35	34	30	80	9 × 14 × 12	3,000 (20, 20), 5,000 (20, 20)	7,000	2,960 (40, 40)	6.5
HDR45	45	37	105	14 × 20 × 17	3,000 (22.5, 37.5), 5,000 (22.5, 42.5)	7,000	2,940 (52.5, 52.5)	10.8
HDR55	53	43	120	16 × 23 × 20	3,000 (30, 90), 5,000 (30, 50)	7,000	3,000 (60, 60)	14.8
HDR65	63	54	150	18 × 26 × 22	3,000 (35, 115), 5,000 (35, 15)	7,000	3,000 (75, 75)	22.3

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

Model SRG

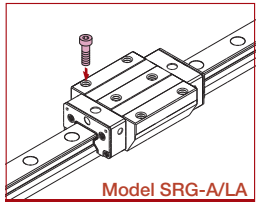


Ultra-High Rigidity/Long-Term Maintenance-Free Operation

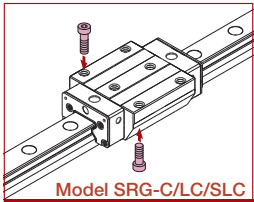
Sizes: 15X, 20X, 25X, 30X, 35, 45, 55, 65

- Roller type
- Four-way equal load
- ISO-compliant dimensions
- Wide array of options

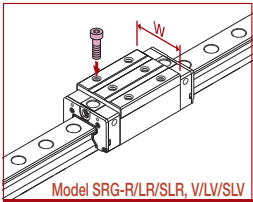
Block Types/Lineup



The flange of the LM block has tapped holes.



The flange of the LM block has tapped holes. It can be mounted from the top or the bottom.



The LM block has a smaller width (W) and tapped holes.

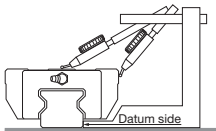
Model No.	Block type										
	Standard type				Long type				Super-Long type		
	A	C	R	V	LA	LC	LR	LV	SLC	SLR	SLV
15X	○	-	-	○	-	-	-	-	-	-	-
20X	○	-	-	○	○	-	-	○	-	-	-
25X	-	○	○	-	-	○	○	-	-	-	-
30X	-	○	○	-	-	○	○	-	-	-	-
35	-	○	○	-	-	○	○	-	○	○	-
45	-	○	○	-	-	○	○	-	○	○	-
55	-	○	○	-	-	○	○	-	○	○	-
65	-	○	-	○	-	○	-	○	○	-	○

○ : Available - : Unavailable

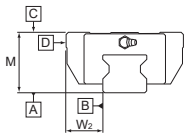
Accuracy Standards

Unit: mm

Model No.	Accuracy standards		High Accuracy grade	Precision grade
	Item		H	P
15X 20X	Dimensional tolerance in height M		±0.03	0 -0.03
	Difference in height M	Multiple blocks on a single rail (1 set)	0.01	0.006
		Multiple blocks on multiple rails (multiple sets)	0.03	0.025
	Dimensional tolerance in width W ₂		±0.03	0 -0.02
	Difference in width W ₂		0.01	0.006
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
Running parallelism of surface D against surface B				
25X 30X 35	Dimensional tolerance in height M		±0.04	0 -0.04
	Difference in height M	Multiple blocks on a single rail (1 set)	0.015	0.007
		Multiple blocks on multiple rails (multiple sets)	0.03	0.025
	Dimensional tolerance in width W ₂		±0.03	0 -0.03
	Difference in width W ₂		0.015	0.007
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
Running parallelism of surface D against surface B				
45 55	Dimensional tolerance in height M		±0.04	0 -0.05
	Difference in height M	Multiple blocks on a single rail (1 set)	0.015	0.007
		Multiple blocks on multiple rails (multiple sets)	0.03	0.025
	Dimensional tolerance in width W ₂		±0.04	0 -0.04
	Difference in width W ₂		0.015	0.007
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
Running parallelism of surface D against surface B				
65	Dimensional tolerance in height M		±0.04	0 -0.05
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02	0.01
		Multiple blocks on multiple rails (multiple sets)	0.035	0.025
	Dimensional tolerance in width W ₂		±0.04	0 -0.05
	Difference in width W ₂		0.02	0.01
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
Running parallelism of surface D against surface B				



Running parallelism



Measurement surface

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value	
Above	Up to	High Accuracy grade	Precision grade
		H	P
—	50	3	2
50	80	3	2
80	125	3	2
125	200	3.5	2
200	250	4	2.5
250	315	4.5	3
315	400	5	3.5
400	500	6	4.5
500	630	7	5
630	800	8.5	6
800	1,000	9	6.5
1,000	1,250	11	7.5
1,250	1,600	12	8
1,600	2,000	13	8.5
2,000	2,500	14	9.5
2,500	3,150	16	11
3,150	4,000	17	12
4,000	5,000	18	13
5,000	6,000	19	14
6,000	7,000	20	15

Radial Clearance Specifications Unit: μm

Code	Normal	Light preload	Medium preload
Model No.	No symbol	C1	C0
15X	-0.5 to 0	-1 to -0.5	-2 to -1
20X	-0.8 to 0	-2 to -0.8	-3 to -2
25X	-2 to -1	-3 to -2	-4 to -3
30X	-2 to -1	-3 to -2	-4 to -3
35	-2 to -1	-3 to -2	-5 to -3
45	-2 to -1	-3 to -2	-5 to -3
55	-2 to -1	-4 to -2	-6 to -4
65	-3 to -1	-5 to -3	-8 to -5

Model Number Coding

LM block

SRG25X LC 1 SS C0 F - Z - N.GRS - P (GK)BLOCK

Model No.	Type of LM block	Number of LM blocks (only 1)	Contamination prevention accessory symbol	Radial clearance symbol	With plate cover	LM block with surface treatment	Accuracy symbol	Anti-rust oil only	GK series LM block symbol
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Standard specifications

Standard specifications	
Accuracy grade	High Accuracy/Precision
Radial clearance	Normal/C1/C0
Material	Carbon steel
Seal options	SS
Lubrication	AFB-LF Grease
Lubrication type	Front lubrication

LM rail

SRG25 - 3000L Z T F P (GK)RAIL

Model No.	LM rail length (in mm)	With plate cover	Symbol for LM rail jointed use	GK series LM rail symbol	Accuracy symbol	LM rail with surface treatment
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Custom Range

Custom items	
Surface treatment	AP-C
Seal options ¹	UU/DD/ZZ/KK/HH/YY/JJ/TT/GG/PP/FS
LM rail specifications	Tapped-hole rail type ² Joint specifications ³ /Plate cover: 25 to 65
LM rail options	CV caps: 20 to 65 and C caps: 15 only ⁴
Lubrication	No grease (anti-rust oil only)
Lubrication options	QZ Lubricator
Lubrication type	Side lubrication ⁵
Contamination protection options	Bellows specifications ⁴

¹ See THK's linear motion systems general catalog for more information on applicable part numbers.

² See p. 58 for information about tapped-hole type rail specifications.

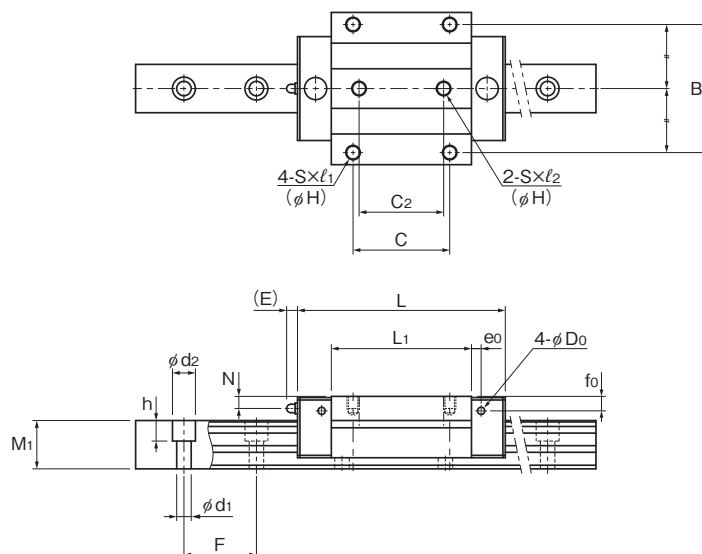
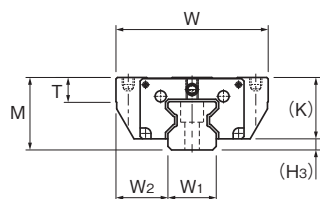
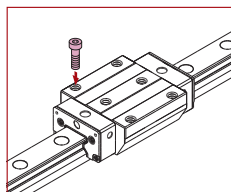
³ See p. 59 to 60 for information about joint specification rails.

⁴ CV caps, C caps, and dedicated bellows must be acquired separately from the LM Guide.

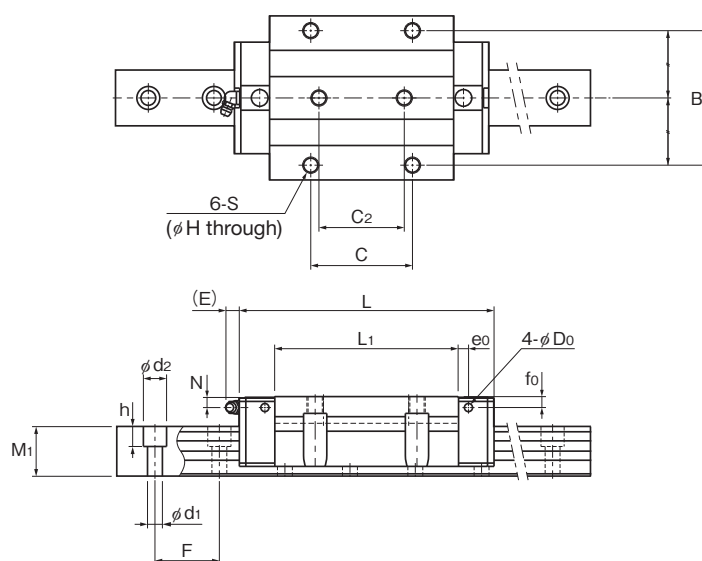
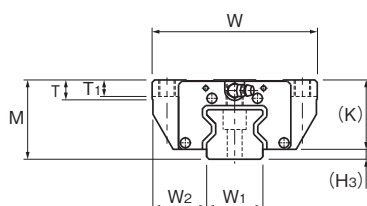
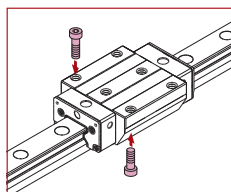
⁵ Contact THK if you desire side lubrication.

Note: See p.55 to 60 for more information on options.

Model SRG-A/LA, C/LC/SLC



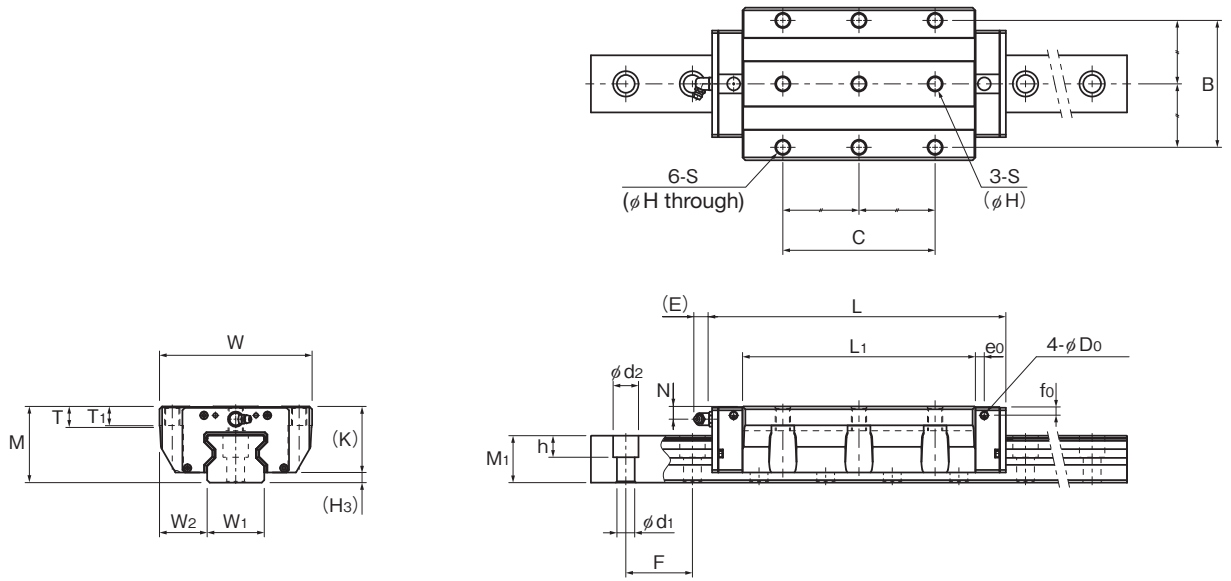
SRG-A/LA



SRG-LC

Unit: mm

Model No.	External dimensions			LM block dimensions														Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN-m				Mass		
	M	Width	Length	B	C	C ₂	S	H	ℓ ₁	ℓ ₂	L ₁	T	T ₁	K	N	E	Grease nipple	e ₀	f ₀	D ₀			C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block	
																									1 block	2 blocks	1 block	2 blocks	1 block	(kg)	
SRG	15XA	24	47	69.2	38	30	26	M5	(4.3)	8	7.5	45	7	(8)	20	4	4.5	PB107	4	6	2.9	4	16	11.3	25.8	0.21	1.24	0.21	1.24	0.24	0.2
	20XA	30	63	86.2	53	40	35	M6	(5.4)	10	9	58	10	(10)	25.4	5	4.5	PB107	4	6	2.9	4.6	21.5	21	46.9	0.48	2.74	0.48	2.74	0.58	0.42
	20XLA	30	63	106.2	53	40	35	M6	(5.4)	10	9	78	10	(10)	25.4	5	4.5	PB107	4	6	2.9	4.6	21.5	26.7	63.8	0.88	4.49	0.88	4.49	0.79	0.57
	25XC	36	70	95.1	57	45	40	M8	6.8	—	—	65.5	9.5	10	31.5	5.5	12	B-M6F	6	7.3	5.2	4.5	23.5	27.9	57.5	0.64	3.7	0.64	3.7	0.8	0.7
	25XLC	36	70	115.1	57	45	40	M8	6.8	—	—	85.5	9.5	10	31.5	5.5	12	B-M6F	6	7.3	5.2	4.5	23.5	34.2	75	1.07	5.74	1.07	5.74	1.03	0.9
	30XC	42	90	111	72	52	44	M10	8.5	—	—	75	12	14	37	6.5	12	B-M6F	6	7.5	5.2	5	31	39.3	82.5	1.02	6.21	1.02	6.21	1.47	1.2
	30XLC	42	90	135	72	52	44	M10	8.5	—	—	99	12	14	37	6.5	12	B-M6F	6	7.5	5.2	5	31	48.3	108	1.76	9.73	1.76	9.73	1.92	1.6
	35C	48	100	125	82	62	52	M10	8.5	—	—	82.2	11.5	10	42	6.5	12	B-M6F	6	6	5.2	6	33	59.1	119	1.66	10.1	1.66	10.1	2.39	1.9
	35LC	48	100	155	82	62	52	M10	8.5	—	—	112.2	11.5	10	42	6.5	12	B-M6F	6	6	5.2	6	33	76	165	3.13	17	3.13	17	3.31	2.4
	45C	60	120	155	100	80	60	M12	10.5	—	—	107	14.5	15	52	10	16	B-PT1/8	7	7	5.2	8	37.5	91.9	192	3.49	20	3.49	20	4.98	3.7
45LC	60	120	190	100	80	60	M12	10.5	—	—	142	14.5	15	52	10	16	B-PT1/8	7	7	5.2	8	37.5	115	256	6.13	32.2	6.13	32.2	6.64	4.5	
55C	70	140	185	116	95	70	M14	12.5	—	—	129.2	17.5	18	60	12	16	B-PT1/8	9	8.5	5.2	10	43.5	131	266	5.82	33	5.82	33	8.19	5.9	
55LC	70	140	235	116	95	70	M14	12.5	—	—	179.2	17.5	18	60	12	16	B-PT1/8	9	8.5	5.2	10	43.5	167	366	10.8	57	10.8	57	11.2	7.8	
65C	90	170	244.9	142	110	82	M16	14.5	—	—	171.7	19.5	20	78.5	17	16	B-PT1/8	9	13.5	5.2	11.5	53.5	219	441	12.5	72.8	12.5	72.8	16.8	12.5	
65LC	90	170	303	142	110	82	M16	14.5	—	—	229.8	19.5	20	78.5	17	16	B-PT1/8	9	13.5	5.2	11.5	53.5	278	599	22.7	120	22.7	120	22.1	16.4	

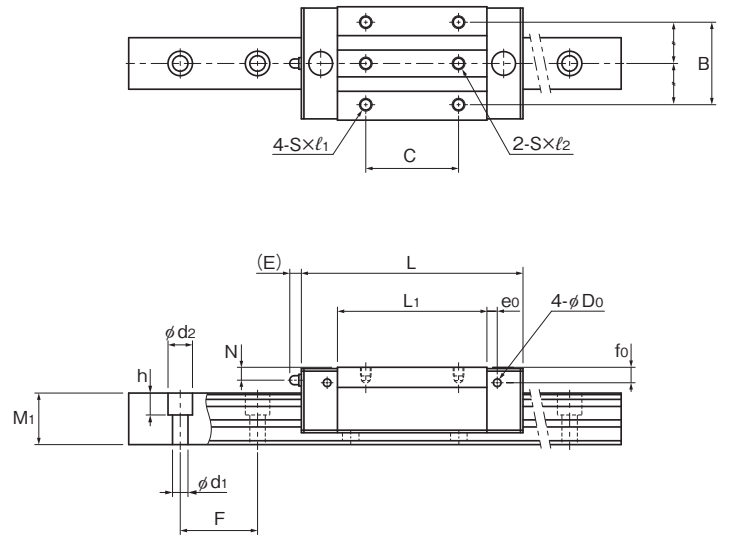
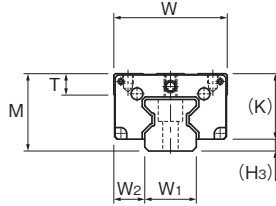
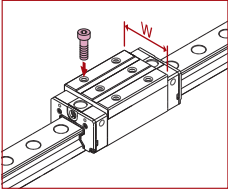


SRG-SLC

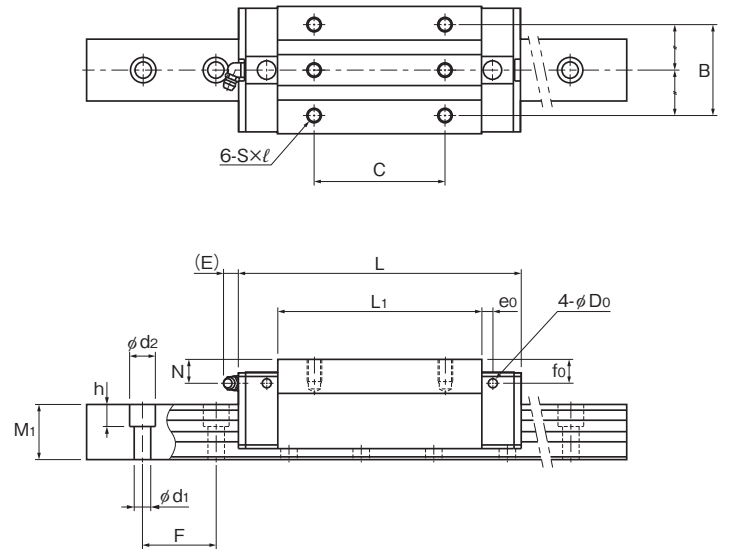
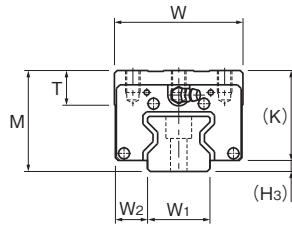
Unit: mm

Model No.	External dimensions			LM block dimensions												Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN·m					Mass
	Height M	Width W	Length L	B	C	S	H	L ₁	T	T ₁	K	N	E	Grease nipple	e ₀	f ₀	D ₀	C (kN)			C ₀ (kN)	M _A		M _B		M _C	LM block	
																						1 block	2 blocks	1 block	2 blocks	1 block	(kg)	
SRG	35SLC	48	100	180.8	82	100	M10	8.5	138	11.5	10	42	6.5	12	B-M6F	6	6	5.2	6	33	87.9	199	4.53	23.9	4.53	23.9	4.09	3.2
	45SLC	60	120	231.5	100	120	M12	10.5	183.5	14.5	15	52	10	16	B-PT1/8	7	7	5.2	8	37.5	139	328	9.99	50	9.99	50	8.91	6.3
	55SLC	70	140	292	116	150	M14	12.5	236.2	17.5	18	60	12	16	B-PT1/8	9	8.5	5.2	10	43.5	210	488	19.1	93.7	19.1	93.7	15.6	10.7
	65SLC	90	170	380	142	200	M16	14.5	306.8	19.5	20	78.5	17	16	B-PT1/8	9	13.5	5.2	11.5	53.5	352	811	41.3	202	41.3	202	30.9	22.3

Model SRG-R/LR/SLR, V/LV/SLV



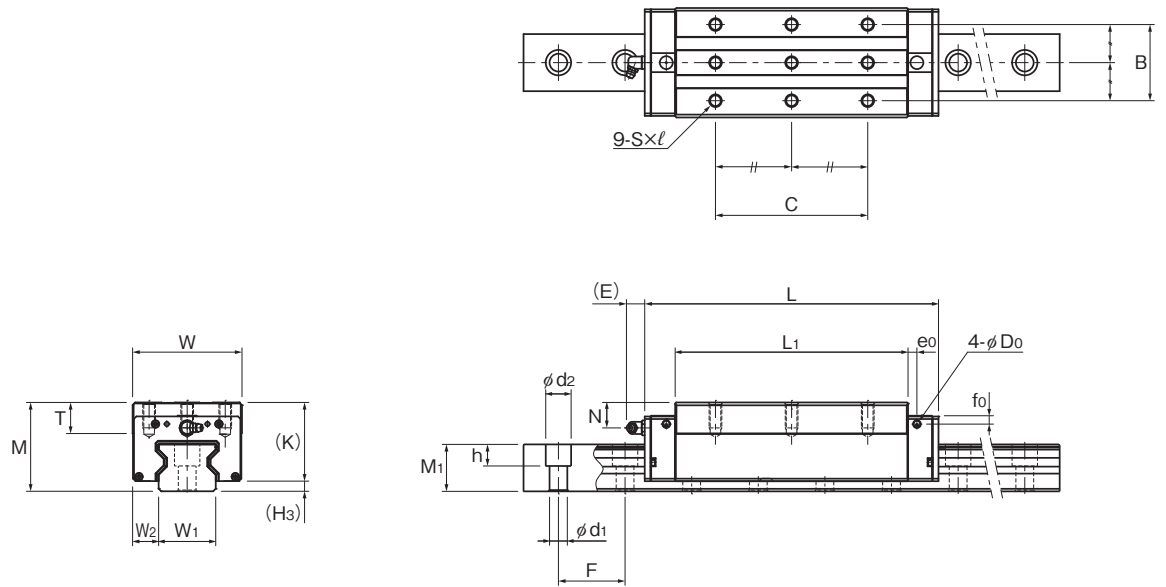
SRG15X, 20X V/LV



SRG-R/LR, V/LV

Unit: mm

Model No.	External dimensions			LM block dimensions													Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN·m				Mass LM block (kg)	
	M	W	L	B	C	S	ℓ	ℓ ₁	ℓ ₂	L ₁	T	K	N	E	Grease nipple	e ₀	f ₀	D ₀	C (kN)			C ₀ (kN)	M _A		M _B		M _C		
																						1 block	2 blocks	1 block	2 blocks	1 block			
SRG	15XV	24	34	69.2	26	26	M4	—	5	7.5	45	6	20	4	4.5	PB107	4	6	2.9	4	9.5	11.3	25.8	0.21	1.24	0.21	1.24	0.24	0.15
	20XV 20XLV	30	44	86.2 106.2	32	36 50	M5	—	7	9	58 78	8	25.4	5	4.5	PB107	4	6	2.9	4.6	12	26.1 27.9	46.9 57.5	0.48 0.88	2.74 4.49	0.48 0.88	2.74 4.49	0.58 0.79	0.28 0.38
	25XR 25XLR	40	48	95.1 115.1	35	35 50	M6	9	—	—	65.5 85.5	9.5	35.5	9.5	12	B-M6F	6	11.3	5.2	4.5	12.5	34.2 34.2	75 75	0.64 1.07	3.7 5.74	0.64 1.07	3.7 5.74	0.8 1.03	0.6 0.8
	30XR 30XLR	45	60	111 135	40	40 60	M8	10	—	—	75 99	12	40	9.5	12	B-M6F	6	10.5	5.2	5	16	39.3 48.3	82.5 108	1.02 1.76	6.21 9.73	1.02 1.76	6.21 9.73	1.47 1.92	0.9 1.2
	35R 35LR	55	70	125 155	50	50 72	M8	12	—	—	82.2 112.2	18.5	49	13.5	12	B-M6F	6	13	5.2	6	18	59.1 76	119 165	1.66 3.13	10.1 17	1.66 3.13	10.1 17	2.39 3.31	1.6 2.1
	45R 45LR	70	86	155 190	60	60 80	M10	20	—	—	107 142	24.5	62	20	16	B-PT1/8	7	17	5.2	8	20.5	91.9 115	192 256	3.49 6.13	20 32.2	3.49 6.13	20 32.2	4.98 6.64	3.2 4.1
	55R 55LR	80	100	185 235	75	75 95	M12	18	—	—	129.2 179.2	27.5	70	22	16	B-PT1/8	9	18.5	5.2	10	23.5	131 167	266 366	5.82 10.8	33 57	5.82 10.8	33 57	8.19 11.2	5 6.9
	65V 65LV	90	126	244.9 303	76	70 120	M16	20	—	—	171.7 229.8	19.5	78.5	17	16	B-PT1/8	9	13.5	5.2	11.5	31.5	219 278	441 599	12.5 22.7	72.8 120	12.5 22.7	72.8 120	16.8 22.1	9.0 12.1

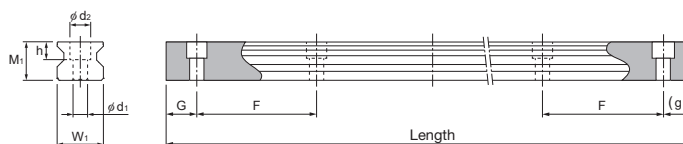


SRG-SLR, SLV

Unit: mm

Model No.	External dimensions			LM block dimensions										Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN-m					Mass	
	Height M	Width W	Length L	B	C	S	ℓ	L ₁	T	K	N	E	Grease nipple	e ₀	f ₀	D ₀			C (kN)	C ₀ (kN)	M _A		M _B		M _C	LM block	
																					1 block	2 blocks	1 block	2 blocks	1 block	(kg)	
SRG	35SLR	55	70	180.8	50	100	M8	12	138	18.5	49	13.5	12	B-M6F	6	13	5.2	6	18	87.9	199	4.53	23.9	4.53	23.9	4.09	2.6
	45SLR	70	86	231.5	60	120	M10	20	183.5	24.5	62	20	16	B-PT1/8	7	17	5.2	8	20.5	139	328	9.99	50	9.99	50	8.91	5.4
	55SLR	80	100	292	75	150	M12	18	236.2	27.5	70	22	16	B-PT1/8	9	18.5	5.2	10	23.5	210	488	19.1	93.7	19.1	93.7	15.6	9.2
	65SLV	90	126	380	76	200	M16	20	306.8	19.5	78.5	17	16	B-PT1/8	9	13.5	5.2	11.5	31.5	352	811	41.3	202	41.3	202	30.9	16.1

LM Rail

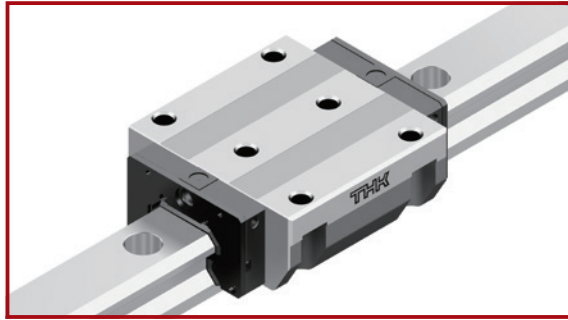


Unit: mm

Model No.	LM rail dimensions						Mass LM rail (kg/m)
	W ₁ 0 -0.05	Height M ₁	Pitch F	d ₁ × d ₂ × h	Standard length (G, g)	Maximum length	
SRG15	15	15.5	30	4.5 × 7.5 × 5.3	3,000 (20, 10)	3,000	1.58
SRG20	20	20	30	6 × 9.5 × 8.5	3,000 (20, 10)	3,500	2.58
SRG25	23	23	30	7 × 11 × 9	3,000 (20, 10)	4,000	3.6
SRG30	28	26	40	9 × 14 × 12	3,000 (20, 20)	4,000	4.4
SRG35	34	30	40	9 × 14 × 12	3,000 (20, 20), 5,000 (20, 20)	7,000	6.9
SRG45	45	37	52.5	14 × 20 × 17	3,000 (22.5, 37.5), 5,000 (22.5, 42.5)	7,000	11.6
SRG55	53	43	60	16 × 23 × 20	3,000 (30, 30), 5,000 (30, 50)	7,000	15.8
SRG65	63	54	75	18 × 26 × 22	3,000 (35, 40), 5,000 (35, 15)	7,000	23.7

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

Model HRX

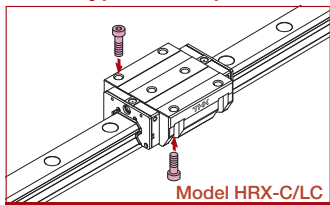


Super-high rigidity

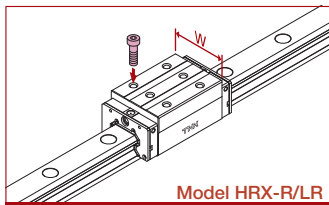
Sizes: 25, 30, 35, 45, 55, 65

- Roller type
- Four-way equal load
- ISO-compliant dimensions
- Smooth motion through skewing prevention

Block Types/Lineup



The flange of the LM block has tapped holes. It can be mounted from the top or the bottom.



The LM block has a smaller width (W) and tapped holes.

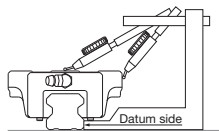
Model No.	Block type			
	Standard type		Long type	
	C	R	LC	LR
25	○	○	○	○
30	○	○	○	○
35	○	○	○	○
45	○	○	○	○
55	○	○	○	○
65	○	○	○	○

○ : Available — : Unavailable

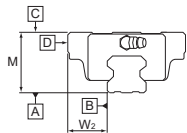
Accuracy Standards

Unit: mm

Model No.	Accuracy standards		High Accuracy grade	Precision grade
	Item		H	P
25 30 35	Dimensional tolerance in height M		±0.04	0 -0.04
	Difference in height M	Multiple blocks on a single rail (1 set)	0.015	0.007
		Multiple blocks on multiple rails (multiple sets)	0.03	0.025
	Dimensional tolerance in width W ₂		±0.03	0 -0.03
	Difference in width W ₂		0.015	0.007
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
	Running parallelism of surface D against surface B			
45 55	Dimensional tolerance in height M		±0.04	0 -0.05
	Difference in height M	Multiple blocks on a single rail (1 set)	0.015	0.007
		Multiple blocks on multiple rails (multiple sets)	0.03	0.025
	Dimensional tolerance in width W ₂		±0.04	0 -0.04
	Difference in width W ₂		0.015	0.007
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
	Running parallelism of surface D against surface B			
65	Dimensional tolerance in height M		±0.04	0 -0.05
	Difference in height M	Multiple blocks on a single rail (1 set)	0.02	0.01
		Multiple blocks on multiple rails (multiple sets)	0.035	0.025
	Dimensional tolerance in width W ₂		±0.04	0 -0.05
	Difference in width W ₂		0.02	0.01
	Running parallelism of surface C against surface A		See the table on the next page for LM rail length and running parallelism by accuracy standard.	
	Running parallelism of surface D against surface B			



Running parallelism



Measurement surface

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

LM Rail Length and Running Parallelism by Accuracy Standard Unit: μm

LM rail length (mm)		Running parallelism value	
Above	Up to	High Accuracy grade	Precision grade
		H	P
—	50	3	2
50	80	3	2
80	125	3	2
125	200	3.5	2
200	250	4	2.5
250	315	4.5	3
315	400	5	3.5
400	500	6	4.5
500	630	7	5
630	800	8.5	6
800	1,000	9	6.5
1,000	1,250	11	7.5
1,250	1,600	12	8
1,600	2,000	13	8.5
2,000	2,500	14	9.5
2,500	3,150	16	11
3,150	4,000	17	12
4,000	5,000	18	13
5,000	6,000	19	14
6,000	7,000	20	15

Radial Clearance Specifications Unit: μm

Code	Medium preload
Model No.	C0
25	-2 to -1
30	-2 to -1
35	-2 to -1
45	-3 to -2
55	-3 to -2
65	-4 to -2

Model Number Coding

LM block

HRX25 LC 1 SS C0 F - N.GRS - P (GK)BLOCK

Model No.
 Type of LM block
 Number of LM blocks (only 1)
 Contamination prevention accessory symbol
 Radial clearance symbol
 Accuracy symbol
 Anti-rust oil only
 LM block with surface treatment
 GK series LM block symbol

Standard specifications

Standard specifications	
Accuracy grade	High/Precision
Radial clearance	C0
Material	Carbon steel
Seal options	SS
Lubrication	AFB-LF Grease
Lubrication type	Front lubrication

LM rail

HRX25 - 3000L K T F - P (GK)RAIL

Model No.
 LM rail length (in mm)
 Symbol for tapped-hole LM rail
 Symbol for LM rail jointed use
 Accuracy symbol
 GK series LM rail symbol
 LM rail with surface treatment

Custom Range

Custom items	
Surface treatment	AP-C
Seal options	UU/DD/ZZ/KK/HH/JJ/TT
LM rail specifications	Tapped-hole rail type ¹ /Joint specifications ²
LM rail options	CV cap ³
Lubrication	No grease (anti-rust oil only)
Lubrication options	QZ Lubricator
Lubrication type	Side lubrication ⁴
Contamination protection options	Bellows specifications ³

¹ See p. 58 for information about tapped-hole type rail specifications.

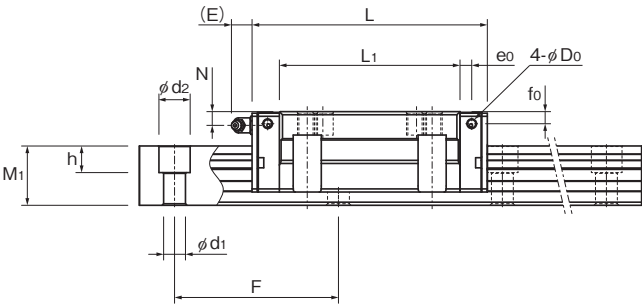
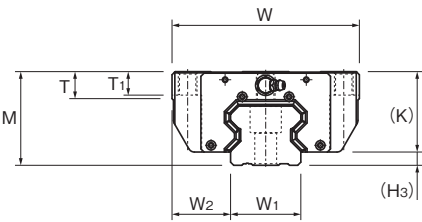
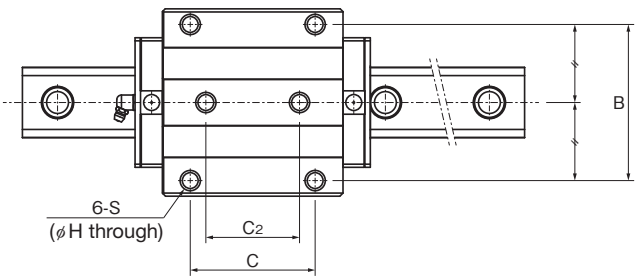
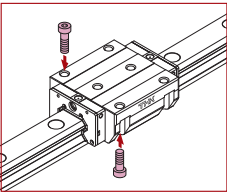
² See p. 59 to 60 for information about joint specification rails.

³ CV caps and dedicated bellows must be acquired separately from the LM Guide.

⁴ Contact THK if you desire side lubrication.

Note: See p.55 to 60 for more information on options.

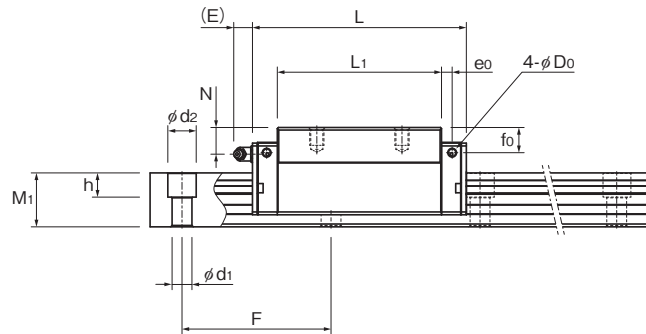
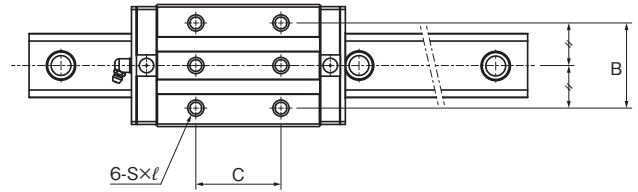
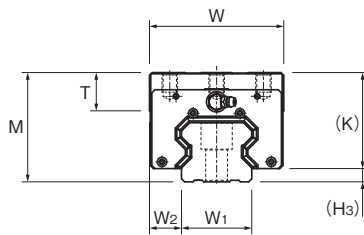
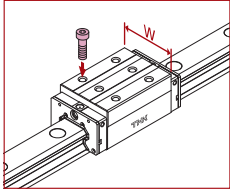
Model HRX-C/LC



Unit: mm

Model No.	External dimensions			LM block dimensions													Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN·m						Mass
	Height	Width	Length	B	C	C ₂	S	H	L ₁	T	T ₁	K	N	E	Grease nipple	e ₀	f ₀	D ₀	C (kN)			C ₀ (kN)	M _A		M _B		M _C	LM block (kg)		
																							1 block	2 blocks	1 block	2 blocks	1 block			
HRX	25C 25LC	36	70	99.6 116.4	57	45	40	M8	6.8	75.4 92.2	9.5	10	31	5.5	12	B-M6F	6	6.2	5.2	5	23.5	26.3 30.8	73.1 89.3	0.92 1.37	4.84 6.86	0.92 1.37	4.84 6.86	0.57 0.69	0.84 1	
	30C 30LC	42	90	110.6 135.1	72	52	44	M10	8.5	84 108.5	12	14	37	8.2	12	B-M6F	6.2	9.5	5.2	5	31	39.4 48	105 135	1.48 2.44	7.72 12.1	1.48 2.44	7.72 12.1	1.03 1.33	1.4 1.9	
	35C 35LC	48	100	123.2 151.2	82	62	52	M10	8.5	92.2 120.2	12	10	41.5	8	12	B-M6F	7.2	9.5	5.2	6.5	33	56 68.9	150 196	2.33 3.92	11.6 18.6	2.33 3.92	11.6 18.6	1.81 2.36	1.9 2.5	
	45C 45LC	60	120	150.7 185.7	100	80	60	M12	10.5	115.7 150.7	17.3	15	51.5	8.75	16	B-PT1/8	7.5	7.8	5.2	8.5	37.5	94.3 116	250 327	4.85 8.17	23.9 38.4	4.85 8.17	23.9 38.4	3.84 5.01	3.5 4.6	
	55C 55LC	70	140	180.2 229.7	116	95	70	M14	12.5	143.2 192.7	18.2	18	59	11.2	16	B-PT1/8	6.8	9.3	5.2	11	43.5	135 170	370 498	8.86 15.9	42.3 72.7	8.86 15.9	42.3 72.7	6.86 9.24	5.8 7.9	
	65C 65LC	90	170	239.1 304.1	142	110	82	M16	14.5	195.7 260.7	22.3	20	78	18	16	B-PT1/8	8.7	16.6	5.2	12	53.5	206 257	567 756	18.4 32	86.5 147	18.4 32	86.5 147	12.3 16.4	13.3 17.9	

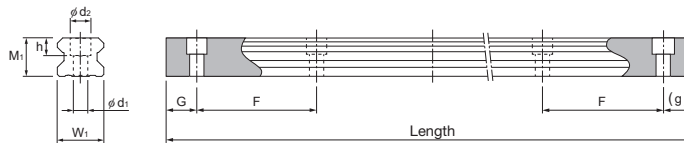
Model HRX-R/LR



Unit: mm

Model No.	External dimensions			LM block dimensions											Pilot hole for side nipple			H ₃	W ₂	Basic load rating		Static permissible moment kN-m					Mass
	Height	Width	Length	B	C	S x ℓ	L ₁	T	K	N	E	Grease nipple	e _o	f _o	D _o	C	C ₀			M _A		M _B		M _C	LM block		
	M	W	L													(kN)	(kN)			1 block	2 blocks	1 block	2 blocks	1 block	(kg)		
HRX	25R 25LR	40	48	99.6 116.4	35	35 50	M6 × 7	75.4 92.2	9	35	9.5	12	B-M6F	6	10.2	5.2	5	12.5	26.3 30.8	73.1 89.3	0.92 1.37	4.84 6.86	0.92 1.37	4.84 6.86	0.57 0.69	0.72 0.86	
	30R 30LR	45	60	110.6 135.1	40	40 60	M8 × 8	84 108.5	12	40	11.2	12	B-M6F	6.2	12.5	5.2	5	16	39.4 48	105 135	1.48 2.44	7.72 12.1	1.48 2.44	7.72 12.1	1.03 1.33	1.1 1.4	
	35R 35LR	55	70	123.2 151.2	50	50 72	M8 × 10	92.2 120.2	18.5	48.5	15	12	B-M6F	7.2	16.5	5.2	6.5	18	56 68.9	150 196	2.33 3.92	11.6 18.6	2.33 3.92	11.6 18.6	1.81 2.36	1.7 2.2	
	45R 45LR	70	86	150.7 185.7	60	60 80	M10 × 12.5	115.7 150.7	24.5	61.5	18.75	16	B-PT1/8	7.5	17.8	5.2	8.5	20.5	94.3 116	250 327	4.85 8.17	23.9 38.4	4.85 8.17	23.9 38.4	3.84 5.01	3.2 4.1	
	55R 55LR	80	100	180.2 229.7	75	75 95	M12 × 15	143.2 192.7	27.5	69	21.2	16	B-PT1/8	6.8	19.3	5.2	11	23.5	135 170	370 498	8.86 15.9	42.3 72.7	8.86 15.9	42.3 72.7	6.86 9.24	5.3 7.1	
	65R 65LR	100	126	239.1 304.1	76	70 120	M16 × 20	195.7 260.7	29.5	88	28	16	B-PT1/8	8.7	26.6	5.2	12	31.5	206 257	567 756	18.4 32	86.5 147	18.4 32	86.5 147	12.3 16.4	12 16	

LM Rail



Unit: mm

Model No.	LM rail dimensions						Mass LM rail (kg/m)
	W ₁ 0 -0.05	Height M ₁	Pitch F	d ₁ × d ₂ × h	Standard length (G, g)	Maximum length	
HRX25	23	21.5	60	7 × 11 × 9	3,000 (20, 40)	4,000	3.25
HRX30	28	23.5	80	9 × 14 × 12	3,000 (20, 20)	4,000	4.42
HRX35	34	29	80	9 × 14 × 12	3,000 (20, 20), 5,000 (20, 20)	7,000	6.33
HRX45	45	38	105	14 × 20 × 17	3,000 (22.5, 37.5), 5,000 (22.5, 42.5)	7,000	10.9
HRX55	53	44	120	16 × 23 × 20	3,000 (30, 90), 5,000 (30, 50)	7,000	15.6
HRX65	63	53	150	18 × 26 × 22	3,000 (35, 115), 5,000 (35, 15)	7,000	22.6

Note: The standard length and maximum length varies with the accuracy grade. Contact THK for details.

Options

Seals

End seals made of synthetic rubber that are highly resistant to wear and side seals that further improve contamination protection effectiveness are available. Use the symbols in the table to the right to specify if you need a contamination protection accessory.

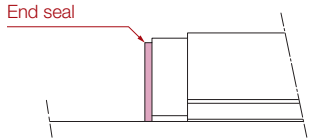
Symbols for Seals and Metal Scraper

Symbol	Configuration of seal and metal scraper
No symbol	Without seal
UU	With end seal
SS	With end seal + side seal + inner seal ¹
DD	With double seals + side seal + inner seal ¹
ZZ	With end seal + side seal + inner seal ¹ + metal scraper
KK	With double seal + side seal + inner seal ¹ + metal scraper

¹ Inner seals are not offered for all models.

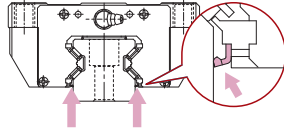
End seal

Used in locations exposed to dust



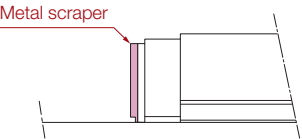
Side seal

Used in locations where dust may enter the LM block from the side or bottom surface, such as vertical, horizontal, and inverted mounts



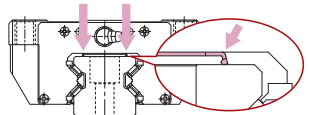
Metal scraper (non-Contact)

Used in locations where welding spatter may adhere to the LM rail



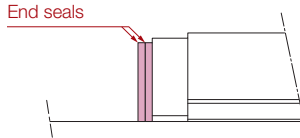
Inner seal

Used in locations exposed to extremely large amounts of dust or cutting chips



Double seals

Used especially in locations exposed to large amounts of dust or cutting chips



Light-Resistance Contact Seal LiCS

The Light-Resistance Contact Seal LiCS is effective in removing dust on the raceway and retaining a lubricant such as grease. It achieves extremely low drag and smooth, stable motion.

Applicable part numbers:

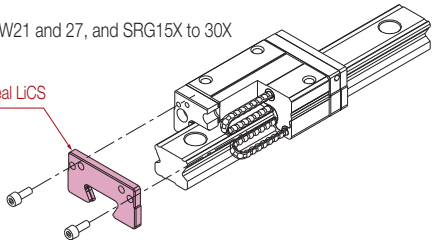
Models SHS, HSR25, SSR, SHW21 and 27, and SRG15X to 30X

Symbols for Light-Resistance Contact Seal LiCS

Symbol	Configuration of options
GG	LiCS
PP	With LiCS + side seal + inner seal ¹

¹ Inner seals are not offered for all models.

Light-Resistance Contact Seal LiCS



Laminated Contact Scraper LaCS

For locations with an adverse environment, Laminated Contact Scraper LaCS is available. LaCS removes minute foreign material adhering to the LM rail in multiple stages and prevents it from entering the LM block with a laminated contact structure (3-layer scraper).

Symbols for Laminated Contact Scraper LaCS

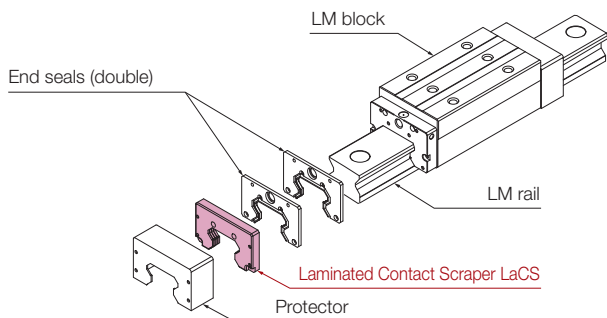
Symbol	Configuration of options	Example
**HH	(Seal or metal scraper) + LaCS	SSH H
**HHYY	(Seal or metal scraper) + LaCS + side scraper ¹	DDH HYY

¹ Side scrapers are only offered for Model SRG sizes 35 to 65.

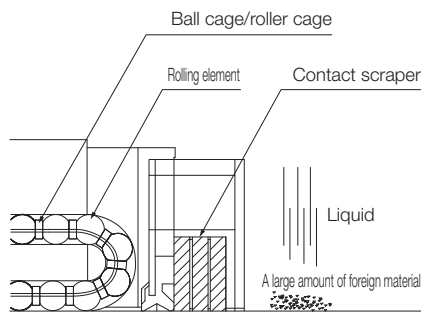
Note: ** in the table represents the symbol for a seal and metal scraper.

Features

- With three layers of scrapers making full contact with the LM rail, LaCS is highly capable of removing minute foreign material.
- Low friction resistance is achieved through the use of oil-impregnated, self-lubricating synthetic foam rubber.



External View



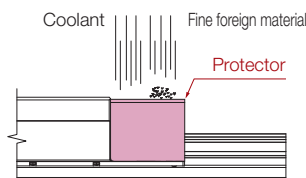
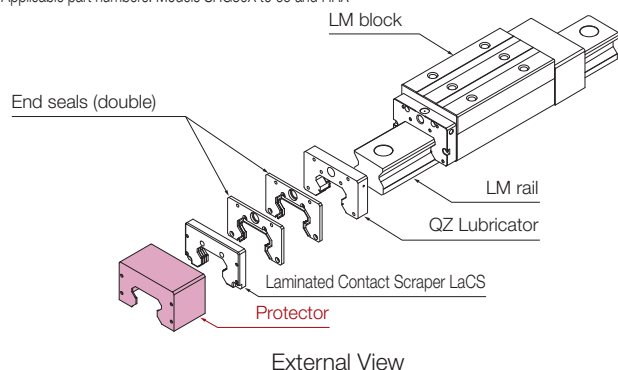
Structural Drawing

See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

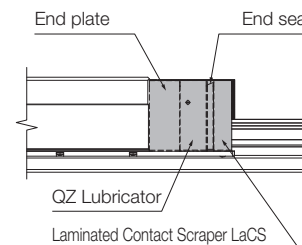
Protectors

The protector also acts as a metal scraper and minimizes the entrance of foreign material even in harsh environments where foreign material such as fine particles and liquids are present.

Applicable part numbers: Models SRG30X to 65 and HRX



Protector Internal Structure Drawing
(Example: QZJJHH specifications)



Symbols for Protector

Symbol	Configuration of options
JJHH	With end seal + side seal + inner seal + LaCS + protector (serving also as metal scraper)
TTHH	With double seals + side seal + inner seal + LaCS + protector (serving also as metal scraper)
JJHHYY	With end seal + side seal + inner seal + LaCS + protector (serving also as metal scraper) + side scraper ¹
TTHHYY	With double seals + side seal + inner seal + LaCS + protector (serving also as metal scraper) + side scraper ¹

¹ Side scrapers are only offered for SRG sizes 35 to 65.

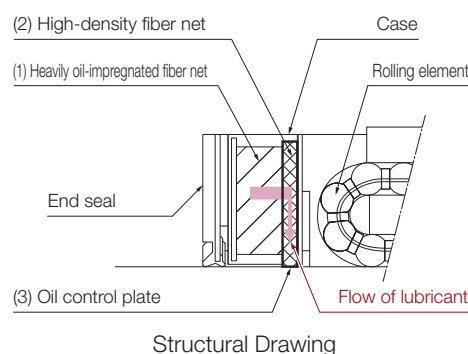
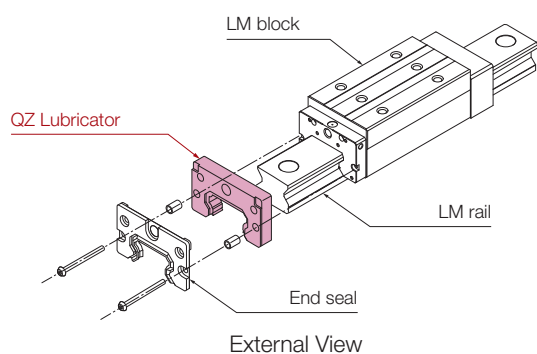
Note: Contact THK if you want to use the protector with other options.

QZ Lubricator

The QZ Lubricator feeds the right amount of lubricant to the LM rail raceway. This allows an oil film to continuously form between the rolling element and the raceway, and it significantly extends the lubrication maintenance intervals. The structure of the QZ Lubricator consists of three major components: (1) a heavily oil-impregnated fiber net (functions to store lubricant), (2) a high-density fiber net (functions to apply lubricant to the raceway), and (3) an oil-control plate (functions to adjust oil flow). Lubricant is primarily supplied from within the QZ Lubricator using the basic principle of capillary action, as used in felt-tip pens.

Features

- Since it compensates for oil loss, the lubrication maintenance interval can be significantly extended.
- It is an eco-friendly lubrication system that does not contaminate the surrounding area, as it feeds the right amount of lubricant to the raceway.



Option Compatibility

Symbol	Contamination protection accessories
QZUU	With end seal + QZ
QZSS	With end seal + side seal + inner seal ¹ + QZ
QZDD	With double seals + side seal + inner seal ¹ + QZ
QZZZ	With end seal + side seal + inner seal ¹ + metal scraper + QZ
QZKK	With double seals + side seal + inner seal ¹ + metal scraper + QZ
OZGG	With LiCS + QZ
QZPP	With LiCS + side seal + inner seal ¹ + QZ
QZSSHH	With end seal + side seal + inner seal ¹ + LaCS + QZ
QZDDHH	With double seals + side seal + inner seal + LaCS + QZ
QZZZHH	With end seal + side seal + inner seal ¹ + metal scraper + LaCS + QZ
QZKKHH	With double seals + side seal + inner seal ¹ + metal scraper + LaCS + QZ
OZJJHH ²	With end seal + side seal + inner seal ¹ + LaCS + protector (serving also as metal scraper)
QZTTHH ²	With double seals + side seal + inner seal ¹ + LaCS + protector (serving also as metal scraper)
QZJJHHYY ³	With end seal + side seal + inner seal ¹ + LaCS + protectors (serving also as metal scraper) + side scraper + QZ
QZTTHHYY ³	With double seals + side seal + inner seal ¹ + LaCS + protector (serving also as metal scraper) + side scraper + QZ

¹ Inner seals are not offered for all models.

² QZJJHH and QZTTHH are only offered for Model SRG sizes 30X to 65 and HRX.

³ QZJJHHYY and QZTTHHYY are only offered for Model SRG sizes 35 to 65.

Note: Grease nipples are not installed when there is a QZ Lubricator. Contact THK if you want to use a grease nipple for a model with a QZ Lubricator.

Options

■ Plate Cover

A plate cover can be placed over the entire upper surface of the LM rail to better prevent foreign materials from getting inside the LM block. Special tools for installing the plate cover are available.

Applicable part numbers: Models SRG25 to 65 and HDR

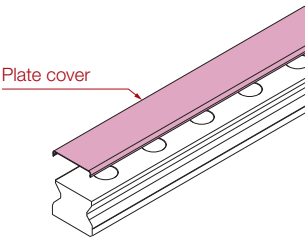


Plate Cover Roll introduction and installation guide (video)

<https://www.thk.com/video/wpc/en>

Plate cover installation tool

A plate cover installation tool and removing/mounting jig are available to make the plate cover installation process easier. Contact THK for details.

Note: Please order the plate cover installation tool separately.
Each tool can be used for more than one size (see the table).

Plate Cover Installation Tool Compatibility

Model	Model number
HDR15, HDR20	WPC-AT15/20
HDR25, HDR30, HDR35	WPC-AT25/30/35
HDR45, HDR55, HDR65	WPC-AT45/55/65

Model	Model number
SRG25, SRG30, SRG35	WPC-AT25/30/35
SRG45, SRG55, SRG65	WPC-AT45/55/65

Cover stamper

A jig is available to slide the plate cover on and install it with the LM block mounted on the LM rail. Contact THK for details.

Note: Please order the cover stamper separately.

Cover Stamper Compatibility

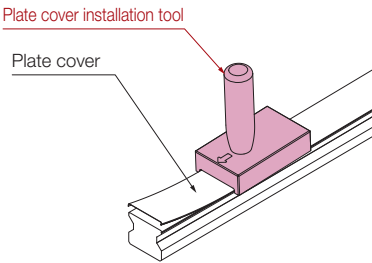
Model	Model number
HDR15	WPC-ST15
HDR20	WPC-ST20
HDR25	WPC-ST25
HDR30	WPC-ST30
HDR35	WPC-ST35
HDR45	WPC-ST45
HDR55	WPC-ST55
HDR65	WPC-ST65

Model	Model number
SRG25	WPC-ST25
SRG30	WPC-ST30
SRG35	WPC-ST35
SRG45	WPC-ST45
SRG55	WPC-ST55
SRG65	WPC-ST65

Model Number Coding

WPC-AT 15/20

Model
(HDR15 to 65)
(SRG25 to 65)



Model Number Coding

WPC-ST 30

Model
(HDR15 to 65)
(SRG25 to 65)

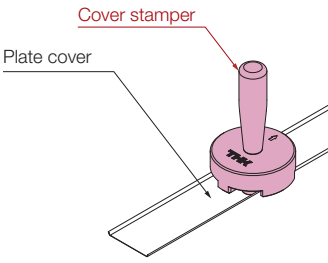


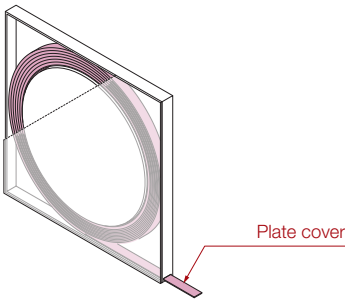
Plate Cover Roll

An extra-long plate cover is available for you to store on-site and use for maintenance and replacements when necessary.

Model Number Coding

WPC35 - 90M

Model Length
(HDR15 to 65) (90 m)
(SRG25 to 65)



Protective cap

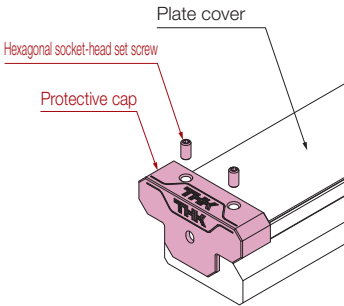
Protective caps are included when a product is ordered with a plate cover. Using the protective caps will prevent injuries caused by coming in contact with the end of the plate cover.

Note: Please order protective caps separately.

Model Number Coding

WPC-PT 35

Model
(HDR15 to 65)
(SRG25 to 65)



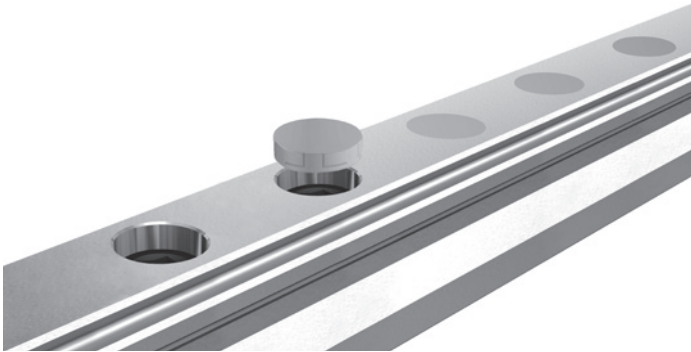
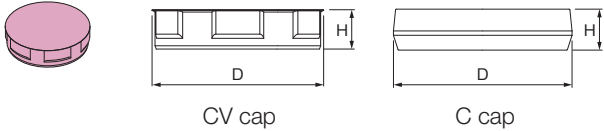
See THK's linear motion systems general catalog for more information. Please contact THK if you have any questions.

Dedicated Cap for LM Rail Mounting Holes

Using dedicated caps to cover the LM rail mounting holes helps prevent foreign material from entering the mounting holes and LM block.

CV caps and C caps

These caps are made of a special synthetic resin. The CV cap is the successor to the C cap, and its new structure makes it easier to insert.



Tapped-Hole Type LM Rails

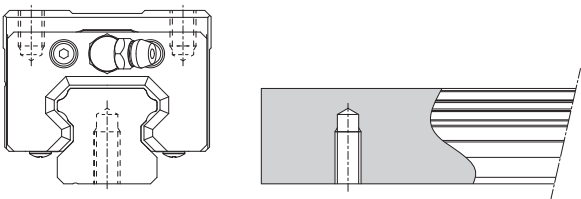
Tapped-hole type LM rails have tapped holes drilled into their bottom surface. They are an effective means of mounting the LM Guide from the bottom surface of the base and for increasing contamination protection.

K Type

LM rails with tapped holes drilled into their bottom surface

K Type Compatibility

Model	Size
SHS	15 to 65
HSR	15 to 65X
SSR	15X to 35X
SR	15 to 55
HDR	15 to 65
SRG	15X to 65
HRX	25 to 65



K Type

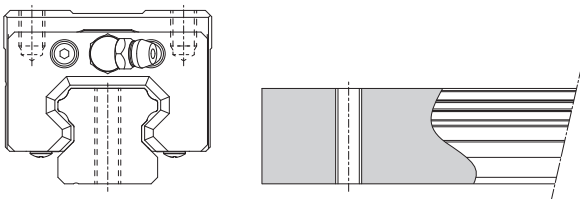
W Type

LM rails with tapped holes drilled all the way through

Note: Avoid using mounting bolts that are so long that they interfere with the movement of the block or damage the seal lip. Make sure there is clearance between the top surface of the LM rail and the ends of the male threads.

W Type Compatibility

Model	Size
SHS	15, 20
HSR	8X to 12X, 15, 20
SSR	15, 20
SR	15, 20
SHW	21
HRW	17, 21
SRS	7 to 15, 7W to 15W
RSX	7 to 15, 7W to 15W
HDR	15, 20

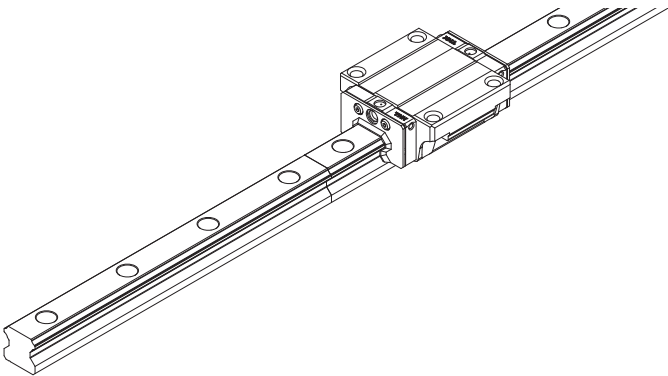


W Type

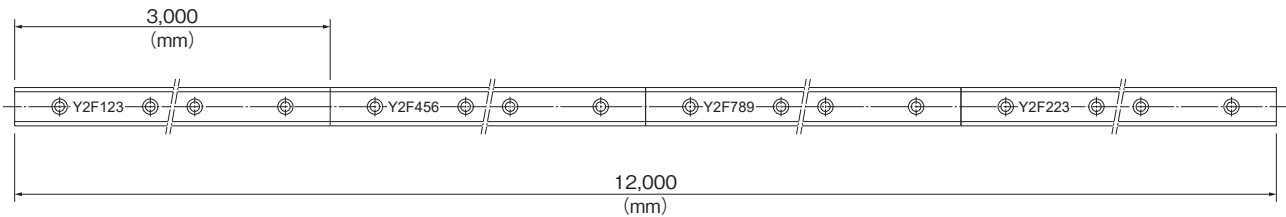
Options

Joint Specification Rails

Joint specification rails are available for applications that require long strokes that exceed the maximum lengths available for LM rails. Customers can select between T joint specification or TC joint specification for the rails that best suit their application and stock management methods.



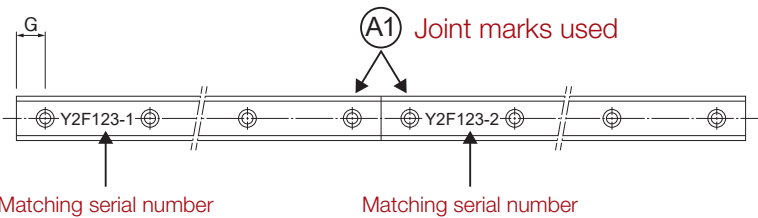
Configuration example: 3,000 mm x 4



T Joint Specification

T joint specification LM rails are stamped with joint marks. Matching the ends of LM rails that have these joint marks (joint surfaces) to each other makes it possible for these rails to provide a longer stroke.

These joint surfaces are given a highly accurate finish, and accuracy grades up to Precision grade are available for some models.



Normal Grade Compatibility

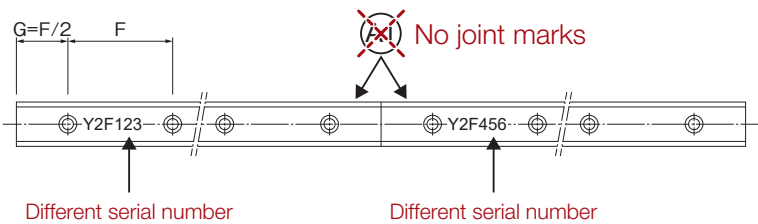
Model	Maximum length
SHS	See the maximum LM rail length for each model
HSR	
SSR	
SR	
SHW	
HRW	
SRS9X to 15, 7W to 15W	
RSX	
HDR	

High Accuracy and Precision Grade Compatibility

Model	Maximum length
SRG	See the maximum LM rail length for each model
HRX	

TC Joint Specification

TC joint specification LM rails can be used together in any combination or configuration. This makes it possible to keep a stock of spare LM rails for replacements.



Normal Grade Compatibility

Model	Maximum length
SHS	3,000 mm max. ¹
HSR15 to 65X	
SSR	
SR	
HDR	

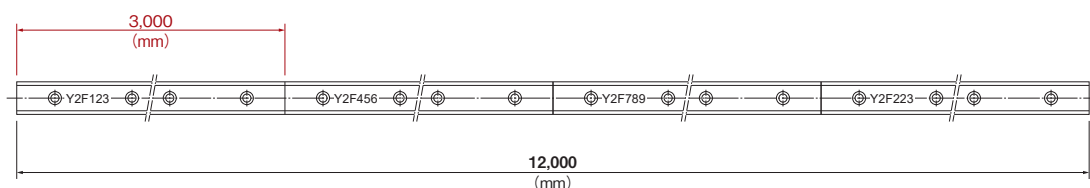
¹ See the LM rail dimension tables for each model for more information about the maximum length for TC joint specification rails.

Example TC Joint Applications

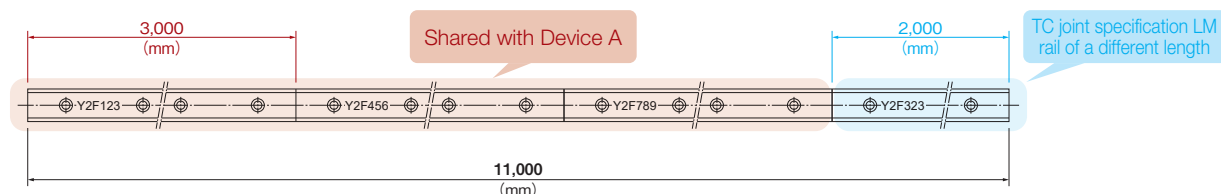
Example 1 Shared TC Joint Specification Rails

By combining TC joint specification rails, you can reduce the variety of LM Guide types used on multiple devices.

Device A Rail configuration: 3,000 mm x 4 **12,000 mm**



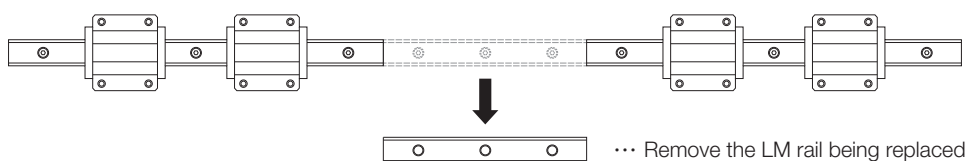
Device B Rail configuration: 3,000 mm x 3 + 2,000 mm x 1 **11,000 mm**



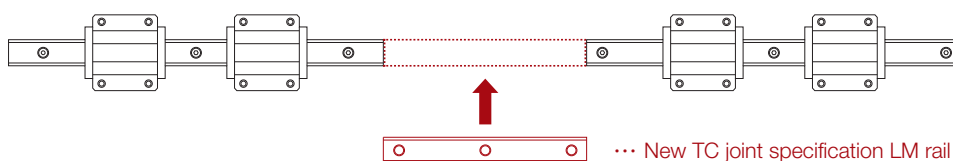
Example 2 Replacing TC Joint Specification Rails

TC joint specification rails can be replaced individually.

- An LM rail from part of the device needs replacing



- Replacing it with a new LM rail



Handling

- (1) Please use at least two people to move any product with a mass of 20 kg or more, or use a cart or another method of conveyance. Otherwise, it may cause injury or damage the unit.
- (2) Do not disassemble the parts. This may result in loss of functionality.
- (3) Tilting an LM block or LM rail may cause it to fall by its own weight.
- (4) Take care not to drop or strike the LM Guide. Otherwise, it may cause injury or damage the unit. Even if there is no outward indication of damage, a sudden impact could prevent the unit from functioning properly.
- (5) When installing the LM Guide, be sure not to remove the LM block from the LM rail.
- (6) Do not insert hands or fingers into the mounting holes on the LM rail, as they could get caught between the rail and the LM block, resulting in injury.
- (7) Wear appropriate safety gear, such as protective gloves and safety shoes, when handling the product.

Precautions on Use

- (1) Prevent foreign material, such as cutting chips or coolant, from entering the product. Failure to do so could damage the product.
- (2) 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.
- (3) Do not use the product at temperatures of 80°C or higher. Unless the unit is specially designed to be heat-resistant, exposure to such temperatures may deform or damage resin and rubber parts.
- (4) If foreign materials such as cutting chips adhere to the product, replenish the lubricant after cleaning the product.
- (5) Very small strokes can inhibit the formation of an oil film between the raceways and the areas of contact on the rolling elements, resulting in fretting. Therefore, be sure to use a type of grease with high fretting resistance properties if the stroke will be small. We recommend periodically allowing the LM block to stroke a distance roughly equal to its length to help ensure that an oil film forms between the raceways and rolling elements.
- (6) Do not forcibly drive a pin, key, or other positioning device into the product. This could create indentations on the raceway and impair the product's function.
- (7) If the operation requires the LM block to be removed from the LM rail, please use a removing/mounting jig. (The removing/mounting jig is not provided as standard. To obtain one, contact THK.)
- (8) When using a removing/mounting jig, align the ends of the LM rail and the jig and mount the block with the jig and rail parallel.
- (9) Take care to keep the LM block straight. Mounting the block at an angle can introduce foreign matter, damage internal components, or cause balls to fall out.
- (10) The LM block must contain all its internal rolling elements when mounted on the LM rail. Using a block with any balls or rollers removed may result in premature damage.
- (11) If any of the rolling elements fall out of the LM block, contact THK. Do not use the product in that condition.
- (12) If the LM Guide breaks due to an accident or another cause, the LM block may become dislodged from the LM rail and fall. For the safe use of these products, take precautions such as adding a mechanism to prevent blocks from falling.
- (13) For the bolt length, select a length that will leave a clearance at the bolt tip in relation to the effective tap depth.
- (14) If the mounting material lacks sufficient rigidity or accuracy, the bearing load will be concentrated at one location and performance will dramatically decrease. Therefore, carefully consider the rigidity and accuracy of the housing and base as well as the strength of the securing bolts.

Lubrication

- (1) Thoroughly remove anti-rust oil and apply lubricant before using the product.
- (2) Do not mix different lubricants. Even greases containing the same type of consistency enhancer may, if mixed, interact negatively due to disparate additives or other ingredients.
- (3) When using the product in locations exposed to constant vibrations or in special environments such as clean rooms, vacuums, and extreme heat or cold, use a lubricant suitable for its use/environment.
- (4) When lubricating a product with no grease nipple or lubrication hole, apply grease directly on the raceway and stroke the product several times to let the grease spread inside.
- (5) The consistency of grease changes according to the temperature. Take note that the sliding resistance of the LM Guide may be affected by changes in viscosity.
- (6) After lubrication, the sliding resistance of the LM Guide may increase due to the stirring resistance of the grease. Be sure to perform a warm-up operation and allow the grease to break in sufficiently before operating the machine.
- (7) Excess grease may spatter after lubrication. Wipe off spattered grease as necessary.
- (8) Grease deteriorates over time, which decreases the lubricity, so perform regular grease inspections and replenish grease based on frequency of use.
- (9) How often grease should be replenished varies depending on the operating conditions and environment. We recommend greasing the system approximately every 100 km traveled (three to six months). The final lubrication interval/amount should be set at the actual machine.
- (10) The lubricant may not reach the raceway if the LM Guide is not installed in a horizontal orientation.
- (11) When adopting oil lubrication, the lubricant may not be distributed throughout the LM Guide depending on the mounting orientation of the LM block. Contact THK for details.

Storage

When storing the LM Guide, pack it as designated by THK and store it indoors in a horizontal position away from high or low temperatures and high humidity.

Please note that if the product has been kept in storage for an extended period, the lubricant inside may have deteriorated. Please ensure that you replenish the lubricant before use.

If you request that we do not apply anti-rust oil to a product, please be aware that it may rust due to the storage environment or length of storage.

Disposal

Dispose of the product properly as industrial waste.

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LM Guide GK Series

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