

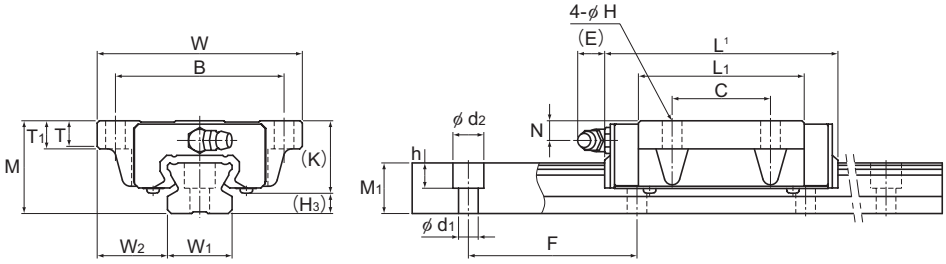
Model SR-M1V

Unit: mm

	LM rail dimensions						Basic load rating[3]		Static permissible moment kN·m[4]						Mass	
	Width		Height	Pitch		Length[2]	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block		kg	kg/m
	15	9.5	12.5	60	3.5×6×4.5	1240	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	1.2
	20	11	15.5	60	6×9.5×8.5	1500	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	2.1
	23	12.5	18	60	7×11×9	1500	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	2.7
	28	16	23	80	7×11×9	1500	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	4.3
	34	18	27.5	80	9×14×12	1500	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	6.4

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
[2] The maximum length indicates the standard maximum length of an LM rail. (See **A1-404**.)
[3] The basic load rating is for a load in the radial direction.
Use Table 7 on **A1-63** to calculate the load rating for loads in the reverse-radial direction or lateral direction.
[4] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Models SR-M1TB and SR-M1SB



Model SR-M1TB

Model No.	Outer dimensions			LM block dimensions									Grease nipple	H_3
	Height M	Width W	Length[1] L	B	C	H	L_1	T	T_1	K	N	E		
SR 15M1SB SR 15M1TB	24	52	40.4 57	41	— 26	4.5	22.9 39.5	6.1	7	19.5	6	5.5	PB1021B	4.5
SR 20M1SB SR 20M1TB	28	59	47.3 66.2	49	— 32	5.5	27.8 46.7	8	9	22	6	12	B-M6F	6
SR 25M1SB SR 25M1TB	33	73	59.2 83	60	— 35	7	35.2 59	9	10	26	7	12	B-M6F	7
SR 30M1SB SR 30M1TB	42	90	67.9 96.8	72	— 40	9	40.4 69.3	8.7	10	32.5	8	12	B-M6F	9.5
SR 35M1SB SR 35M1TB	48	100	77.6 111	82	— 50	9	45.7 79	11.2	13	36.5	8.5	12	B-M6F	11.5

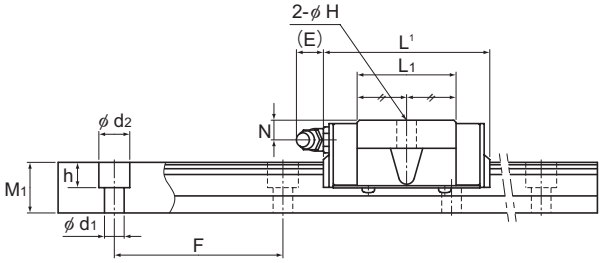
Model number coding

SR30 M1 W 2 UU C0 +1000L Y P T -II

- SR30: Model number
- M1: Symbol for high temperature type LM Guide
- W: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +1000L: LM rail length (in mm)
- Y: Applied to only 15 and 25
- P: Accuracy symbol — Normal grade (No Symbol)/High Accuracy grade (H), Precision grade (P)/Super Precision grade (SP), Ultra Precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
See **A1-584** for contamination protection accessories. See **A1-76** for radial clearance symbol. See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Model SR-M1SB

Unit: mm

	LM rail dimensions						Basic load rating[3]		Static permissible moment kN·m[4]						Mass	
	Width		Height	Pitch		Length[2]	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block		kg	kg/m
	15	18.5	12.5	60	3.5×6×4.5	1240	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	1.2
	20	19.5	15.5	60	6×9.5×8.5	1500	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	2.1
	23	25	18	60	7×11×9	1500	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	2.7
	28	31	23	80	7×11×9	1500	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	4.3
	34	33	27.5	80	9×14×12	1500	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	6.4

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
[2] The maximum length indicates the standard maximum length of an LM rail. (See A**1-404**.)
[3] The basic load rating is for a load in the radial direction.
Use Table 7 on A**1-63** to calculate the load rating for loads in the reverse-radial direction or lateral direction.
[4] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Options⇒A1-541

Standard Lengths and Maximum Lengths of LM Rails

Table 1 shows the standard lengths and the maximum lengths of model SR-M1 variations. If the maximum length of the desired LM rail exceeds these values, jointed rails will be used. Contact THK for details.
For special rail lengths, it is recommended to use a value corresponding to the G and g dimensions from the table. As the G and g dimensions increase, this portion becomes less stable, and the accuracy performance is severely impacted.

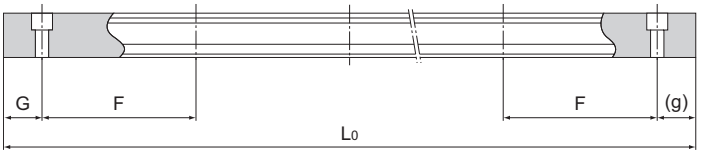


Table 1: Standard Lengths and Maximum Lengths of LM Rails for Model SR-M1

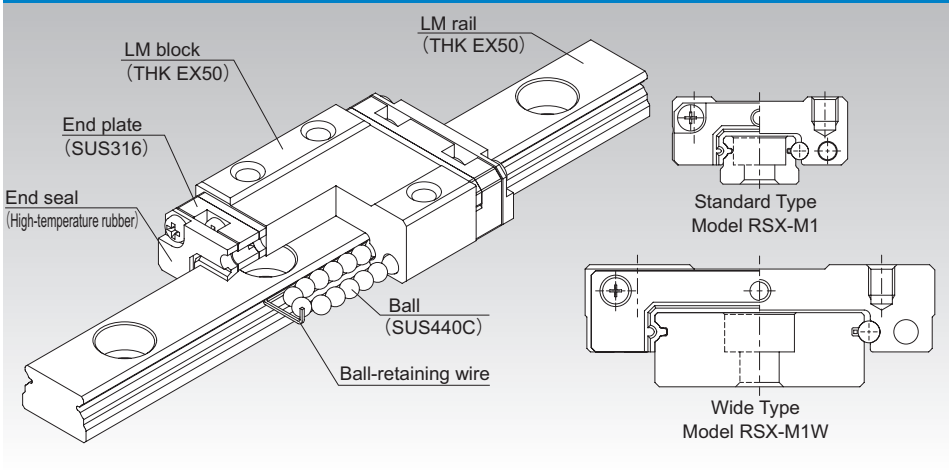
Unit: mm

Model No.	SR 15M1	SR 20M1	SR 25M1	SR 30M1	SR 35M1
LM rail standard lengths (L_0)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1240 1300 1360 1420 1480	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480
Standard pitch F	60	60	60	80	80
G, g	20	20	20	20	20
Max length	1240	1500	1500	1500	1500

Notes: The maximum length varies with accuracy grades. Contact THK for details.
If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

RSX-M1

High-Temperature LM Guide Model RSX-M1



Selection Criteria A1-10
Design Highlights A1-516
Options A1-541
Model No. A1-614
Handling Precautions A1-620
Accessories for Lubrication A24-1
Mounting Procedure B1-91

Equivalent Moment Factor A1-45
Rated Loads in All Directions A1-63
Equivalent Factor in Each Direction A1-65
Radial Clearance A1-75
Accuracy Standards A1-87
Shoulder Height of the Mounting Base and the Corner Radius A1-531
Reference Error Tolerance for the Mounting Surface A1-533
Flatness of the Mounting Surface A1-534
Dimensions of Each Model with Options Attached A1-555

Structure and Features

Balls roll in two rows of raceways precision-ground on an LM rail and an LM block, and end plates incorporated in the LM block allow the balls to circulate.
Despite being compact, the product's ball contact structure is capable of receiving loads in all directions, and it can be used individually in locations with space limitations or where moments are applied.
The Miniature High-Temperature LM Guide Model RSX-M1 is capable of being used at service temperatures up to 150℃ thanks to THK's unique technologies in material, heat treatment, and lubrication.

Maximum Service Temperature: 150℃

Use of stainless steel in the end plates and high-temperature rubber in the end seals achieves the maximum service temperature of 150℃.

Dimensional Stability

The product has undergone processing which grants it superb dimensional stability even when heated or cooled (though it does expand some at high temperatures).

Highly Corrosion Resistant

Since the LM block, LM rail, and balls use stainless steel, which is highly corrosion resistant, this model is optimal for clean room applications.

High-Temperature Grease

This model uses high-temperature grease that shows little grease-based fluctuation in rolling resistance even if the temperature changes from normal to high levels.

Thermal Characteristics of LM Rail and LM Block Materials

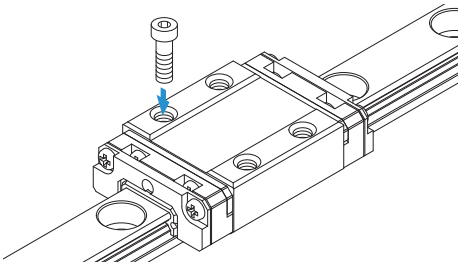
- Specific heat capacity: 0.481 J/(g•K)
- Thermal conductivity: 20.67 W/(m•K)
- Average coefficient of linear expansion: 11.8×10^{-6}/℃

Types and Features

Model RSX-M1

Dimensional Table⇒A1-410

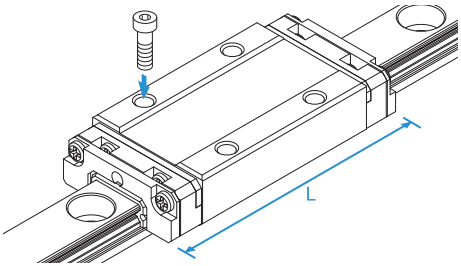
This model is the standard type.



Model RSX-M1N

Dimensional Table⇒A1-410

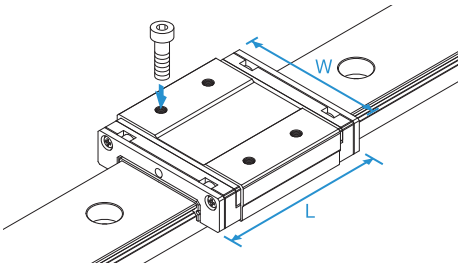
This type has a longer overall LM block length (L) and a higher load rating than the Model RSX-M1.



Model RSX-M1W

Dimensional Table⇒A1-412

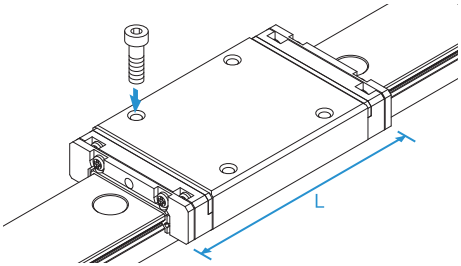
This type has a longer overall LM block length (L), a greater width, and a larger load rating and permissible moment than the Model RSX-M1.



Model RSX-M1WN

Dimensional Table⇒A1-412

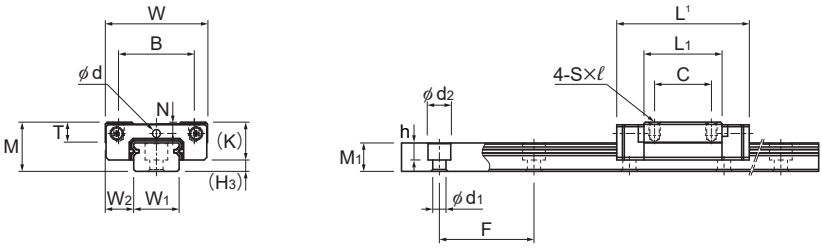
This type has a longer overall LM block length (L) and a higher load rating than the Model RSX-M1W.



Service Life

When using this product in temperatures higher than 100°C, always multiply the basic dynamic load rating by the temperature coefficient when calculating the rated service life. See A1-69 for details.

Models RSX-M1 and RSX-M1N



Models RSX9M1, RSX12M1

Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length[1] L	B	C	S×ℓ	L_1	T	K	N	E	Lubrication hole d	Grease nipple	
RSX 9M1 RSX 9M1N	10	20	30.8 40.8	15	10 16	M3×2.8	19.8 29.8	—	7.8	2.4	—	1.6	—	2.2
RSX 12M1 RSX 12M1N	13	27	35 47.7	20	15 20	M3×3.5	20.6 33.3	5.3	10	3	—	2	—	3
RSX 15M1 RSX 15M1N	16	32	42.9 60.7	25	20 25	M3×4	25.7 43.5	5.8	12	3	4	—	PB107	4

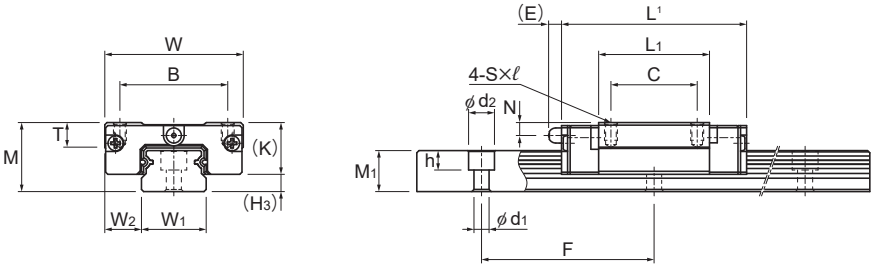
Model number coding

2 RSX15 M1 N UU C1 +230L P T -II

- 2: No. of LM blocks used on the same rail
- RSX15: Model number
- M1: Type of LM block
- N: Symbol for high temperature type LM Guide
- UU: Contamination protection accessory symbol
- C1: Radial clearance symbol — Normal (No symbol), Light preload (C1)
- +230L: LM rail length (in mm)
- P: Accuracy symbol — Normal grade (No symbol)/High Accuracy grade (H), Precision grade (P)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
No symbol for single LM block. See A1-584 for contamination protection accessories. See A1-75 for radial clearance symbol. See A1-87 for accuracy symbol. See A1-13 for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Model RSX15M1

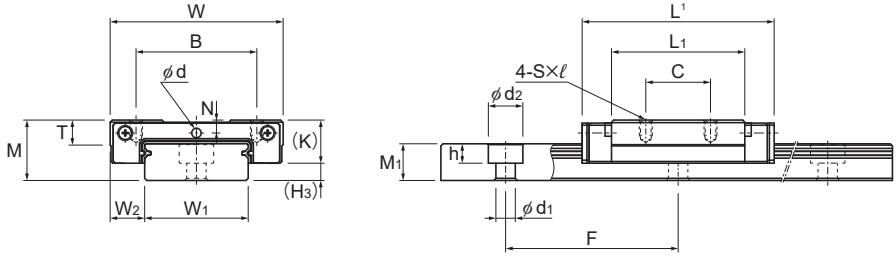
Unit: mm

	LM rail dimensions						Basic load rating[3]		Static permissible moment N·m [4]						Mass	
	Width		Height	Pitch		Length[2]	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1 $^{0}_{-0.02}$	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block		kg	kg/m
	9	5.5	5.5	20	3.5×6×3.3	1240	2.22 2.94	3.06 4.59	9.87 21.1	57.9 111	11.4 24.4	66.9 128	14.1 21.1		0.018 0.024	0.32
	12	7.5	7.5	25	3.5×6×4.5	2000	3.36 4.72	4.21 6.83	14.2 34.8	92.5 195	14.2 34.8	92.5 195	27.6 44.7		0.037 0.047	0.65
	15	8.5	9.5	40	3.5×6×4.5	2000	5.59 8.27	6.78 11.8	29 82.1	186 432	29 82.1	186 432	48.1 84.3		0.069 0.089	0.96

[1] Length L shown in the table is the length with the contamination protection accessories (code: UU).
[2] The maximum length indicates the standard maximum length of an LM rail. (See **A1-414**.)
[3] The basic load rating is for a load in the radial direction.
Use Table 7 on **A1-63** to calculate the load rating for loads in the reverse-radial direction or lateral direction.
[4] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Options⇒A1-541

Models RSX-M1W and RSX-M1WN



Models RSX9M1W, RSX12M1W

Model No.	Outer dimensions			LM block dimensions										H_3
	Height	Width	Length[1]								Lubrication hole	Grease nipple		
	M	W	L	B	C	S×ℓ	L_1	T	K	N	E	d		
RSX 9M1W RSX 9M1WN	12	30	39 50.7	21 23	12 24	M3×2.8	27 38.7	—	8.3	2.3	—	1.6	—	3.7
RSX 12M1W RSX 12M1WN	14	40	44.5 59.5	28	15 28	M3×3.5	30.9 45.9	4.5	10	3	—	2	—	4
RSX 15M1W RSX 15M1WN	16	60	55.5 74.5	45	20 35	M4×4.5	38.9 57.9	5.6	12	3	4	—	PB107	4

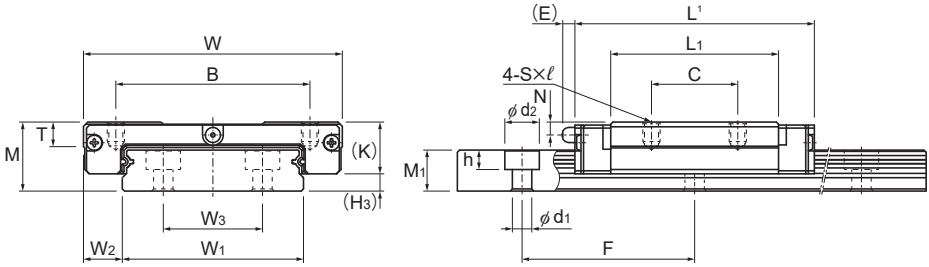
Model number coding

2 RSX12 M1 WN UU C1 +310L P T

- **2**: No. of LM blocks used on the same rail
- **RSX12**: Model number
- **M1**: Symbol for high temperature type LM Guide
- **WN**: Type of LM block
- **UU**: Contamination protection accessory symbol
- **C1**: Radial clearance symbol
Normal (No symbol)
Light preload (C1)
- **+310L**: LM rail length (in mm)
- **P**: Accuracy symbol
Normal grade (No symbol)/High Accuracy grade (H)
Precision grade (P)
- **T**: Symbol for LM rail jointed use

Notes: No symbol for 1 LM block. See contamination protection accessories on **A1-584**. See **A1-75** for radial clearance symbol. See **A1-87** for accuracy symbol.

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Model RSX15M1W

Unit: mm

	LM rail dimensions							Basic load rating[3]		Static permissible moment N·m [4]						Mass	
	Width			Height	Pitch		Length[2]	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1 $^{0}_{-0.02}$	W_2	W_3	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block		kg	kg/m
	18	6	—	7.5	30	3.5×6×4.5	1430	2.8 3.48	4.28 5.81	18.5 33.2	99.3 172	21.4 38.3	115 199	40.5 54.9		0.035 0.048	1.01
	24	8	—	8.5	40	4.5×8×4.5	2000	4.46 5.93	6.31 9.46	30 64.7	171 332	30 64.7	171 332	79.2 119		0.075 0.091	1.52
	42	9	23	9.5	40	4.5×8×4.5	2000	7.43 9.87	10.1 15.2	61.4 133	343 670	61.4 133	343 670	211 316		0.17 0.195	2.87

[1] Length L shown in the table is the length with the contamination protection accessories (code: UU).
[2] The maximum length indicates the standard maximum length of an LM rail. (See A1-414.)
[3] The basic load rating is for a load in the radial direction.
Use Table 7 on A1-63 to calculate the load rating for loads in the reverse-radial direction or lateral direction.
[4] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Options⇒A1-541

Standard Lengths and Maximum Lengths of LM Rails

Table 1 shows the standard and maximum lengths of RSX-M1 model rails.

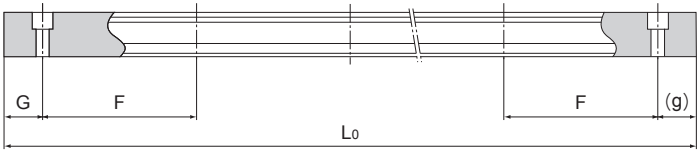


Table 1: Standard Lengths and Maximum Lengths of LM Rails for Model RSX-M1

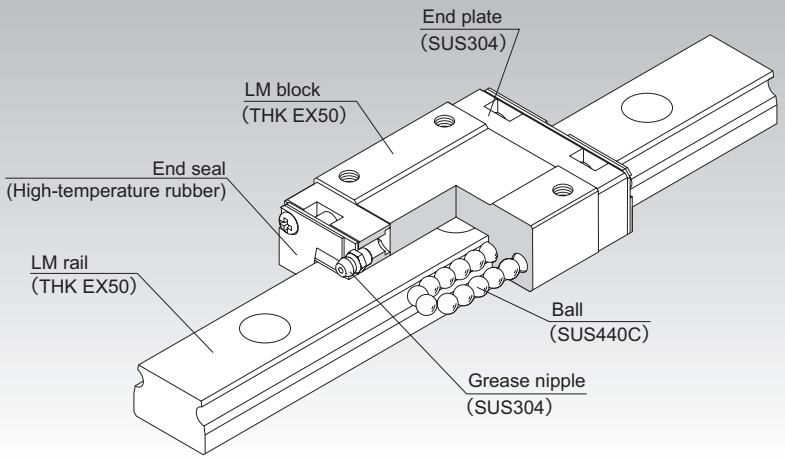
Unit: mm

Model No.	RSX 9M1	RSX 9M1W	RSX 12M1	RSX 12M1W	RSX 15M1	RSX 15M1W
LM rail standard lengths (L_o)	55 75 95 115 135 155 175 195 275 375	50 80 110 140 170 200 260 290 320	70 95 120 145 170 195 220 245 270 320 370 470 570	70 110 150 190 230 270 310 390 470 550	70 110 150 190 230 270 310 350 390 430 470 550 670 870	110 150 190 230 270 310 430 550 670 790
Standard pitch F	20	30	25	40	40	40
G, g	7.5	10	10	15	15	15
Max length	1240	1430	2000	2000	2000	2000

Note: The maximum length varies with accuracy grades. Contact THK for details.

RSR-M1

High-Temperature LM Guide Model RSR-M1



Selection Criteria A1-10
Design Highlights A1-516
Options A1-541
Model No. A1-614
Handling Precautions A1-620
Accessories for Lubrication A24-1
Mounting Procedure B1-91

Equivalent Moment Factor A1-45
Rated Loads in All Directions A1-63
Equivalent Factor in Each Direction A1-65
Radial Clearance A1-76
Accuracy Standards A1-87
Shoulder Height of the Mounting Base and the Corner Radius A1-531
Reference Error Tolerance for the Mounting Surface A1-533
Flatness of the Mounting Surface A1-534
Dimensions of Each Model with Options Attached A1-555

Structure and Features

Balls roll in two rows of raceways precision-ground on an LM rail and an LM block, and end plates incorporated in the LM block allow the balls to circulate.
The miniature High-Temperature LM Guide Model RSR-M1 is capable of being used at service temperatures up to 150℃ thanks to THK's unique technologies in material, heat treatment, and lubrication.

Maximum Service Temperature: 150℃

Use of stainless steel in the end plates and high-temperature rubber in the end seals achieves the maximum service temperature of 150℃.

Dimensional Stability

The product has undergone processing which grants it superb dimensional stability even when heated or cooled (though it does expand some at high temperatures).

Highly Corrosion Resistant

Since the LM block, LM rail, and balls use stainless steel, which is highly corrosion resistant, this model is optimal for clean room applications.

High-Temperature Grease

This model uses high-temperature grease that shows little grease-based fluctuation in rolling resistance even if temperature changes from normal to high levels.

Thermal Characteristics of LM Rail and LM Block Materials

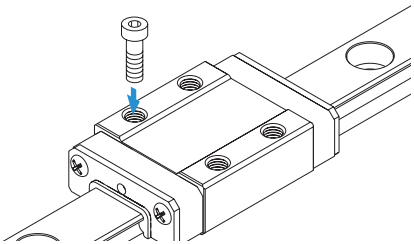
- Specific heat capacity: 0.481 J/(g•K)
- Thermal conductivity: 20.67 W/(m•K)
- Average coefficient of linear expansion: 11.8×10^{-6}/℃

Types and Features

Model RSR-M1V

Dimensional Table⇒A1-420

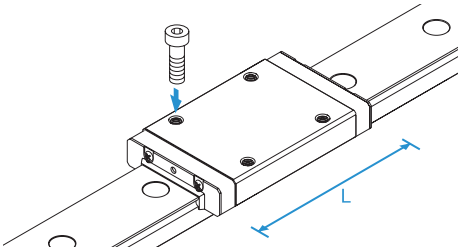
This model is the standard type.



Model RSR-M1N

Dimensional Table⇒A1-420

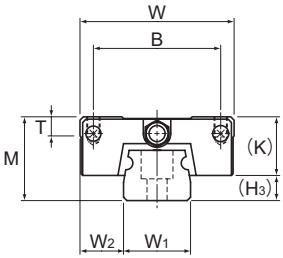
This model has a longer overall LM block length (L) and a greater load rating than standard types.



Service Life

When using this product in temperatures higher than 100°C, always multiply the basic dynamic load rating by the temperature coefficient when calculating the rated service life. See A1-69 for details.

Models RSR-M1V and RSR-M1N



Model No.	Outer dimensions			LM block dimensions									
	Height M	Width W	Length[1] L	B	C	S×ℓ	L_1	T	K	N	E	Grease nipple	H_3
RSR 20M1V RSR 20M1N	25	46	66.5 86.3	38	38	M4×6	45.2 65	5.7	17.5	5	6.4	A-M6F	7.5

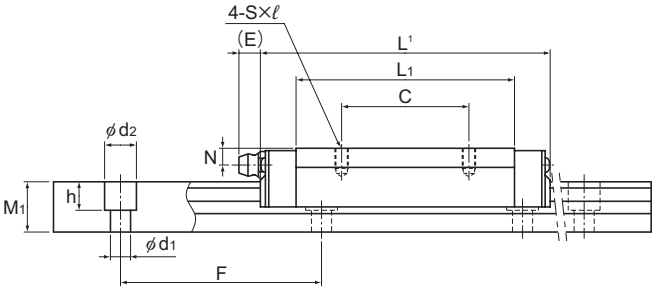
Model number coding

2 RSR20 M1 V UU C1 +460L P T -II

- 2: No. of LM blocks used on the same rail
- RSR20: Model number
- M1: Type of LM block
- V: Symbol for high temperature type LM Guide
- UU: Contamination protection accessory symbol
- C1: Radial clearance symbol — Normal (No symbol), Light preload (C1)
- +460L: LM rail length (in mm)
- P: Accuracy symbol — Normal grade (No Symbol)/High Accuracy grade (H), Precision grade (P)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
No symbol for single LM block. See **A1-584** for contamination protection accessories. See **A1-76** for radial clearance symbol. See **A1-87** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Unit: mm

	LM rail dimensions						Basic load rating[3]		Static permissible moment N·m [4]						Mass	
	Width		Height	Pitch		Length[2]	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block		kg	kg/m
	20 $^{0}_{-0.03}$	13	15	60	6×9.5×8.5	1800	8.82 14.2	12.7 20.6	75.4 171	435 897	66.7 151	389 795	96.6 157		0.245 0.337	1.95

[1] Length L shown in the table is the length with the contamination protection accessories (code: UU).
[2] The maximum length indicates the standard maximum length of an LM rail. (See **A1-422**.)
[3] The basic load rating is for a load in the radial direction.
Use Table 7 on **A1-63** to calculate the load rating for loads in the reverse-radial direction or lateral direction.
[4] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Options⇒A1-541

Standard Lengths and Maximum Lengths of LM Rails

Table 1 shows the standard and maximum lengths of RSR M1 model rails.

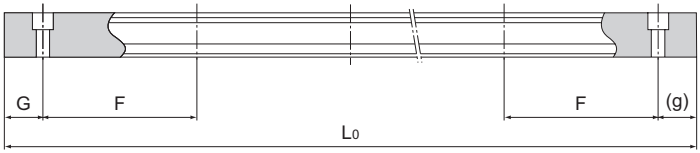


Table 1: Standard Lengths and Maximum Lengths of LM Rails for Model RSR-M1

Unit: mm

Model No.	RSR 20M1
LM rail standard lengths (L_o)	220 280 340 460 640 880 1000
Standard pitch F	60
G, g	20
Max length	1800

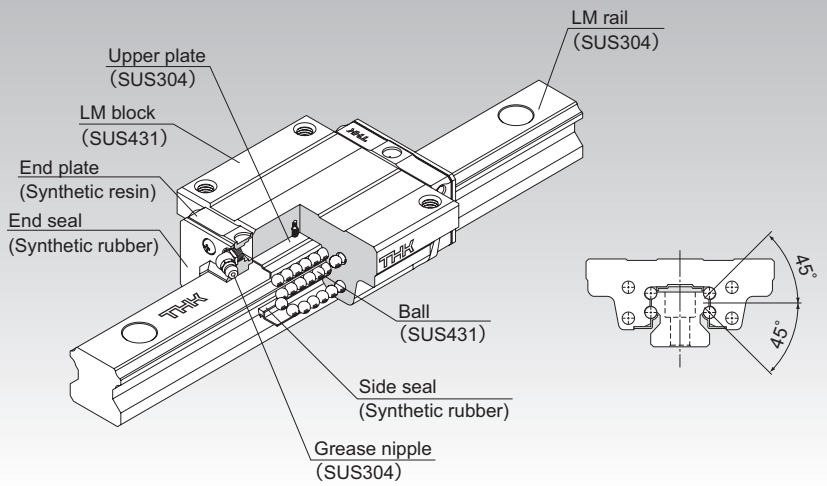
Note: The maximum length varies with accuracy grades. Contact THK for details.

Preventing the LM Block from Falling off of the LM Rail

In model RSR-M1 the balls fall out if the LM block comes off the LM rail.
For this reason, LM Guide assemblies are delivered with a part which prevents the LM block from coming off the rail. If you remove this part when using the product, please take precautions to avoid overrunning the blocks off of the rail.

HSR-M2

Corrosion-Resistant LM Guide Model HSR-M2



Selection Criteria	**A1-10**
Design Highlights	**A1-516**
Options	**A1-541**
Model No.	**A1-614**
Handling Precautions	**A1-620**
Accessories for Lubrication	**A24-1**
Mounting Procedure	**B1-91**

Equivalent Moment Factor	A1-45
Rated Loads in All Directions	A1-63
Equivalent Factor in Each Direction	A1-65
Radial Clearance	A1-77
Accuracy Standards	A1-81
Shoulder Height of the Mounting Base and the Corner Radius	A1-527
Reference Error Tolerance for the Mounting Surface	A1-532
Dimensions of Each Model with Options Attached	A1-555

Structure and Features

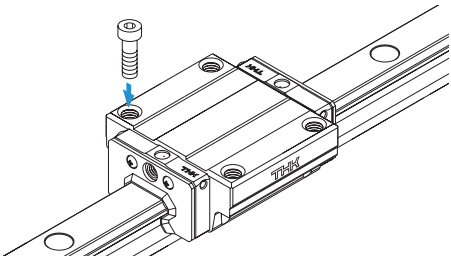
Balls roll in four rows of raceways precision-ground on an LM rail and an LM block, and end plates incorporated in the LM block allow the balls to circulate.
Each row of balls is placed at a contact angle of 45° so that the rated loads applied to the LM block are uniform in the four directions (radial, reverse-radial, and lateral directions), enabling the LM Guide to be used in all orientations.
The LM rail, LM block, and balls are made of highly corrosion-resistant stainless steel. The use of stainless steel in other metal components further contributes to superb corrosion resistance.

Types and Features

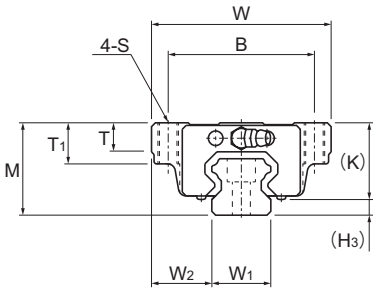
Model HSR-M2A

Dimensional Table⇒A1-426

The flange of its LM block has tapped holes.



Model HSR-M2A



Model No.	Outer dimensions			LM block dimensions										Pilot hole for side nipple			
	Height	Width	Length[1]										Grease nipple				
	M	W	L	B	C	S	L_1	T	T_1	K	N	E		e_0	f_0	D_0[2]	H_3
HSR 15M2A	24	47	56.6	38	30	M5	38.8	6.5	11	19.3	4.3	5.5	PB1021B	3.2	3.9	3	4.7
HSR 20M2A	30	63	74	53	40	M6	50.8	9.5	10	26	5	12	B-M6F	3.1	3.4	3	4
HSR 25M2A	36	70	83.1	57	45	M8	59.5	11	16	30.5	6	12	B-M6F	3.5	4	3	5.5

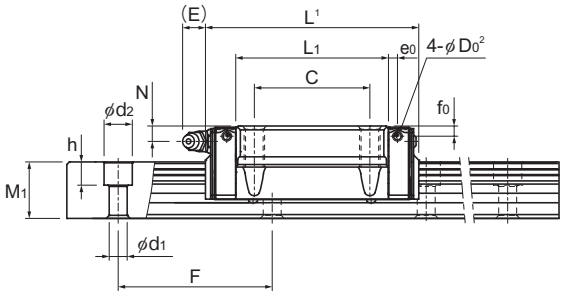
Model number coding

HSR20M2 A 2 UU C1 I +820L P T -II

- HSR20M2: Model number (high corrosion resistance type LM Guide)
- A: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol
- C1: Radial clearance symbol (Normal (No symbol), Light preload (C1))
- I: End plate is made of stainless steel
- +820L: LM rail length (in mm)
- P: Accuracy symbol (Normal grade (No Symbol)/High Accuracy grade (H), Precision grade (P))
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
See **A1-584** for contamination protection accessories. See **A1-77** for radial clearance symbol. See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Unit: mm

	LM rail dimensions						Basic load rating[4]		Static permissible moment N·m [5]					Mass	
	Width		Height	Pitch		Length[3]	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
	15	16	15	60	4.5×7.5×5.3	1000	2.11	2.04	12.1	68.6	12.1	68.6	12.7	0.2	1.5
	20	21.5	18	60	6×9.5×8.5	1000	3.89	3.57	28.5	156	28.5	156	30.2	0.35	2.3
	23	23.5	22	60	7×11×9	1000	5.57	5.15	46.1	256.5	46.1	256.5	51.6	0.59	3.3

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
[2] The side nipple pilot holes will not be through holes. For grease nipple mount machining, contact THK.
[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-428**.)
[4] Please be aware that the basic load rating of the corrosion-resistant LM Guide is smaller than ordinary stainless steel models of LM Guide.
[5] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Note: A stainless steel end plate is available for the HSR-M2 (symbol: ···I).

Options⇒A1-541

Standard Lengths and Maximum Lengths of LM Rails

Table 1 shows the standard lengths and the maximum lengths of model HSR-M2 variations. If the maximum length of the desired LM rail exceeds these values, jointed rails will be used. Contact THK for details.
For special rail lengths, it is recommended to use a value corresponding to the G and g dimensions from the table. As the G and g dimensions increase, this portion becomes less stable, and the accuracy performance is severely impacted.

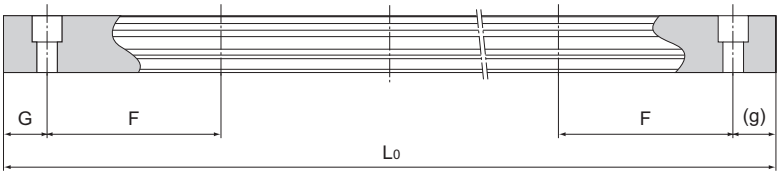


Table 1: Standard Lengths and Maximum Lengths of LM Rails for Model HSR-M2

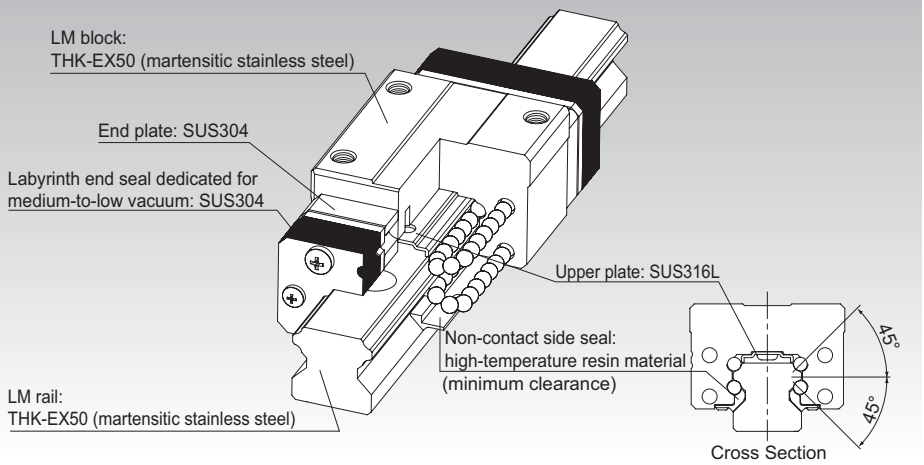
Unit: mm

Model No.	HSR 15M2	HSR 20M2	HSR 25M2
LM rail standard lengths (L_0)	160 280 460 640	280 460 640 820	280 460 640 820 1000
Standard pitch F	60	60	60
G, g	20	20	20
Max length	1000	1000	1000

Notes: The maximum length varies with accuracy grades. Contact THK for details.
If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

HSR-M1VV

Medium-to-Low Vacuum LM Guide Model HSR-M1VV



Selection Criteria	**A1-10**
Design Highlights	**A1-516**
Options	**A1-541**
Model No.	**A1-614**
Handling Precautions	**A1-622**
Accessories for Lubrication	**A24-1**
Mounting Procedure	**B1-91**
Equivalent Moment Factor	A1-45
Rated Loads in All Directions	A1-63
Equivalent Factor in Each Direction	A1-65
Radial Clearance	A1-76
Accuracy Standards	A1-81
Shoulder Height of the Mounting Base and the Corner Radius	A1-527
Reference Error Tolerance for the Mounting Surface	A1-532
Flatness of the Mounting Surface	A1-534
Dimensions of Each Model with Options Attached	A1-555

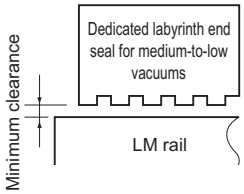
Structure and Features

Features

- Operable in various environments at pressure between atmospheric pressure and vacuum (10^{-3} Pa).
- Capable of withstanding baking temperatures up to 200℃[1]
- Use of a dedicated labyrinth end seal for medium-to-low vacuums increases grease retention and allows extended use in a vacuum.
- The use of a grease designed for medium-to-low vacuums enables stable rolling resistance.

[1] If the baking temperature exceeds 100°C, multiply the basic load rating with the temperature coefficient.

Structure of the Dedicated Labyrinth End Seal for Medium-to-Low Vacuums
The dedicated labyrinth end seal for medium-to-low vacuums forms a multi-stage space as shown in the figure on the right to minimize the pressure difference between adjacent stages. This minimizes the outflow velocity of the oil inside the LM block. In addition, the seal will not affect the rolling resistance since it does not contact the LM rail.

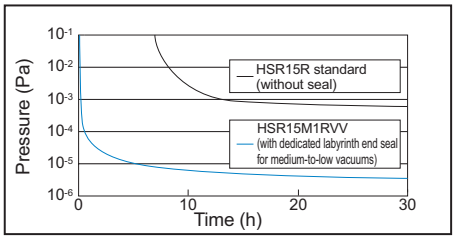


Achievable Vacuum Level

The medium-to-low vacuum LM Guide demonstrates excellent achievable vacuum levels.

Test temperature: 25℃ (±5℃)

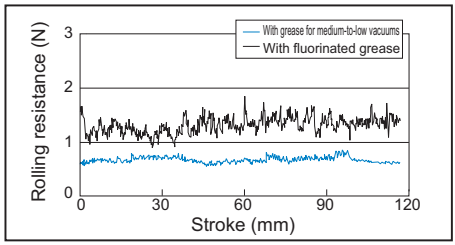
	HSR15M1RVV	HSR15R (for reference)
Grease	Grease for medium-to-low vacuum	AFB-LF Grease
Seal	Labyrinth end seal dedicated for medium-to-low vacuum	None
End plate	Stainless steel	Resin



Achievable Vacuum Level

Rolling Resistance

The grease used in the medium-to-low vacuum LM Guide has a smaller rolling resistance than conventional fluorine grease and ensures stable rolling motion.
Specimen: HSR15M1RVV
Temperature: 25℃ (±5℃)
Pressure: atmospheric pressure



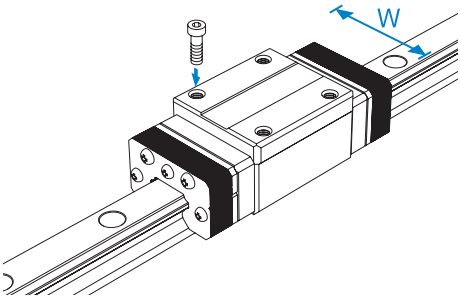
Rolling Resistance Fluctuation

Types and Features

Model HSR-M1RVV

Dimensional Table⇒A1-434

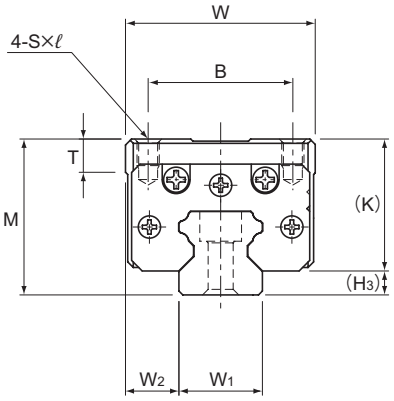
With this type, the LM block has a smaller width (W) and tapped holes. It is used in places where the space for table width is limited.



Design Precautions

If a large moment is applied to a system consisting of one LM rail or one LM block per shaft, the labyrinth end seal may contact the LM rail, which could affect the system's motion.
If a moment is applied, it is recommended to use two rails with two LM blocks per rail. Contact THK for details.

Model HSR-M1VV



Model No.	Outer dimensions			LM block dimensions						
	Height M	Width W	Length[1] L	B	C	S×ℓ	L_1	T	K	H_3
HSR15M1R-VV	28	34	75	26	26	M4×5	38.8	6	23.7	4.3

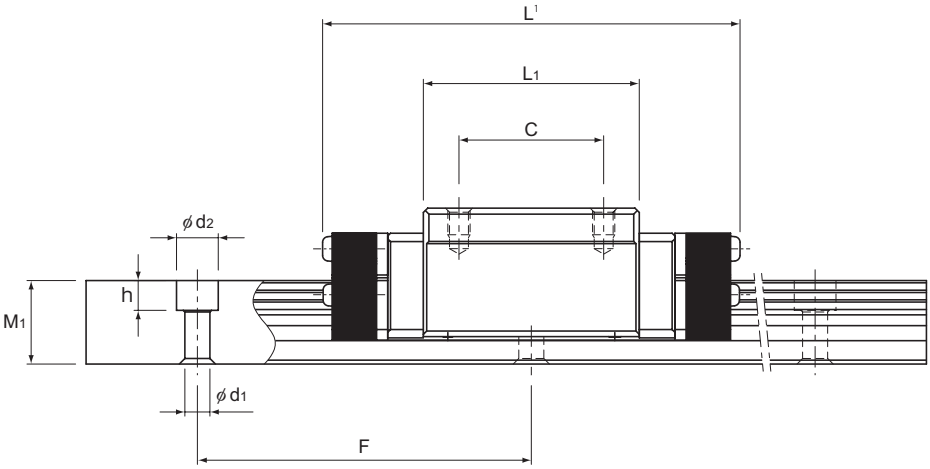
Model number coding

HSR15M1R 1 VV C1 +400L P -II

- HSR15M1R: Model No.
- 1: No. of LM blocks used on the same rail
- VV: Labyrinth seal symbol
- C1: Radial clearance symbol
- +400L: LM rail length (in mm)
- P: Accuracy symbol
- -II: Symbol for No. of rails used on the same plane

Notes: The radial clearance, maximum LM rail length and accuracy class are equal to that of model HSR.
With this model, a single-rail unit constitutes one set (I.e., the required number of sets when 2 rails are used in parallel is 2).
See **A1-76** radial clearance symbol. See **A1-431** for labyrinth seal symbol. See **A1-81** for accuracy symbol. See **A1-13** for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN·m [3]					Mass	
	Width		Height	Pitch		Length[2]	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
	15	9.5	15	60	4.5×7.5×5.3	1240	10.9	15.7	0.0945	0.527	0.0945	0.527	0.0998	0.27	1.5

[1] Length L is for when the contamination protection accessory symbol is VV (with labyrinth end seals).
[2] The maximum length indicates the standard maximum length of an LM rail. (See A1-436.)
[3] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: If a large moment is applied to a system consisting of one LM rail or one LM block per shaft, the labyrinth end seal may contact the LM rail, which could affect the system's motion.
If a moment is applied, it is recommended to use two rails with two LM blocks per rail.
Contact THK for details.

Options⇒A1-541

Standard Lengths and Maximum Lengths of LM Rails

Table 1 shows the standard and maximum lengths for Model HSR-M1VV rails. If the maximum length of the desired LM rail exceeds these values, contact THK.
For special rail lengths, it is recommended to use a value corresponding to the G and g dimensions from the table. As the G and g dimensions increase, this portion becomes less stable, and the accuracy performance is severely impacted.

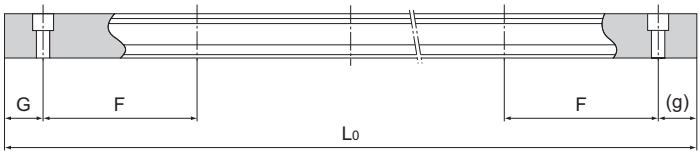


Table 1: Standard Lengths and Maximum Lengths of LM Rails for Model HSR-M1VV

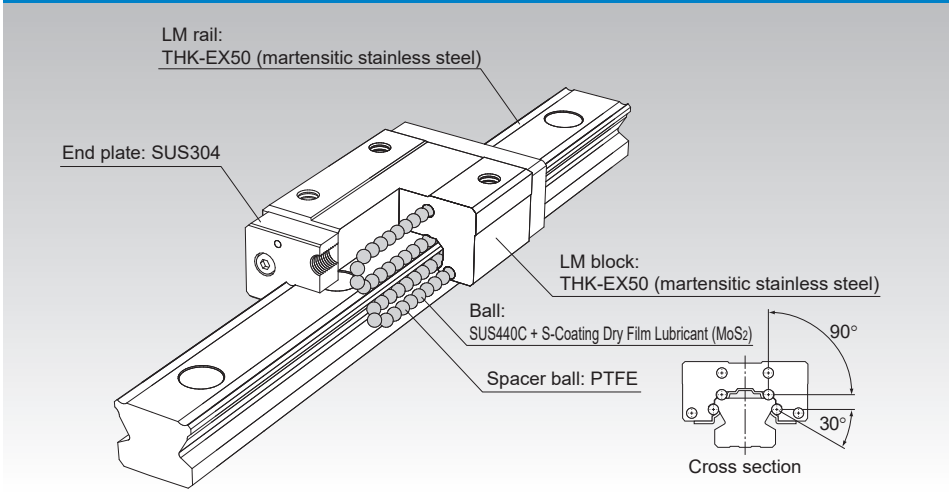
Unit: mm

Model No.	HSR15M1R-VV
LM rail standard lengths (L_0)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240
Standard pitch F	60
G, g	20
Max length	1240

Notes: The maximum length varies with accuracy grades. Contact THK for details.
If a length greater than the above maximum is required, contact THK.

SR-MS

Oil-Free LM Guide Model SR-MS for Special Environments



Selection Criteria A1-10
Design Highlights A1-516
Options A1-541
Model No. A1-614
Handling Precautions A1-620
Accessories for Lubrication A24-1
Mounting Procedure B1-91

Equivalent Moment Factor A1-45
Rated Loads in All Directions A1-63
Equivalent Factor in Each Direction A1-65
Radial Clearance A1-76
Accuracy Standards A1-90
Shoulder Height of the Mounting Base and the Corner Radius A1-525
Reference Error Tolerance for the Mounting Surface A1-533
Flatness of the Mounting Surface A1-534
Dimensions of Each Model with Options Attached A1-555

Structure and Features

Structural Characteristics

1. Uses stainless steel
   All components are made of stainless steel or other materials for special environments.
2. Degreased and cleaned
   Special solvent is used to de-grease this model.
3. Does not use grease
   S-Coating Dry Film Lubricant is used to provide this model's stainless steel balls with grease-free lubrication.

This achieves → Low outgassing → As a result...

Greatest advantage

Suitable for applications where the vacuum level reaches 10^{-6} Pa and chemical contamination (gaseous contamination such as organic matter and moisture) is not allowed.

Note: Can be used at temperatures up to 150°C (200°C short term).

What Is S-Coating Dry Film Lubricant?

S-Coating Dry Film Lubricant is a fully dry lubricant developed for use under atmospheric to high-vacuum environments.
It has superior characteristics in load carrying capacity, wear resistance, and sealability compared to other lubrication systems.

Comparison of Dry Lubrication Material Properties

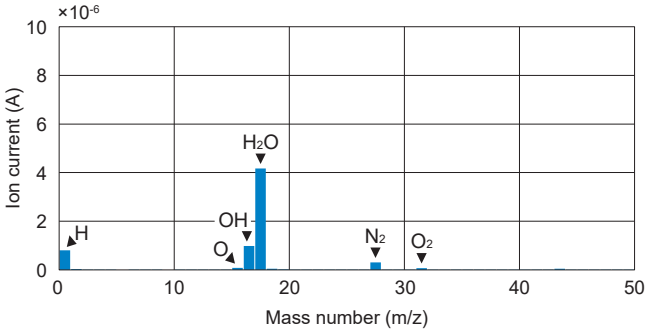
Item	Atmosphere		Vacuum		Service environment
	Friction coefficient	Wear resistance	Friction coefficient	Wear resistance	
Molybdenum disulfide (hexagonal form)	0.05 to 0.25	△	0.02 to 0.1	△	Vacuum
Silver (soft metal)	Not suitable	Not suitable	0.1 to 0.3	△	Vacuum
DLC (diamond-like carbon)	0.06 to 0.15	◎	0.3 to 0.5	△	Atmosphere
S-Coating Dry Film Lubricant	0.02 to 0.05	○	0.01 to 0.03	○	Atmosphere, vacuum

◎: Superb, ○: Good, △: Adequate

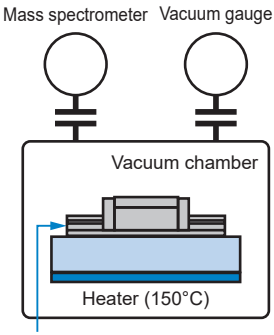
Outgassing in Vacuum Environments

No outgassing was observed from the S-Coating Dry Film Lubricant in a high-vacuum environment.

Test Conditions
Temperature: 150°C
Pressure: 1.0×10^{-5} Pa



Outgassing Analysis Data



LM Guide:
SR15MSW1CS+160LP

Test Overview

Durability

The Oil-Free LM Guide Model SR-MS for Special Environments demonstrates stable durable life.[1]

Test Conditions

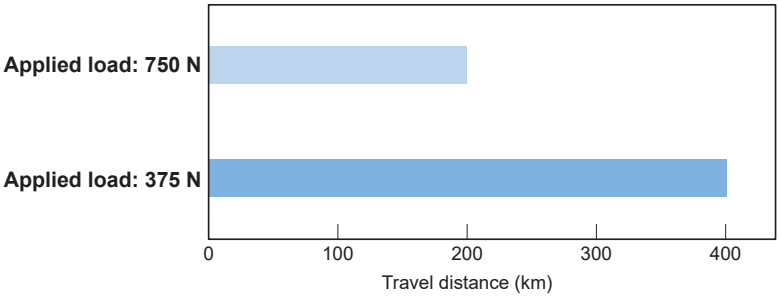
Model: SR20MSW (permissible load: 750 N)

Speed: 15 m/min (1G)

Stroke: 350 mm

Temperature: Room temperature

Pressure: Atmospheric



[1] The durable life represents the value at a point from which the S-Coating Dry Film Lubricant is no longer effective. Note that the durable life differs from the rated service life of the LM Guide.

Applications of the Oil-Free LM Guide for Special Environments

Industry	Equipment	Advantages of the oil-free LM Guide for special environments
Semiconductor / FPD manufacturing machines	Exposure machines, OLED manufacturing equipment, ion-implanters, and lithography systems	• Low (organic) outgassing • Operable at high temperatures (up to 150℃)
Analyzers and inspection equipment	Mass spectrometers and X-ray inspection systems	• Usable in high-vacuum environments • Stable rolling resistance even at low speeds
Space industry	Satellites and robot arms	• Low volatility and loss in outer space • Stable rolling resistance even at low temperatures

Calculating Expected Service Life for the Oil-Free LM Guide for Special Environments

LM Guide units with dry film lubricant are generally used in applications involving light loads. THK has devised the following formula for calculating the expected service life when using this dry film lubricant based on data obtained from various forms of evaluative testing. This formula can be used to estimate the service life under given operating conditions.

$$L_m = \left(\frac{F_0}{\alpha \cdot P_c} \right)^{1.57} \times 50$$

L_m : Average service life (km)
F_0 : Permissible load (N)
P_c : Calculated load (N)
α : Modified factor

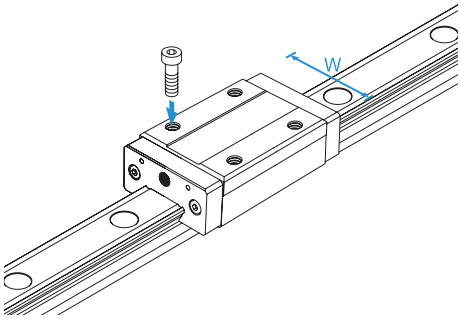
Notes: The life here means the service life of the S-Coating based on wear.
Since the service life of the S-Coating may vary according to the service environment or the operating conditions, customers are encouraged to evaluate and validate the life under the service environment and operating conditions at their facilities.

Types and Features

Model SR-MSW

Dimensional Table⇒A1-442

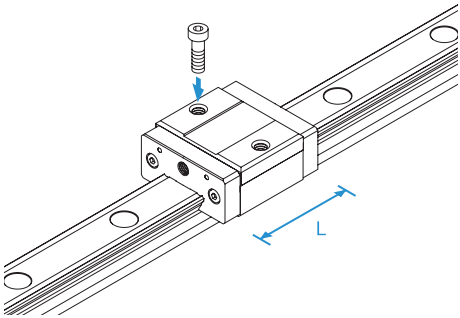
With this type, the LM block has a smaller width (W) and tapped holes.



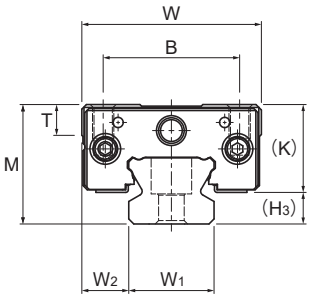
Model SR-MSV

Dimensional Table⇒A1-442

A space-saving type whose LM block has the same cross-sectional shape as Model SR-MSW, but has a smaller overall LM block length (L).



Models SR-MSV and SR-MSW



Model No.	Outer dimensions			LM block dimensions						
	Height	Width	Length							
	M	W	L	B	C	S×ℓ	L_1	T	K	H_3
SR15MSV SR15MSW	24	34	36.6 53.2	26	— 26	M4×7	22.9 39.5	5.7	19.5	4.5
SR20MSV SR20MSW	28	42	41.3 60.2	32	— 32	M5×8	27.8 46.7	7.2	22	6

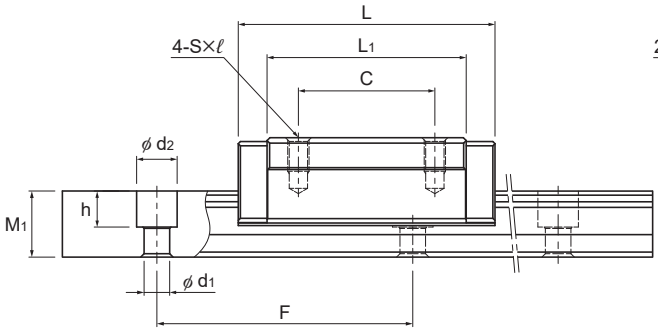
Model number coding

SR15MSV 1 CS +340L Y P -II

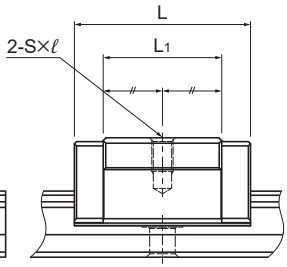
- SR15MSV: Model number
- 1: No. of LM blocks used on the same rail
- CS: Radial clearance symbol
- +340L: LM rail length (in mm)
- Y: Applied to only 15
- P: Accuracy symbol
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
See **A1-75** radial clearance symbol. See **A1-80** for accuracy symbol. See **A1-13** for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Model SR-MSW



Model SR-MSV

Unit: mm

	LM rail dimensions						Permissible load[2]	Permissible moment N·m[3]					Mass	
	Width		Height	Pitch		Length[1]	F_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	N	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
	15	9.5	12.5	60	3.5×6×4.5	400	320 570	0.8 2.35	5.43 13	0.51 1.47	3.6 8.31	1.16 2.08	0.12 0.2	1.2
	20	11	15.5	60	6×9.5×8.5	400	430 750	1.35 3.76	8.44 19.9	0.87 2.36	5.52 12.6	2.05 3.59	0.2 0.3	2.1

[1] Length Max represents the standard maximum length of an LM rail (see **A1-444**).
[2] The permissible load in the dimension table is for a load in the radial direction.
Use Table 7 on **A1-63** to calculate the permissible value for loads in the reverse radial direction or lateral direction.
The permissible load value represents the permissible value for the strength of the S-Coating Dry Film Lubricant.
[3] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: Please note that Model SR-MS does not have contamination protection accessories.
Contact THK for information about Model SR-MS durability.
The service life of the S-Coating may vary according to the environment or the operating conditions.
Customers are encouraged to evaluate and validate the service life under the operating conditions in their service environment.
For model SR15, two types of rails with different mounting hole dimensions are offered (see Table 1).

Table 1: Rail Mounting Hole Dimensions

Model No.	Standard rail	Semi-standard rail
SR 15	For M3 (no symbol)	For M4 (symbol Y)

Options⇒A1-541

Standard Lengths and Maximum Lengths of LM Rails

Table 1 shows the standard lengths and the maximum lengths of Model SR-MS variations. If the maximum length of the desired LM rail exceeds these values, contact THK.
For special rail lengths, it is recommended to use a value corresponding to the G and g dimensions from the table. As the G and g dimensions increase, this portion becomes less stable, and performance accuracy is severely impacted.

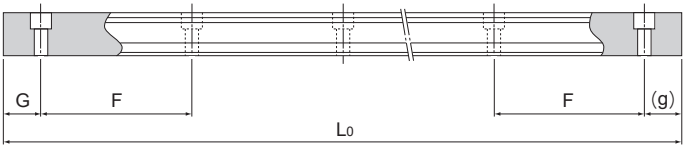


Table 1: Standard Lengths and Maximum Lengths of LM Rails for Model SR-MS

Unit: mm

Model No.	SR 15MS	SR 20MS
LM rail standard lengths (L_0)	160 220 280 340 400	220 280 340 400
Standard pitch F	60	60
G, g	20	20
Max length	400	400

Notes: Contact THK if LM rails longer than the specified maximum length are required.
A connected-rail type is not available.

Structure and Features of the Caged Roller LM Guide

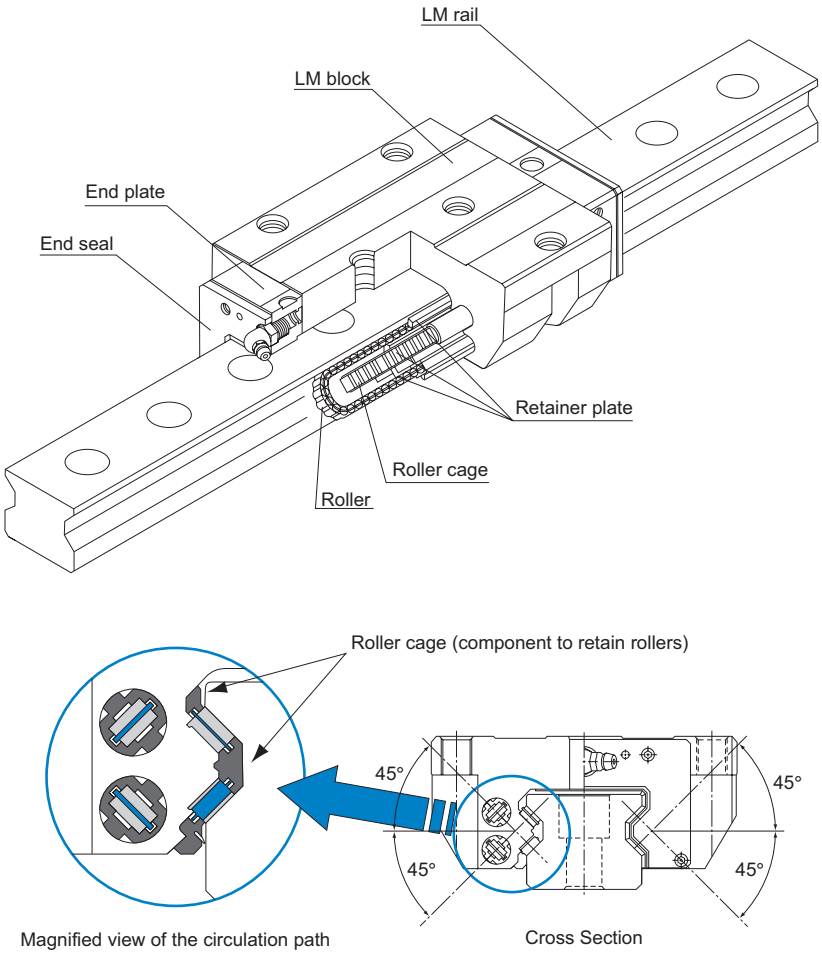
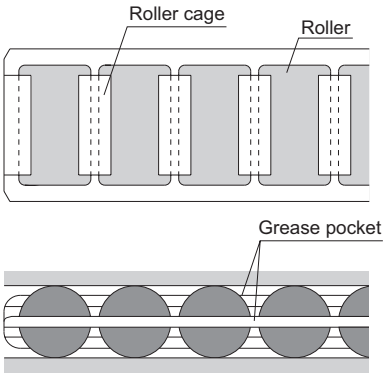


Fig. 1: Structural Drawing of the Caged Roller LM Guide Model SRG

The Caged Roller LM Guide is a roller guide that achieves low-friction, smooth motion, and long-term maintenance-free operation by using a roller cage. In addition, to ensure ultra-high rigidity, rollers with low elastic deformation and optimized diameter and length are used as the rolling elements. Furthermore, the lines of rollers are placed at a contact angle of 45° so that the same rated load is applied in all (radial, reverse-radial, and lateral) directions.

Advantages of the Caged Roller Technology

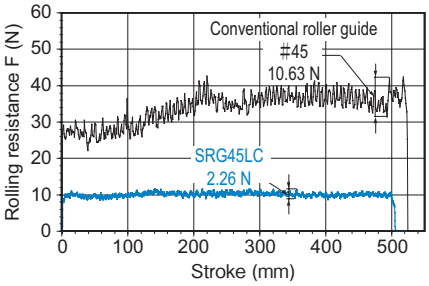
(1) Evenly arranged rollers circulate in a way that limits the front-to-back and side-to-side movements of the rollers, preventing the rollers from skewing and minimizing rolling resistance fluctuations. The end result is smooth and stable motion.
(2) The absence of friction between rollers and the retention of lubrication in grease pockets enable long-term maintenance-free operation.
(3) The absence of friction between rollers achieves low heat generation and superbly high speed.
(4) The absence of roller-to-roller collision achieves low noise and reduced running sound.



Smooth Motion

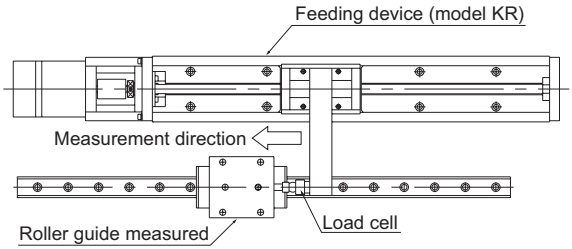
● **Rolling Resistance Data**

Evenly spaced and aligned rollers circulate, minimizing rolling resistance fluctuations and achieving smooth and stable motion.



Result of Measuring Rolling Resistance Fluctuations

Conditions
Feeding speed: 10 mm/s
Applied load: no load (one block)



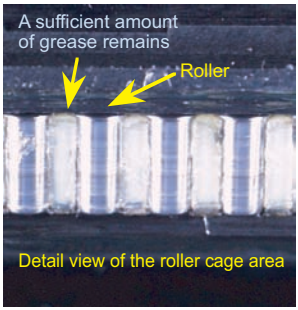
Rolling Resistance Measuring Machine

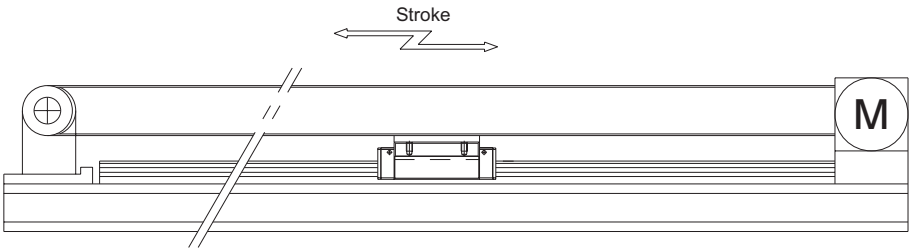
Long-Term Maintenance-Free Operation

● High-Speed Durability Test Data

Use of a roller cage eliminates friction between rollers, minimizes heat generation, and increases grease retention, thus achieving long-term maintenance-free operation.

Conditions
Model No.: SRG45LC
Magnitude of preload: clearance C0
Speed: 180 m/min
Acceleration: 1.5 G
Stroke: 2300 mm
Lubrication: Initial lubrication only
(THKAFB-LF Grease)





Test result: No anomaly observed after running 15,000 km

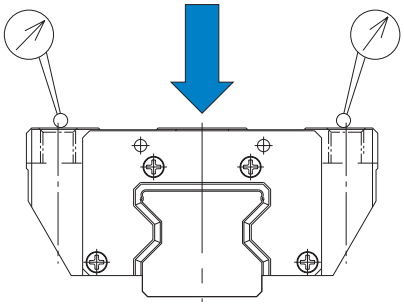
Result of High-Speed Durability Test

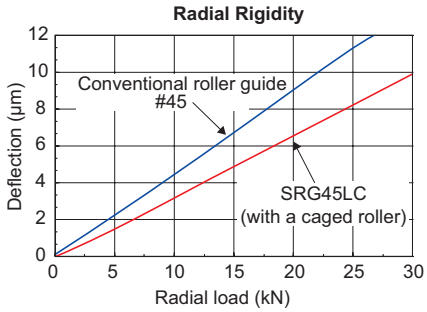
Ultra-High Rigidity

● High Rigidity Evaluation Data

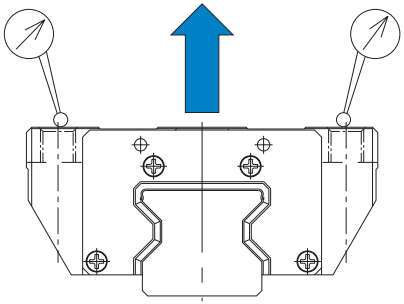
Preload SRG : radial clearance C0
Conventional type : radial clearance equivalent to C0

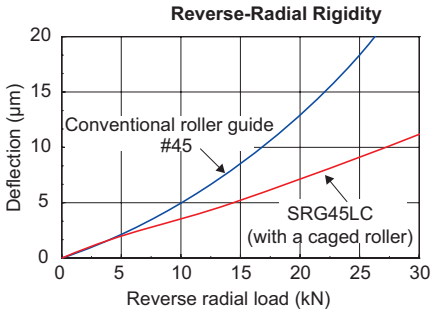
Radial Rigidity



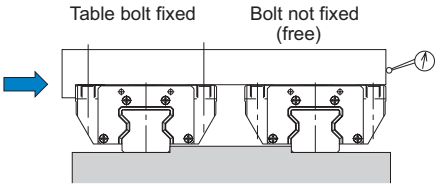


Reverse-Radial Rigidity

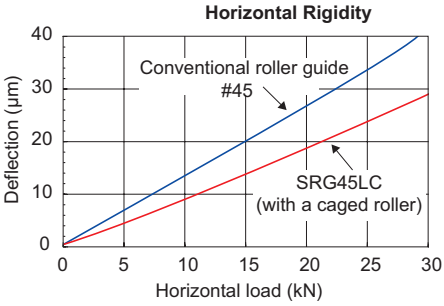




Horizontal Rigidity

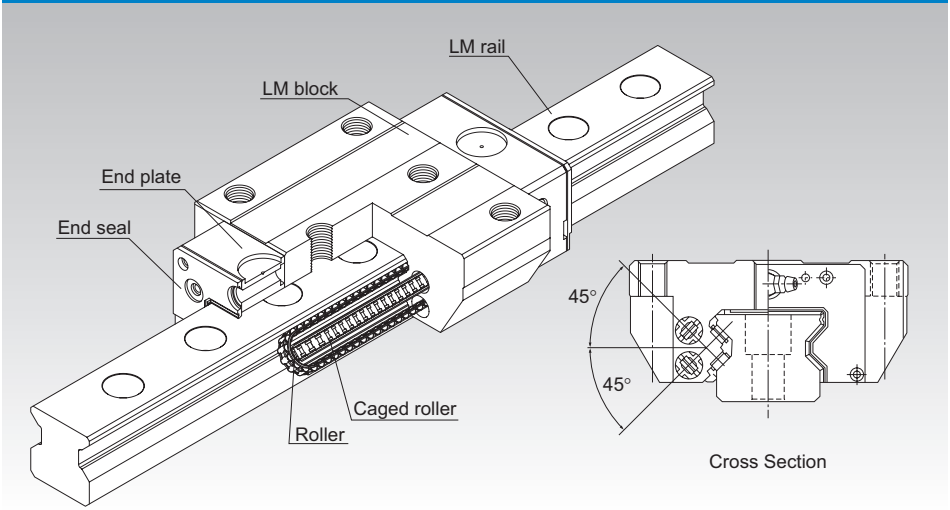


Rigidity is measured with the two axes placed in parallel and one of the axes not fixed with a bolt in order to not apply a moment.



SRG

Ultra-Rigid Caged Roller LM Guide Model SRG



Note: For the caged roller, see A1-446.

Selection Criteria	**A1-10**
Design Highlights	**A1-516**
Options	**A1-541**
Model No.	**A1-614**
Handling Precautions	**A1-620**
Accessories for Lubrication	**A24-1**
Mounting Procedure	**B1-91**

Equivalent Moment Factor	A1-45
Rated Loads in All Directions	A1-63
Equivalent Factor in Each Direction	A1-65
Radial Clearance	A1-77
Accuracy Standards	A1-81
Shoulder Height of the Mounting Base and the Corner Radius	A1-528
Reference Error Tolerance for the Mounting Surface	A1-455
Dimensions of Each Model with Options Attached	A1-555

Structure and Features

Rollers roll in four rows of raceways precision-ground on the LM rail and LM block, and roller cages and end plates incorporated in the LM block allow the balls to circulate.
The SRG is an ultra-rigid roller guide that uses roller cages to reduce friction, move smoothly, and achieve long-term maintenance-free operation.

Ultra-High Rigidity

Increased rigidity is achieved by using highly rigid rollers as the rolling elements and having the overall roller length more than 1.5 times greater than the roller diameter.

4-Way Equal Load

Since each row of rollers is arranged at a contact angle of 45° so that the LM block receives an equal load rating in all four directions (radial, reverse-radial, and lateral directions), high rigidity is ensured in all directions.

Smooth Motion through Skewing Prevention

The roller cage allows rollers to form an evenly spaced line while circulating, thus preventing the rollers from skewing as the block enters a loaded area. This minimizes rolling resistance fluctuation and achieves stable, smooth motion.

Long-Term Maintenance-Free Operation

Use of roller cages eliminates friction between rollers and increases grease retention, enabling long-term maintenance-free operation.

Global Standard Size

SRG is designed to have dimensions nearly equal to the Full-Ball LM Guide Model HSR, THK's pioneer LM System and the de facto global standard.

Wide Array of Options

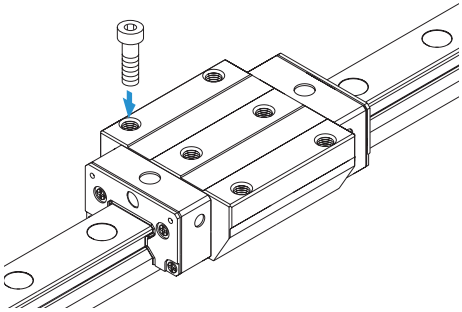
Various options are available, including end seals, inner seals, side seals, Laminated Contact Scraper LaCS, protectors, side scrapers, High Chemical Resistance Fluorine Seal FS, and GC caps, to accommodate various usage environments.

Types and Features

Models SRG15XA, 20XA

Dimensional Table⇒A1-456

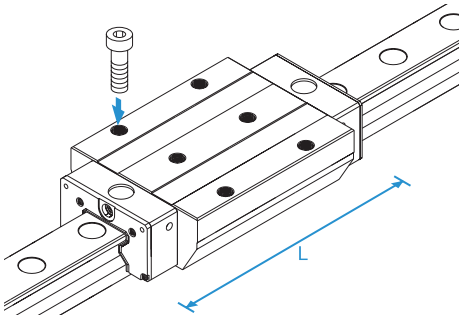
The flange of the LM block has tapped holes.
It can be mounted from the top or the bottom.



Model SRG20XLA

Dimensional Table⇒A1-456

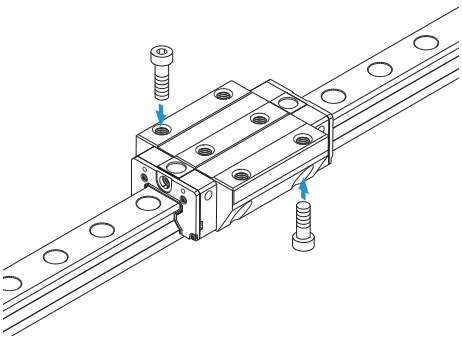
The LM block has the same cross-sectional shape as model SRG-A, but has a longer overall LM block length (L) and a greater load rating.



Model SRG-C

Dimensional Table⇒A1-456

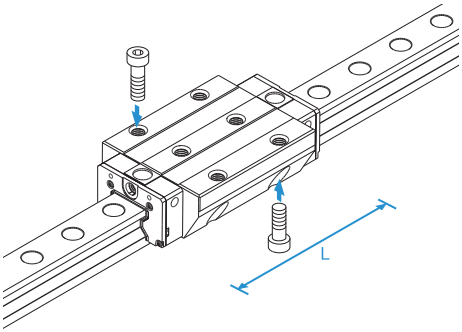
The flange of the LM block has tapped holes.
It can be mounted from the top or the bottom.
It is used in places where the table cannot have through holes for mounting bolts.



Model SRG-LC

Dimensional Table⇒A1-456

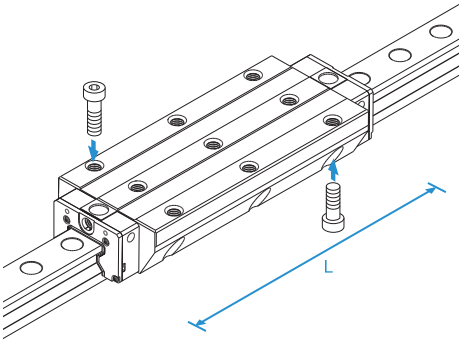
The LM block has the same cross-sectional shape as model SRG-C, but has a longer overall LM block length (L) and a greater load rating.



Model SRG-SLC

Dimensional Table⇒A1-458

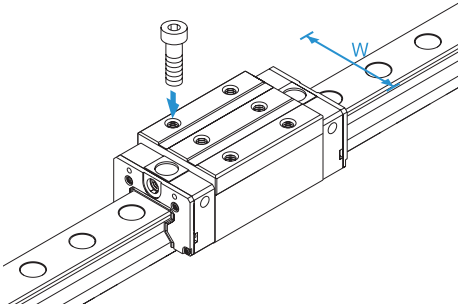
The LM block has the same cross-sectional shape as model SRG-LC, but has a longer overall LM block length (L) and a greater load rating.



Models SRG-V/R

Dimensional Table⇒A1-464

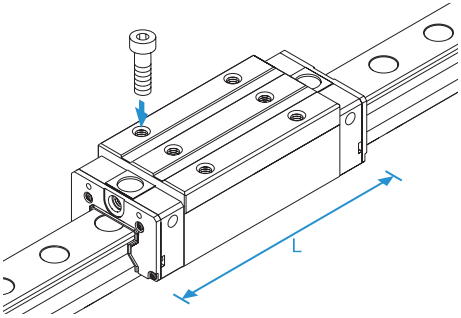
With this type, the LM block has a smaller width (W) and tapped holes.
It is used in places where the space for table width is limited.



Models SRG-LV/LR

Dimensional Table⇒A1-464

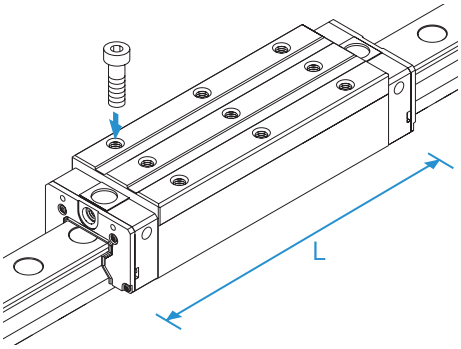
The LM block has the same cross-sectional shape as the Model SRG-V/R, but has a longer overall LM block length (L) and a greater load rating.



Models SRG-SLV/SLR

Dimensional Table⇒A1-466

The LM block has the same cross-sectional shape as the Model SRG-LV/LR, but has a longer overall LM block length (L) and a greater load rating.



SRG-G

Dimensional Table⇒A1-456 to A1-469

The SRG-G, a model equipped with uncaged, full-complement bearings, is also available. Due to its cageless design, however, the SRG-G's dynamic load rating is lower than that of standard SRG models. For specific data, please refer to the dimension tables in this catalog.

Reference Error Tolerance for the Mounting Surface

The Caged Roller LM Guide Model SRG features high rigidity because it uses rollers as its rolling element. It also contains a roller cage that prevents the rollers from skewing. However, high machining accuracy is required in the mounting surface. Large error on the mounting surface will affect the rolling resistance and the service life. The following shows the reference error tolerance according to the radial clearance.

Table 1: Reference Horizontal Error Tolerance (P) between Two Rails

Unit: μm

Radial clearance / Model No.	Normal	C1	C0
SRG 15X	5	3	3
SRG 20X	8	6	4
SRG 25X	9	7	5
SRG 30X	11	8	6
SRG 35	14	10	7
SRG 45	17	13	9
SRG 55	21	14	11
SRG 65	27	18	14
SRG 85	40	27	21
SRG 100	45	31	24

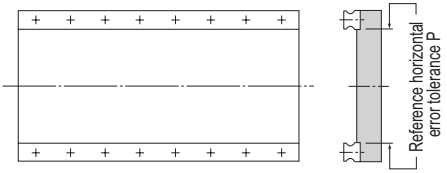


Fig. 1

Table 2: Reference Vertical Error Tolerance (X) between Two Rails

Unit: mm

Radial clearance	Normal	C1	C0
Reference vertical error tolerance X	0.0003a	0.00021a	0.00011a

$X = X_1 + X_2$ X_1 : Level difference on the rail mounting surface
X_2 : Level difference on the block mounting surface

Example of calculation

Rail span when a = 500 mm

Reference vertical error tolerance $X = 0.0003 \times 500 = 0.15$

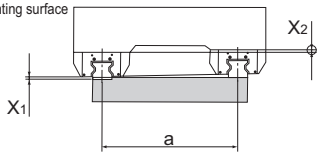


Fig. 2

Table 3: Reference Vertical Error Tolerance (Y) in the Axial Direction

Unit: mm

Reference vertical error tolerance Y	0.000036b

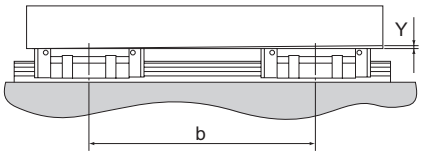
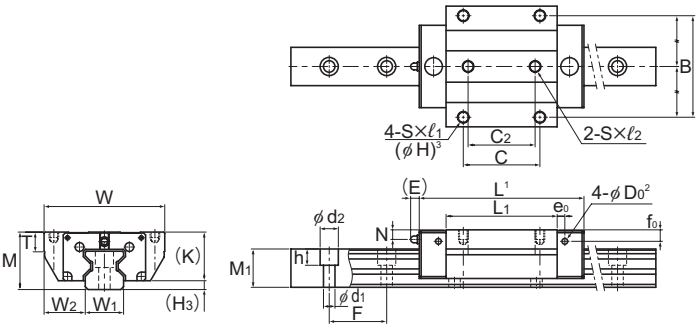


Fig. 3

Models SRG-A, SRG-LA, SRG-C, and SRG-LC



Models SRG15XA and 20X A/LA

Model No.	Outer dimensions			LM block dimensions													Pilot hole for side nipple		
	Height M	Width W	Length[1] L	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[2]
SRG 15XA SRG 15XGA	24	47	69.2	38	30	26	M5	(4.3)[3]	8	7.5	45	7	(8)[3]	20	4	4.5	PB107	4	6	2.9
SRG 20XA SRG 20XGA	30	63	86.2	53	40	35	M6	(5.4)[3]	10	9	58	10	(10)[3]	25.4	5	4.5	PB107	4	6	2.9
SRG 20XLA SRG 20XGLA	30	63	106.2	53	40	35	M6	(5.4)[3]	10	9	78	10	(10)[3]	25.4	5	4.5	PB107	4	6	2.9
SRG 25XC SRG 25XGC	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
SRG 25XLC SRG 25XGLC	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
SRG 30XC SRG 30XGC	42	90	111	72	52	44	M10	8.5	—	—	75	12	14	37	6.5	12	B-M6F	6	7.5	5.2
SRG 30XLC SRG 30XGLC	42	90	135	72	52	44	M10	8.5	—	—	99	12	14	37	6.5	12	B-M6F	6	7.5	5.2

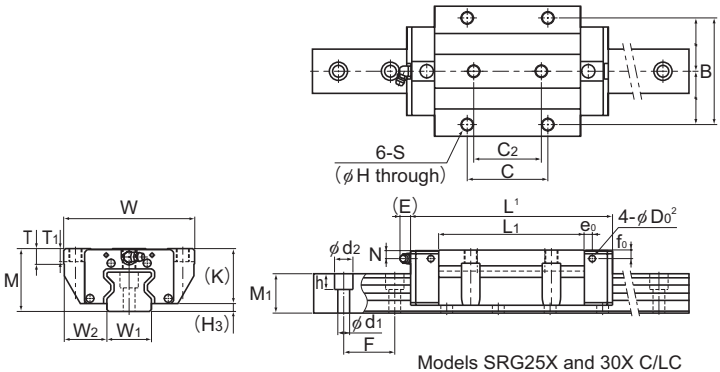
Model number coding

SRG30X LC 2 QZ TTHH C0 +1240L P Z T -II

- SRG30X: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- TTHH: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +1240L: LM rail length (in mm)
- P: Accuracy symbol — High Accuracy grade (H)/Precision grade (P), Super Precision grade (SP)/Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See **A1-584** for contamination protection accessories. See **A1-77** for radial clearance symbol. See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Models SRG25X and 30X C/LC

Unit: mm

		LM rail dimensions						Basic load rating[5]		Static permissible moment kN·m [6]						Mass	
		Width		Height	Pitch		Length[4]	C	C0	MA		MB		MC		LM block	LM rail
	H3	W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block		kg	kg/m
	4	15	16	15.5	30	4.5×7.5×5.3	3000	11.3 11.3	25.8 30.9	0.21 0.25	1.24 1.49	0.21 0.25	1.24 1.49	0.24 0.3		0.2	1.58
	4.6	20	21.5	20	30	6×9.5×8.5	3000	21 20.6	46.9 54.4	0.48 0.56	2.74 3.25	0.48 0.56	2.74 3.25	0.58 0.68		0.42	2.58
	4.6	20	21.5	20	30	6×9.5×8.5	3000	26.7 25.9	63.8 73.1	0.88 0.99	4.49 5.27	0.88 0.99	4.49 5.25	0.79 0.91		0.57	2.58
	4.5	23	23.5	23	30	7×11×9	3000	27.9 26.7	57.5 65	0.64 0.76	3.7 4.31	0.64 0.76	3.7 4.31	0.8 0.9		0.7	3.6
	4.5	23	23.5	23	30	7×11×9	3000	34.2 32.9	75 85	1.07 1.27	5.74 6.69	1.07 1.27	5.74 6.69	1.03 1.18		0.9	3.6
	5	28	31	26	40	9×14×12	3000	39.3 38.7	82.5 96.9	1.02 1.23	6.21 7.25	1.02 1.23	6.21 7.25	1.47 1.62		1.2	4.4
	5	28	31	26	40	9×14×12	3000	48.3 47.4	108 126	1.76 2.04	9.73 11.3	1.76 2.04	9.73 11.3	1.92 2.11		1.6	4.4

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The values in parentheses are the dimensions when SRG15XA, 20XA, or 20XLA are machined with an inverted counterbore. If the mounting holes (4 holes) of the LM block are machined with an inverted counterbore, these models can be mounted to the table from the bottom. Contact THK for details.

[4] The maximum length indicates the standard maximum length of an LM rail. (See **A1-470**.)

[5] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

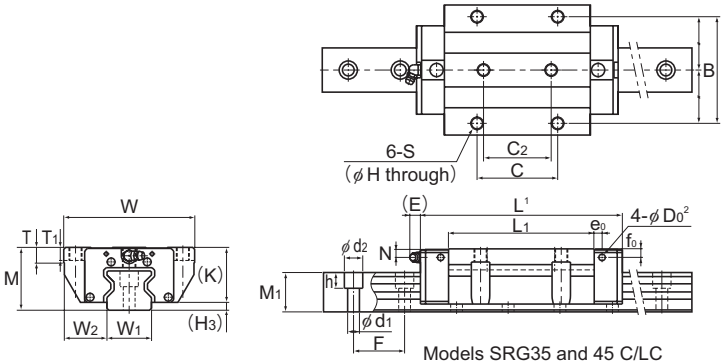
C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[6] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: The SRG-G is a cageless, Full-Roller type.
For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Models SRG-C, SRG-LC, and SRG-SLC



Models SRG35 and 45 C/LC

Model No.	Outer dimensions			LM block dimensions												Pilot hole for side nipple		
	Height	Width	Length[1]												Grease nipple			
	M	W	L	B	C	C_2	S	H	L_1	T	T_1	K	N	E		e_0	f_0	D_0[2]
SRG 35C SRG 35GC	48	100	125	82	62	52	M10	8.5	82.2	11.5	10	42	6.5	12	B-M6F	6	6	5.2
SRG 35LC SRG 35GLC	48	100	155	82	62	52	M10	8.5	112.2	11.5	10	42	6.5	12	B-M6F	6	6	5.2
SRG 35SLC SRG 35GSLC	48	100	180.8	82	100	—	M10	8.5	138	11.5	10	42	6.5	12	B-M6F	6	6	5.2
SRG 45C SRG 45GC	60	120	155	100	80	60	M12	10.5	107	14.5	15	52	10	16	B-PT1/8	7	7	5.2
SRG 45LC SRG 45GLC	60	120	190	100	80	60	M12	10.5	142	14.5	15	52	10	16	B-PT1/8	7	7	5.2
SRG 45SLC SRG 45GSLC	60	120	231.5	100	120	—	M12	10.5	183.5	14.5	15	52	10	16	B-PT1/8	7	7	5.2

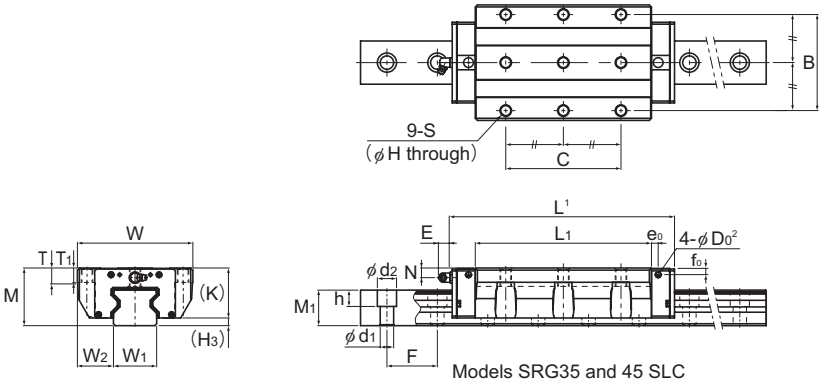
Model number coding

SRG45 LC 2 QZ TTHH C0 +1200L P Z T -II

- SRG45: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- TTHH: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol)/Light preload (C1), Medium preload (C0)/Heavy preload (CN1), Super heavy preload (CN2)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol — High Accuracy grade (H)/Precision grade (P), Super Precision grade (SP)/Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See **A1-584** for contamination protection accessories. See **A1-77** for radial clearance symbol. See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Models SRG35 and 45 SLC

Unit: mm

	H3	LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m [5]					Mass	
		Width W1 0 -0.05	W2	Height M1	Pitch F	d1×d2×h	Length[3] Max	C kN	C0 kN	MA 1 block	MA 2 blocks	MB 1 block	MB 2 blocks	MC 1 block	LM block kg	LM rail kg/m
	6	34	33	30	40	9×14×12	3000	59.1 55.3	119 131	1.66 1.77	10.1 11.1	1.66 1.77	10.1 11.1	2.39 2.69	1.9	6.9
	6	34	33	30	40	9×14×12	3000	76 71.4	165 182	3.13 3.39	17 18.8	3.13 3.39	17 18.8	3.31 3.74	2.4	6.9
	6	34	33	30	40	9×14×12	3000	87.9 83.4	199 222	4.53 5	23.9 26.6	4.53 5	23.9 26.6	4.09 4.56	3.2	6.9
	8	45	37.5	37	52.5	14×20×17	3090	91.9 87.8	192 216	3.49 3.9	20 22.5	3.49 3.9	20 22.5	4.98 5.87	3.7	11.6
	8	45	37.5	37	52.5	14×20×17	3090	115 110	256 288	6.13 6.87	32.2 36.3	6.13 6.87	32.2 36.3	6.64 7.83	4.5	11.6
	8	45	37.5	37	52.5	14×20×17	3090	139 133	328 368	9.99 11.1	50 56	9.99 11.1	50 56	8.91 10	6.3	11.6

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-470**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

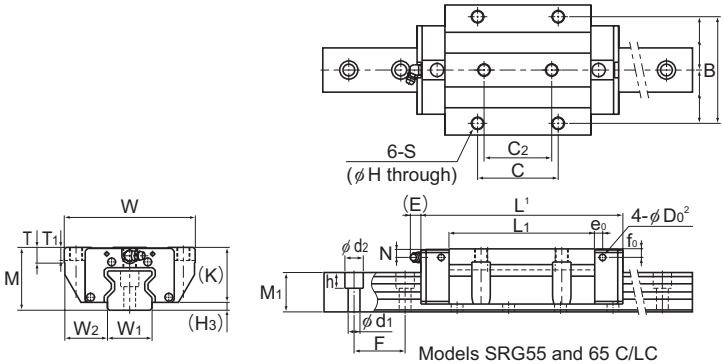
C50 : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: The SRG-G is a cageless, Full-Roller type.
For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Models SRG-C, SRG-LC, and SRG-SLC



Models SRG55 and 65 C/LC

Model No.	Outer dimensions			LM block dimensions												Pilot hole for side nipple		
	Height	Width	Length[1]												Grease nipple			
	M	W	L	B	C	C_2	S	H	L_1	T	T_1	K	N	E		e_0	f_0	D_0[2]
SRG 55C SRG 55GC	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
SRG 55LC SRG 55GLC	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
SRG 55SLC SRG 55GSLC	70	140	292	116	150	—	M14	12.5	236.2	17.5	18	60	12	16	B-PT1/8	9	8.5	5.2
SRG 65C SRG 65GC	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
SRG 65LC SRG 65GLC	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
SRG 65SLC SRG 65GSLC	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

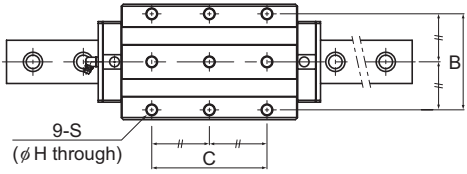
Model number coding

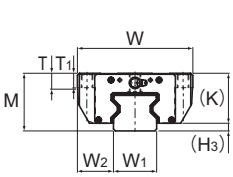
SRG65 LC 2 QZ TTHH C0 +1270L P Z T -II

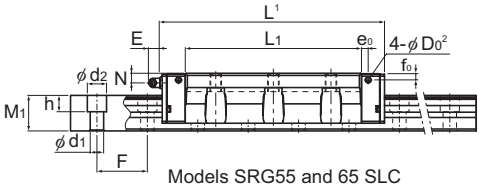
- SRG65: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- TTHH: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol)/Light preload (C1), Medium preload (C0)/Heavy preload (CN1), Super heavy preload (CN2)
- +1270L: LM rail length (in mm)
- P: Accuracy symbol — High Accuracy grade (H)/Precision grade (P), Super Precision grade (SP)/Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See A1-584 for contamination protection accessories. See A1-77 for radial clearance symbol. See A1-81 for accuracy symbol. See A1-13 for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/







Models SRG55 and 65 SLC

Unit: mm

		LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m [5]					Mass	
		Width		Height	Pitch		Length[3]	C	C_0	M_A		M_B		M_C	LM block	LM rail
	H_3	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
	10	53	43.5	43	60	16×23×20	3060	131 125	266 300	5.82 6.5	33 37.2	5.82 6.5	33 37.2	8.19 9.55	5.9	15.8
	10	53	43.5	43	60	16×23×20	3060	167 160	366 411	10.8 12.1	57 64	10.8 12.1	57 64	11.2 13.1	7.8	15.8
	10	53	43.5	43	60	16×23×20	3060	210 199	488 544	19.1 21	93.7 104	19.1 21	93.7 104	15.6 17.3	10.7	15.8
	11.5	63	53.5	54	75	18×26×22	3000	219 214	441 511	12.5 14.8	72.8 83.8	12.5 14.8	72.8 83.8	16.8 19.4	12.5	23.7
	11.5	63	53.5	54	75	18×26×22	3000	278 264	599 670	22.7 25.3	120 135	22.7 25.3	120 135	22.1 25.5	16.4	23.7
	11.5	63	53.5	54	75	18×26×22	3000	352 332	811 899	41.3 45.2	202 224	41.3 45.2	202 224	30.9 34.2	22.3	23.7

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-470**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

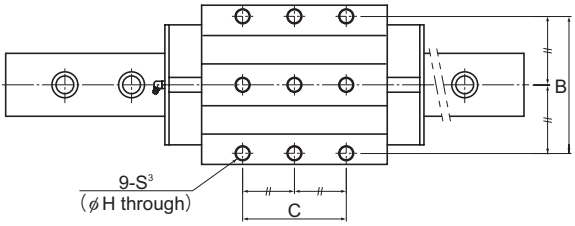
C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

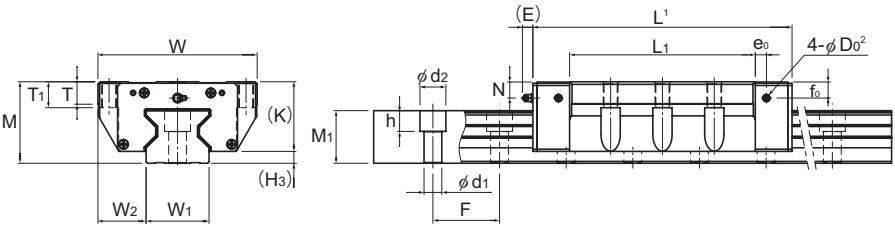
[5] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: The SRG-G is a cageless, Full-Roller type.
For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Model SRG-LC





Model SRG85LC

Model No.	Outer dimensions			LM block dimensions											Pilot hole for side nipple		
	Height M	Width W	Length[1] L	B	C	S	H	L_1	T	T_1	K	N	E	Grease nipple	e_0	f_0	D_0[2]
SRG 85LC	110	215	350	185	140	M20	17.8	250.8	30	35	94	22	16	B-PT1/8	15	22	8.2
SRG 100LC	120	250	395	220	200	M20	17.8	280.2	35	38	104	23	16	B-PT1/4	15	23	8.2

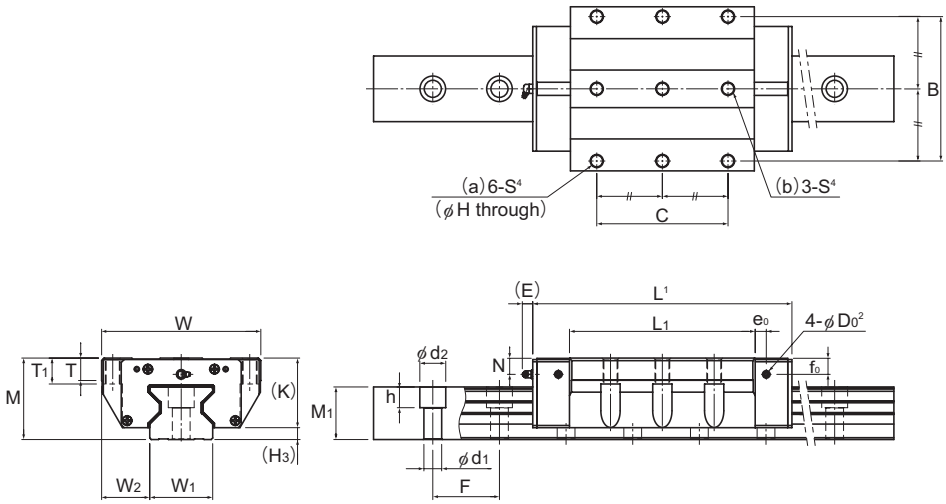
Model number coding

SRG85 LC 2 TT C0 +2610L P Z T -II

- SRG85: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- TT: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +2610L: LM rail length (in mm)
- P: Accuracy symbol — Precision grade (P)/Super Precision grade (SP), Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See A1-584 for contamination protection accessories. See A1-77 for radial clearance symbol. See A1-81 for accuracy symbol. See A1-13 for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Model SRG100LC

Unit: mm

		LM rail dimensions						Basic load rating[6]		Static permissible moment kN·m[7]					Mass	
		Width		Height	Pitch		Length[5]	C	C₀	M_A		M_B		M_C	LM block	LM rail
	H_3	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
	16	85	65	71	90	24×35×28	3000	497	990	45.3	239	45.3	239	51.9	26.2	35.7
	16	100	75	77	105	26×39×32	3000	601	1170	60	319	60	319	72.3	37.6	46.8

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The LM block mounting holes (9 holes) of SRG85LC are all through holes (full thread).

[4] The LM block mounting holes in part (a) (6 holes) of SRG100LC are through holes (full thread).
The LM block mounting holes in part (b) (3 holes) have effective thread depth of 22 mm.

[5] The maximum length indicates the standard maximum length of an LM rail. (See **A1-470**.)

[6] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

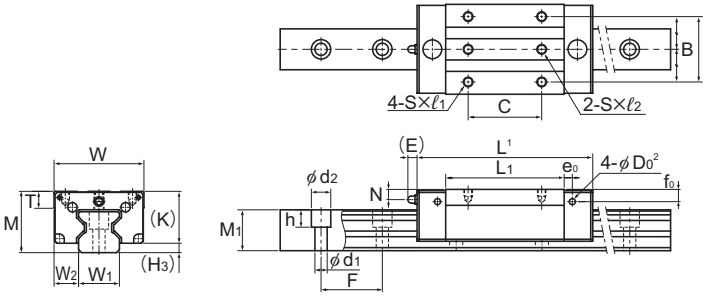
C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[7] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached. (Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Models SRG-V, SRG-LV, SRG-R, and SRG-LR



Models SRG15XV and 20X V/LV

Model No.	Outer dimensions			LM block dimensions											Pilot hole for side nipple		
	Height M	Width W	Length[1] L	B	C	S	ℓ	ℓ1	ℓ2	L1	T	K	N	E	Grease nipple	e0	f0	D0[2]
SRG 15XV SRG 15XGV	24	34	69.2	26	26	M4	—	5	7.5	45	6	20	4	4.5	PB107	4	6	2.9
SRG 20XV SRG 20XGV	30	44	86.2	32	36	M5	—	7	9	58	8	25.4	5	4.5	PB107	4	6	2.9
SRG 20XLV SRG 20XGLV	30	44	106.2	32	50	M5	—	7	9	78	8	25.4	5	4.5	PB107	4	6	2.9
SRG 25XR SRG 25XGR	40	48	95.1	35	35	M6	9	—	—	65.5	9.5	35.5	9.5	12	B-M6F	6	11.3	5.2
SRG 25XLR SRG 25XGLR	40	48	115.1	35	50	M6	9	—	—	85.5	9.5	35.5	9.5	12	B-M6F	6	11.3	5.2
SRG 30XR SRG 30XGR	45	60	111	40	40	M8	10	—	—	75	12	40	9.5	12	B-M6F	6	10.5	5.2
SRG 30XLR SRG 30XGLR	45	60	135	40	60	M8	10	—	—	99	12	40	9.5	12	B-M6F	6	10.5	5.2

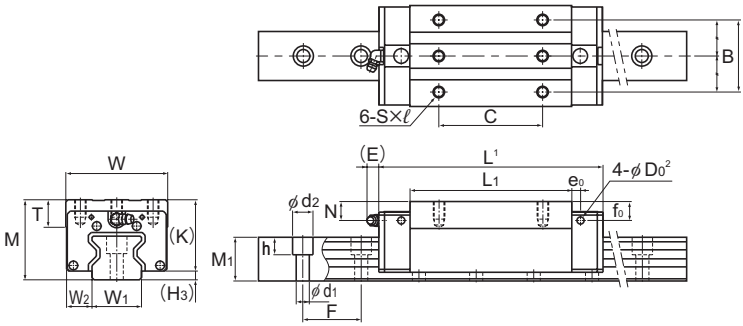
Model number coding

SRG30X LR 2 QZ TTHH C0 +1240L P Z T -II

- SRG30X: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- TTHH: Contamination protection accessory symbol
- C0: Radial clearance symbol
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1240L: LM rail length (in mm)
- P: Accuracy symbol
  - High Accuracy grade (H)/Precision grade (P)
  - Super Precision grade (SP)/Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See **A1-584** for contamination protection accessories. See **A1-77** for radial clearance symbol. See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Models SRG25X and 30X R/LR

Unit: mm

		LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m [5]					Mass	
		Width		Height	Pitch		Length[3]	C	C_0	M_A		M_B		M_C	LM block	LM rail
	H_3	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
	4	15	9.5	15.5	30	4.5×7.5×5.3	3000	11.3 11.3	25.8 30.9	0.21 0.25	1.24 1.49	0.21 0.25	1.24 1.49	0.24 0.3	0.15	1.58
	4.6	20	12	20	30	6×9.5×8.5	3000	21 20.6	46.9 54.4	0.48 0.56	2.74 3.25	0.48 0.56	2.74 3.25	0.58 0.68	0.28	2.58
	4.6	20	12	20	30	6×9.5×8.5	3000	26.7 25.9	63.8 73.1	0.88 0.99	4.49 5.27	0.88 0.99	4.49 5.25	0.79 0.91	0.38	2.58
	4.5	23	12.5	23	30	7×11×9	3000	27.9 26.7	57.5 65	0.64 0.76	3.7 4.31	0.64 0.76	3.7 4.31	0.8 0.9	0.6	3.6
	4.5	23	12.5	23	30	7×11×9	3000	34.2 32.9	75 85	1.07 1.27	5.74 6.69	1.07 1.27	5.74 6.69	1.03 1.18	0.8	3.6
	5	28	16	26	40	9×14×12	3000	39.3 38.7	82.5 96.9	1.02 1.23	6.21 7.25	1.02 1.23	6.21 7.25	1.47 1.62	0.9	4.4
	5	28	16	26	40	9×14×12	3000	48.3 47.4	108 126	1.76 2.04	9.73 11.3	1.76 2.04	9.73 11.3	1.92 2.11	1.2	4.4

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-470**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

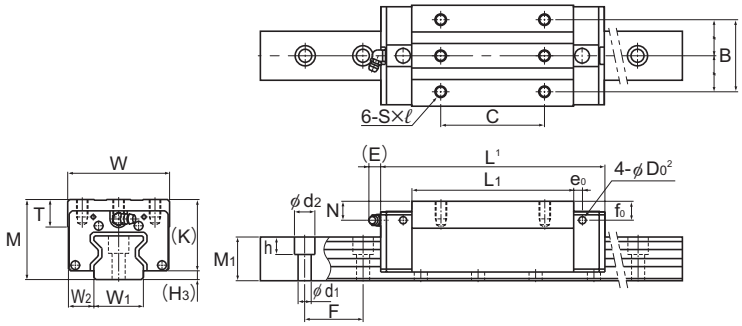
C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: The SRG-G is a cageless, Full-Roller type.
For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Models SRG-R, SRG-LR, and SRG-SLR



Models SRG35 and 45 R/LR

Model No.	Outer dimensions			LM block dimensions										Pilot hole for side nipple		
	Height	Width	Length[1]										Grease nipple			
	M	W	L	B	C	S	ℓ	L_1	T	K	N	E		e_0	f_0	D_0[2]
SRG 35R SRG 35GR	55	70	125	50	50	M8	12	82.2	18.5	49	13.5	12	B-M6F	6	13	5.2
SRG 35LR SRG 35GLR	55	70	155	50	72	M8	12	112.2	18.5	49	13.5	12	B-M6F	6	13	5.2
SRG 35SLR SRG 35GSLR	55	70	180.8	50	100	M8	12	138	18.5	49	13.5	12	B-M6F	6	13	5.2
SRG 45R SRG 45GR	70	86	155	60	60	M10	20	107	24.5	62	20	16	B-PT1/8	7	17	5.2
SRG 45LR SRG 45GLR	70	86	190	60	80	M10	20	142	24.5	62	20	16	B-PT1/8	7	17	5.2
SRG 45SLR SRG 45GSLR	70	86	231.5	60	120	M10	20	183.5	24.5	62	20	16	B-PT1/8	7	17	5.2

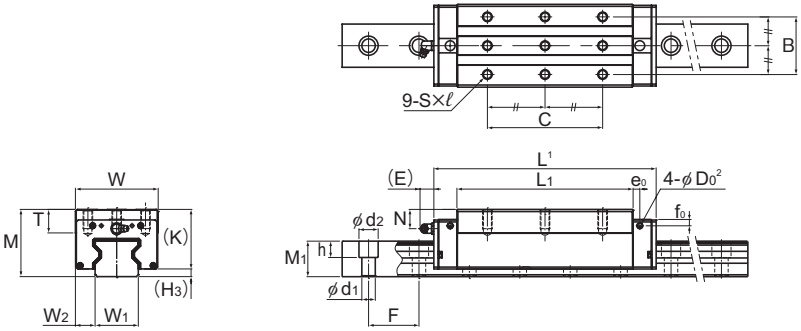
Model number coding

SRG45 LR 2 QZ TTHH C0 +1200L P Z T -II

- SRG45: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- TTHH: Contamination protection accessory symbol
- C0: Radial clearance symbol
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol
  High Accuracy grade (H)/Precision grade (P)
  Super Precision grade (SP)/Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See **A1-584** for contamination protection accessories. See **A1-77** for radial clearance symbol. See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

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Models SRG35 and 45 SLR

Unit: mm

		LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m [5]						Mass	
		Width		Height	Pitch		Length[3]	C	C_0	M_A		M_B		M_C		LM block	LM rail
	H_3	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block		kg	kg/m
	6	34	18	30	40	9×14×12	3000	59.1 55.3	119 131	1.66 1.77	10.1 11.1	1.66 1.77	10.1 11.1	2.39 2.69		1.6	6.9
	6	34	18	30	40	9×14×12	3000	76 71.4	165 182	3.13 3.39	17 18.8	3.13 3.39	17 18.8	3.31 3.74		2.1	6.9
	6	34	18	30	40	9×14×12	3000	87.9 83.4	199 222	4.53 5	23.9 26.6	4.53 5	23.9 26.6	4.09 4.56		2.6	6.9
	8	45	20.5	37	52.5	14×20×17	3090	91.9 87.8	192 216	3.49 3.9	20 22.5	3.49 3.9	20 22.5	4.98 5.87		3.2	11.6
	8	45	20.5	37	52.5	14×20×17	3090	115 110	256 288	6.13 6.87	32.2 36.3	6.13 6.87	32.2 36.3	6.64 7.83		4.1	11.6
	8	45	20.5	37	52.5	14×20×17	3090	139 133	328 368	9.99 11.1	50 56	9.99 11.1	50 56	8.91 10		5.4	11.6

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-470**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

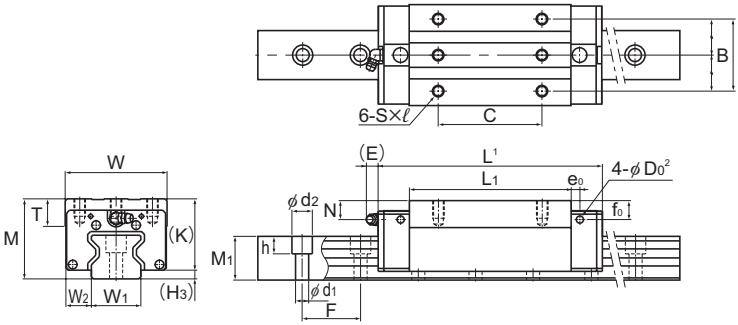
C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: The SRG-G is a cageless, Full-Roller type.
For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Models SRG-V, SRG-LV, SRG-SLV, SRG-R, SRG-LR, and SRG-SLR



Models SRG55R/LR and 65V/LV

Model No.	Outer dimensions			LM block dimensions									Grease nipple	Pilot hole for side nipple		
	Height M	Width W	Length[1] L	B	C	S	ℓ	L_1	T	K	N	E		e_0	f_0	D_0[2]
SRG 55R SRG 55GR	80	100	185	75	75	M12	18	129.2	27.5	70	22	16	B-PT1/8	9	18.5	5.2
SRG 55LR SRG 55GLR	80	100	235	75	95	M12	18	179.2	27.5	70	22	16	B-PT1/8	9	18.5	5.2
SRG 55SLR SRG 55GSLR	80	100	292	75	150	M12	18	236.2	27.5	70	22	16	B-PT1/8	9	18.5	5.2
SRG 65V SRG 65GV	90	126	244.9	76	70	M16	20	171.7	19.5	78.5	17	16	B-PT1/8	9	13.5	5.2
SRG 65LV SRG 65GLV	90	126	303	76	120	M16	20	229.8	19.5	78.5	17	16	B-PT1/8	9	13.5	5.2
SRG 65SLV SRG 65GSLV	90	126	380	76	200	M16	20	306.8	19.5	78.5	17	16	B-PT1/8	9	13.5	5.2

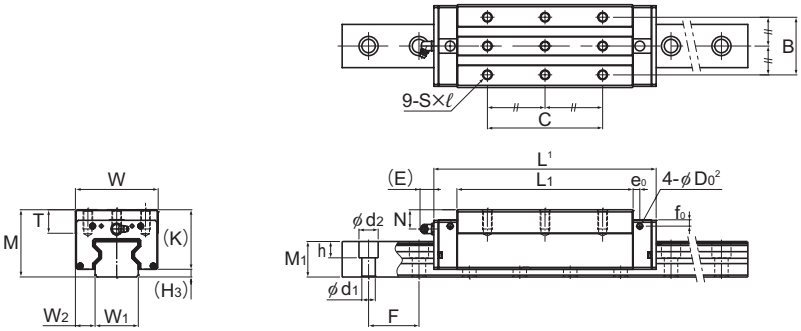
Model number coding

SRG65 LV 2 QZ TTHH C0 +1270L P Z T -II

- SRG65: Model number
- LV: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- TTHH: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +1270L: LM rail length (in mm)
- P: Accuracy symbol — High Accuracy grade (H)/Precision grade (P), Super Precision grade (SP)/Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See **A1-584** for contamination protection accessories. See **A1-77** for radial clearance symbol. See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

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Models SRG55SLR and 65SLV

Unit: mm

		LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m [5]						Mass	
		Width		Height	Pitch		Length[3]	C	C0	MA		MB		MC		LM block	LM rail
	H3	W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block		kg	kg/m
	10	53	23.5	43	60	16×23×20	3060	131 125	266 300	5.82 6.5	33 37.2	5.82 6.5	33 37.2	8.19 9.55		5	15.8
	10	53	23.5	43	60	16×23×20	3060	167 160	366 411	10.8 12.1	57 64	10.8 12.1	57 64	11.2 13.1		6.9	15.8
	10	53	23.5	43	60	16×23×20	3060	210 199	488 544	19.1 21	93.7 104	19.1 21	93.7 104	15.6 17.3		9.2	15.8
	11.5	63	31.5	54	75	18×26×22	3000	219 214	441 511	12.5 14.8	72.8 83.8	12.5 14.8	72.8 83.8	16.8 19.4		9	23.7
	11.5	63	31.5	54	75	18×26×22	3000	278 264	599 670	22.7 25.3	120 135	22.7 25.3	120 135	22.1 25.5		12.1	23.7
	11.5	63	31.5	54	75	18×26×22	3000	352 332	811 899	41.3 45.2	202 224	41.3 45.2	202 224	30.9 34.2		16.1	23.7

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-470**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: The SRG-G is a cageless, Full-Roller type.
For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Standard Lengths and Maximum Lengths of LM Rails

Table 4 shows the standard lengths and the maximum lengths of model SRG variations. If the maximum length of the desired LM rail exceeds these values, jointed rails will be used. Contact THK for details.
For special rail lengths, it is recommended to use a value corresponding to the G and g dimensions from the table. As the G and g dimensions increase, this portion becomes less stable, and the accuracy performance is severely impacted.

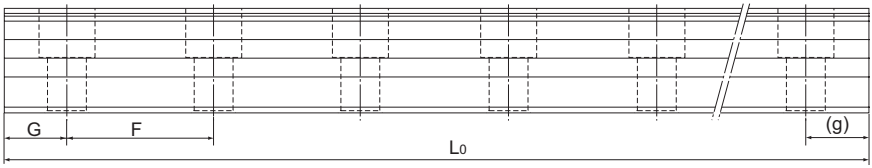


Table 4: Standard Lengths and Maximum Lengths of LM Rails for Model SRG

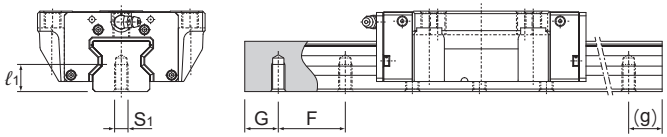
Unit: mm

Model No.	SRG 15X	SRG 20X	SRG 25X	SRG 30X	SRG 35	SRG 45	SRG 55	SRG 65	SRG 85	SRG 100
LM rail standard lengths (L_o)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600 1720 1840 1960 2080 2200	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1720 1840 1960 2080 2200 2320 2440	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620	1530 1890 2250 2610	1340 1760 2180 2600
Standard pitch F	30	30	30	40	40	52.5	60	75	90	105
G, g	20	20	20	20	20	22.5	30	35	45	40
Max length	3000	3000	3000	3000	3000	3090	3060	3000	3000	3000

Notes: The maximum length varies with accuracy grades. Contact THK for details.
If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

Tapped-Hole Type LM Rail

Model SRG rails also include a type where the LM rail is tapped from the bottom. This type is useful when mounting from the bottom of the base and when increased contamination protection is desired.



(1) A tapped-hole LM rail is available only for products of Precision grade accuracy or lower.
(2) For standard pitches of the taps and the G and g dimensions, see **A1-470** on Table 4.

Table 5: Dimensions of the LM Rail Tap

Unit: mm

Model No.	S_1	Effective tap depth ℓ_1
SRG 15X	M4	8
SRG 20X	M5	10
SRG 25X	M6	12
SRG 30X	M8	16
SRG 35	M8	16
SRG 45	M12	24
SRG 55	M14	28
SRG 65	M16	32

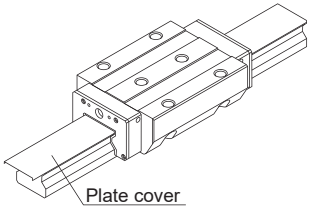
Model number coding

SRG30XC2UU+1000LP K

Symbol for tapped-hole LM rail

Plate Cover

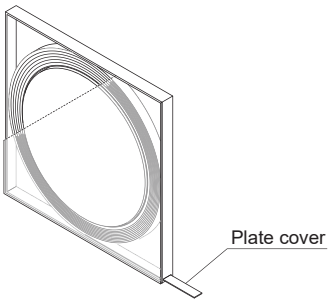
By covering the LM rail's mounting holes with ultra-thin stainless steel (SUS304) plates, the adhesion of the end seals increases drastically, helping prevent foreign materials and liquid from entering from the top of the LM rail. Contact THK for further details regarding mounting.



Notes: The plate cover is not a standard specification for Model SRG. (Please note it is not possible to add just the plate cover afterwards.)
The LM block must be removed from the LM rail when mounting. When doing this, a removing/mounting jig (see **A1-611**) is required. Please contact THK for details.
Plate covers cannot be used in combination with a tapped-hole LM rail.

● Plate Cover Roll

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



Model number coding

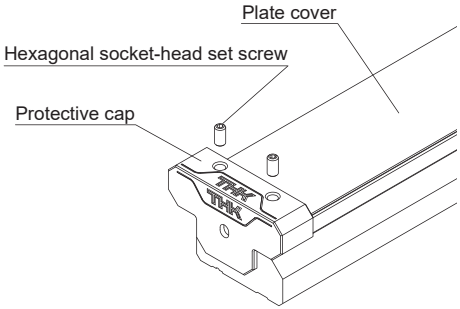
WPC35 - 90M

Model number Length

Notes: This option is only available for models SRG25X to 65.
Please order protective caps separately.

● 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.



Model number coding

WPC-PT 35

Model number

Note: This option is only available for models SRG25X to 65.

● 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.

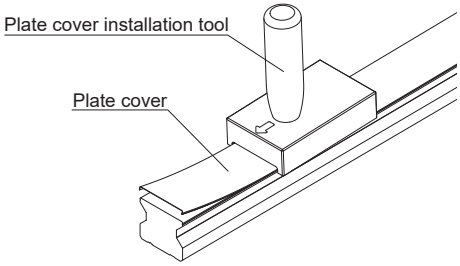


Plate Cover Installation Tool Compatibility

Model No.	Model No.
SRG25X, SRG30X, SRG35	WPC-AT25/30/35
SRG45, SRG55, SRG65	WPC-AT45/55/65

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

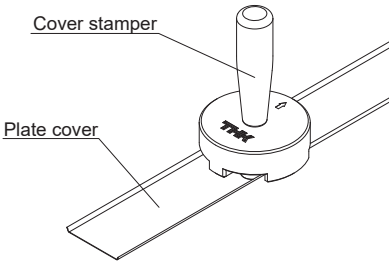
Model number coding

WPC-AT 15/20

Model number

● Cover Stamper

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



Cover Stamper Compatibility

Model No.	Model No.
SRG25X	WPC-ST25
SRG30X	WPC-ST30
SRG35	WPC-ST35
SRG45	WPC-ST45
SRG55	WPC-ST55
SRG65	WPC-ST65

Note: Please order the plate cover installation tool separately.

Model number coding

WPC-ST 30

Model number

Lubrication Hole

Lubrication Hole for Model SRG

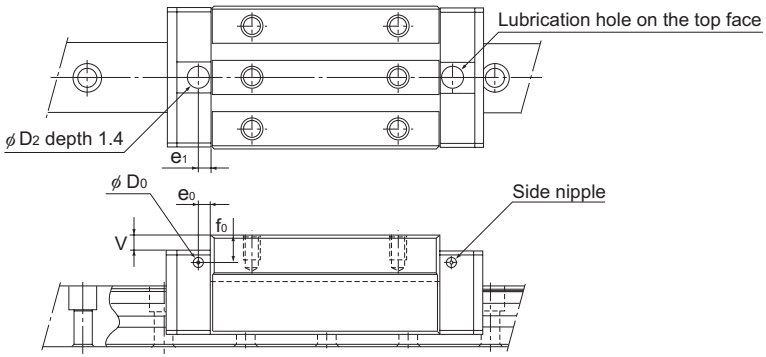
Model SRG allows lubrication from both the side and top faces of the LM block. The lubrication hole of standard types is not drilled through in order to prevent foreign material from entering the LM block. When using the lubrication hole, contact THK.

When using the lubrication hole on the top face of models SRG-R/LR/SLR, a separate lubrication adapter is required. Contact THK for details.

The lubricant may not reach the raceway if the LM Guide is not installed in a horizontal orientation.

Be sure to let THK know the mounting orientation and the exact position in each LM block where the grease nipple or the piping joint should be attached.

For the mounting orientation and the lubrication, see A1-12 and A24-2, respectively.



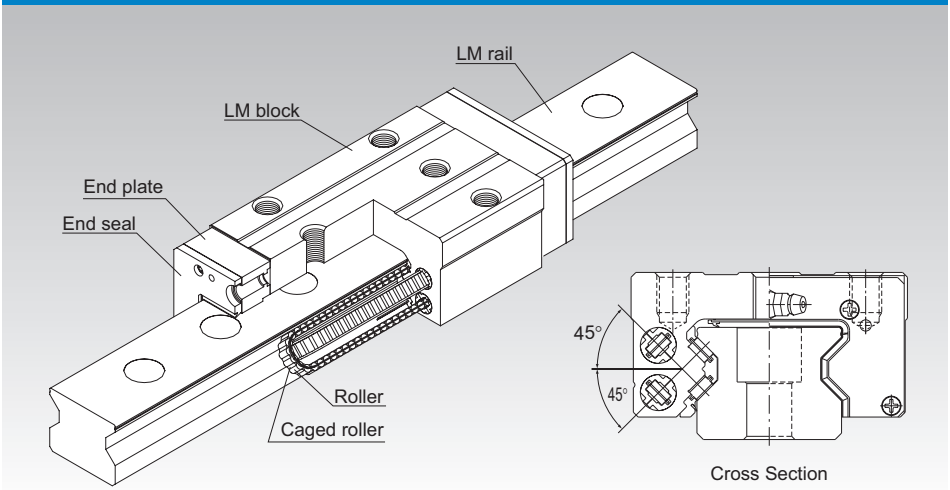
Unit: mm

Model No.		Pilot hole for side nipple			Applicable nipple	Lubrication hole on the top face			
		e_0	f_0	D_0		D_2	(O-ring)	V	e_1
SRG	15XA 15XV	4	6	2.9	PB107	9.2	(P6)	0.4	5.5
	20XA 20XLA	4	6	2.9	PB107	9.2	(P6)	0.4	6.5
	20XV 20XLV	4	6	2.9	PB107	9.2	(P6)	0.4	6.5
	25XC 25XLC	6	7.3	5.2	M6F	10.2	(P7)	0.4	6
	25XR 25XLR	6	11.3	5.2	M6F	10.2	(P7)	4.5	6
	30XC 30XLC	6	7.5	5.2	M6F	10.2	(P7)	0.4	6
	30XR 30XLR	6	10.5	5.2	M6F	10.2	(P7)	3.4	6
	35C 35LC 35SLC	6	6	5.2	M6F	10.2	(P7)	0.4	6
	35R 35LR 35SLR	6	13	5.2	M6F	10.2	(P7)	7.4	6
	45C 45LC 45SLC	7	7	5.2	M6F	10.2	(P7)	0.4	7
	45R 45LR 45SLR	7	17	5.2	M6F	10.2	(P7)	10.4	7
	55C 55LC 55SLC	9	8.5	5.2	M6F	10.2	(P7)	0.4	11
	55R 55LR 55SLR	9	18.5	5.2	M6F	10.2	(P7)	10.4	11
	65C 65LC 65SLC	9	13.5	5.2	M6F	10.2	(P7)	0.4	10
	65V 65LV 65SLV	9	13.5	5.2	M6F	10.2	(P7)	0.4	10
	85LC	15	22	8.2	PT1/8	13	(P10)	0.4	10
	100LC	15	23	8.2	PT1/8	13	(P10)	0.4	10

Note: Upper surface lubrication is oil lubrication only. Contact THK if you are considering using the lubrication hole on the top face for grease lubrication.

SRN

Ultra-Rigid, Low-Profile Caged Roller LM Guide Model SRN



Note: For the caged roller, see A1-446.

Selection Criteria A1-10
Design Highlights A1-516
Options A1-541
Model No. A1-614
Handling Precautions A1-620
Accessories for Lubrication A24-1
Mounting Procedure B1-91

Equivalent Moment Factor A1-45
Rated Loads in All Directions A1-63
Equivalent Factor in Each Direction A1-65
Radial Clearance A1-77
Accuracy Standards A1-81
Shoulder Height of the Mounting Base and the Corner Radius A1-528
Reference Error Tolerance for the Mounting Surface A1-480
Dimensions of Each Model with Options Attached A1-555

Structure and Features

Rollers roll in four rows of raceways precision-ground on the LM rail and LM block, and roller cages and end plates incorporated in the LM block allow the balls to circulate.
The SRN is an ultra-rigid roller guide that uses roller cages to allow low-friction, smooth motion and achieve long-term maintenance-free operation.

Ultra-High Rigidity

Increased rigidity is achieved by using highly rigid rollers as the rolling elements and having the overall roller length more than 1.5 times greater than the roller diameter.

4-Way Equal Load

Each row of rollers is arranged at a 45° contact angle so the LM block will have an equal load rating in all directions: radial, reverse-radial, and horizontal. This ensures high rigidity in all directions.

Smooth Motion through Skewing Prevention

The roller cage allows rollers to form an evenly spaced line while circulating, thus preventing the rollers from skewing as the block enters a loaded area. This minimizes rolling resistance fluctuation and achieves stable, smooth motion.

Long-Term Maintenance-Free Operation

Use of roller cages eliminates friction between rollers and increases grease retention, enabling long-term maintenance-free operation to be achieved.

Low-Profile, Low Center of Gravity

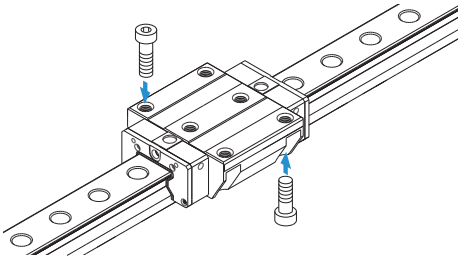
Because it has a lower total height than the Caged Roller LM Guide Model SRG, it is ideal for compact designs.

Types and Features

Model SRN-C

Dimensional Table⇒A1-482

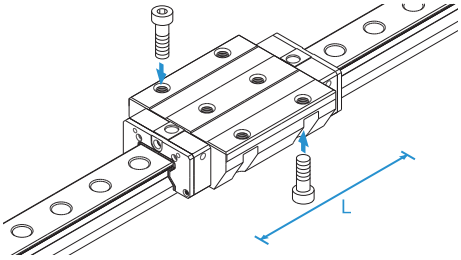
The flange of the LM block has tapped holes.
It can be mounted from the top or the bottom.
It is used in places where the table cannot have through holes for mounting bolts.



Model SRN-LC

Dimensional Table⇒A1-482

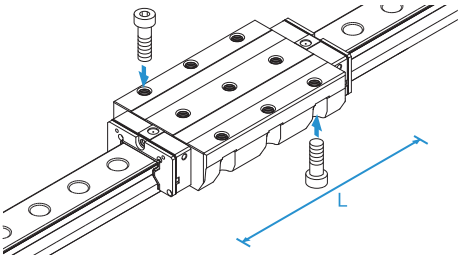
The LM block has the same cross-sectional shape as model SRN-C, but has a longer overall LM block length (L) and a greater load rating.



Model SRN-SLC

Dimensional Table⇒A1-482

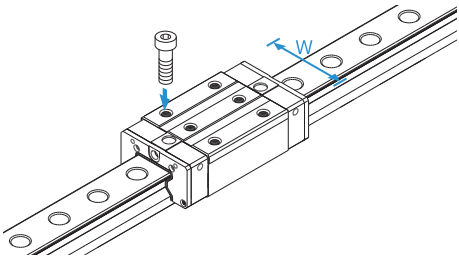
The LM block has the same cross-sectional shape as model SRN-LC, but has a longer overall LM block length (L) and a greater load rating.



Model SRN-R

Dimensional Table⇒A1-486

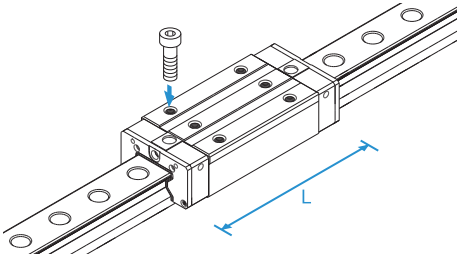
With this type, the LM block has a smaller width (W) and tapped holes.
It is used in places where the space for table width is limited.



Model SRN-LR

Dimensional Table⇒A1-486

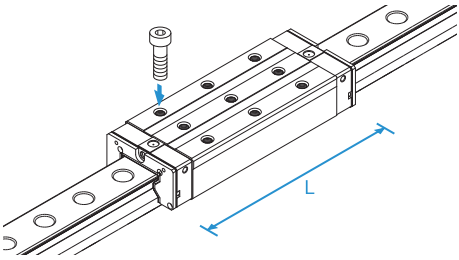
The LM block has the same cross-sectional shape as model SRN-R, but has a longer overall LM block length (L) and a greater load rating.



Model SRN-SLR

Dimensional Table⇒A1-486

The LM block has the same cross-sectional shape as model SRN-LR, but has a longer overall LM block length (L) and a greater load rating.



SRN-G

Dimensional Table⇒A1-482 to A1-489

The SRN-G, a model equipped with uncaged, full-complement bearings, is also available. Due to its cageless design, however, the SRN-G's dynamic load rating is lower than that of standard SRN models. For specific data, please refer to the dimension tables in this catalog.

Reference Error Tolerance for the Mounting Surface

The Caged Roller LM Guide Model SRN features high rigidity because it uses rollers as its rolling element, and it also features a roller cage, which prevents the rollers from skewing. However, high machining accuracy is required in the mounting surface. If the error on the mounting surface is large, it will affect the rolling resistance and the service life. The following shows the reference error tolerance according to the radial clearance.

Table 1: Reference Horizontal Error Tolerance (P) between Two Rails

Unit: μm

Radial clearance / Model No.	Normal	C1	C0
SRN 35	14	10	7
SRN 45	17	13	9
SRN 55	21	14	11
SRN 65	27	18	14

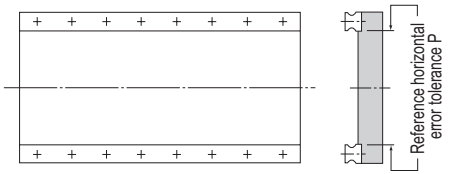


Fig. 1

Table 2: Reference Vertical Error Tolerance (X) between Two Rails

Unit: mm

Radial clearance	Normal	C1	C0
Reference vertical error tolerance X	0.0003a	0.00021a	0.00011a

$X = X_1 + X_2$ X_1 : Level difference on the rail mounting surface

X_2 : Level difference on the block mounting surface

Example of calculation

Rail span when a = 500 mm

Reference vertical error tolerance $X = 0.0003 \times 500 = 0.15$

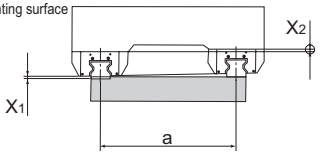


Fig. 2

Table 3: Reference Vertical Error Tolerance (Y) in the Axial Direction

Unit: mm

Reference vertical error tolerance Y	0.000036b

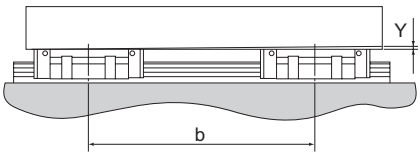
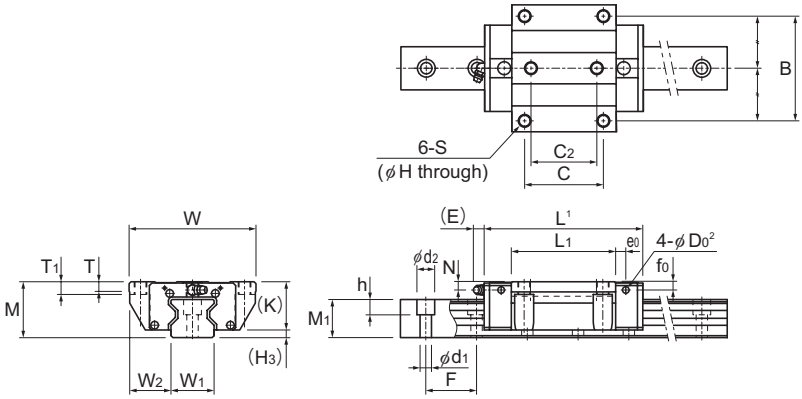


Fig. 3

Models SRN-C, SRN-LC, and SRN-SLC



Models SRN35 and 45 C/LC

Model No.	Outer dimensions			LM block dimensions												Pilot hole for side nipple			
	Height M	Width W	Length[1] L	B	C	C_2	S	H	L_1	T	T_1	K	N	E	Grease nipple	e_0	f_0	D_0^2	H_3
SRN 35C SRN 35GC	44	100	125	82	62	52	M10	8.5	82.2	11.6	10	38	6.5	12	B-M6F	8	7	5.2	6
SRN 35LC SRN 35GLC	44	100	155	82	62	52	M10	8.5	112.2	11.6	10	38	6.5	12	B-M6F	8	7	5.2	6
SRN 35SLC SRN 35GSLC	44	100	180.8	82	100	—	M10	8.5	138	11.7	10	38	6.5	12	B-M6F	8	7	5.2	6
SRN 45C SRN 45GC	52	120	155	100	80	60	M12	10.5	107	16.5	15	45	7	12	B-M6F	8.5	7.6	5.2	7
SRN 45LC SRN 45GLC	52	120	190	100	80	60	M12	10.5	142	16.5	15	45	7	12	B-M6F	8.5	7.6	5.2	7
SRN 45SLC SRN 45GSLC	52	120	231.5	100	120	—	M12	10.5	183.5	16.5	15	45	7	12	B-M6F	8.5	7.6	5.2	7

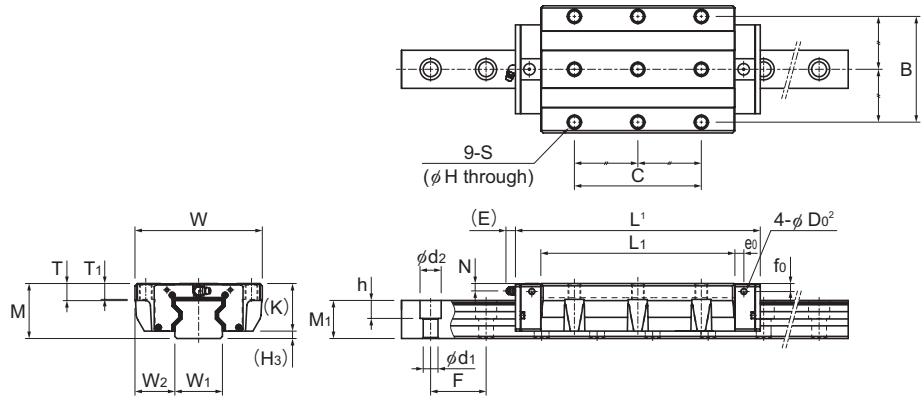
Model number coding

SRN45 C 2 QZ KK C0 +1200L P Z T -II

- SRN45: Model number
- C: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ lubricator
- KK: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol)/Light preload (C1), Medium preload (C0)/Heavy preload (CN1), Super heavy preload (CN2)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol — High Accuracy grade (H)/Precision grade (P), Super Precision grade (SP)/Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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. See **A1-584** for contamination protection accessories. See **A1-77** for radial clearance symbol, See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Models SRN35 and 45 SLC

Unit: mm

LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m [5]					Mass	
Width		Height	Pitch		Length[3]	C	C_0	M_A		M_B		M_C	LM block	LM rail
W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
34	33	30	40	9×14×12	3000	59.1 55.3	119 131	1.66 1.77	10.1 11.1	1.66 1.77	10.1 11.1	2.39 2.69	1.5	6.9
34	33	30	40	9×14×12	3000	76 71.4	165 182	3.13 3.39	17 18.8	3.13 3.39	17 18.8	3.31 3.74	2.3	6.9
34	33	30	40	9×14×12	3000	87.9 83.4	199 222	4.53 5	23.9 26.6	4.53 5	23.9 26.6	4.09 4.56	2.8	6.9
45	37.5	36	52.5	14×20×17	3090	91.9 87.8	192 216	3.49 3.9	20 22.5	3.49 3.9	20 22.5	4.98 5.87	3.1	11.3
45	37.5	36	52.5	14×20×17	3090	115 110	256 288	6.13 6.87	32.2 36.3	6.13 6.87	32.2 36.3	6.64 7.83	4.1	11.3
45	37.5	36	52.5	14×20×17	3090	139 133	328 368	9.99 11.1	50 56	9.99 11.1	50 56	8.91 10	5.4	11.3

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-490**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

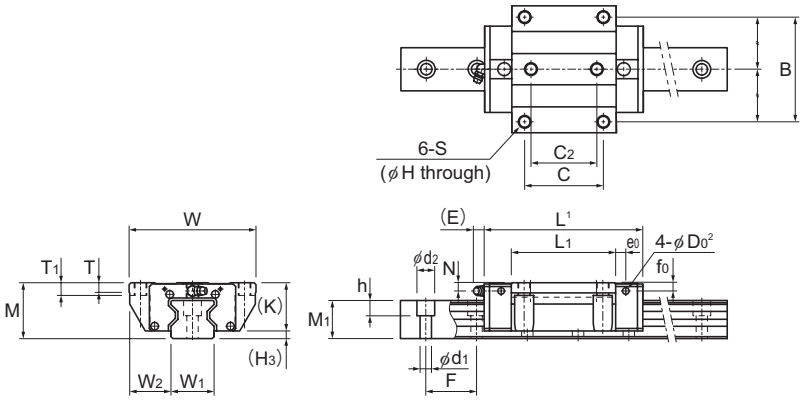
C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: The SRN-G is a cageless, Full-Roller type.
For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Models SRN-C, SRN-LC, and SRN-SLC



Models SRN55 and 65 C/LC

Model No.	Outer dimensions			LM block dimensions												Pilot hole for side nipple			
	Height M	Width W	Length[1] L	B	C	C_2	S	H	L_1	T	T_1	K	N	E	Grease nipple	e_0	f_0	D_0^2	H_3
SRN 55C SRN 55GC	63	140	185	116	95	70	M14	12.5	129	18.2	18	53	8	16	B-PT1/8	10	9.8	5.2	10
SRN 55LC SRN 55GLC	63	140	235	116	95	70	M14	12.5	179.2	18.2	18	53	8	16	B-PT1/8	10	9.8	5.2	10
SRN 55SLC SRN 55GSLC	63	140	292	116	150	—	M14	12.5	236.2	18.2	18	53	8	16	B-PT1/8	10	9.8	5.2	10
SRN 65C SRN 65GC	75	170	244.9	142	110	82	M16	14.5	171.7	21.2	20	65	14	16	B-PT1/8	9	13	5.2	10
SRN 65LC SRN 65GLC	75	170	303	142	110	82	M16	14.5	229.8	21.2	20	65	14	16	B-PT1/8	9	13	5.2	10
SRN 65SLC SRN 65GSLC	75	170	380	142	200	—	M16	14.5	306.8	21.2	20	65	14	16	B-PT1/8	9	13	5.2	10

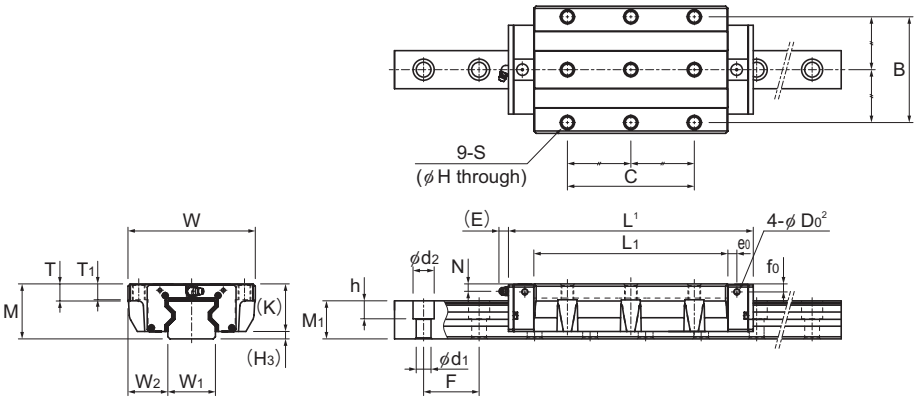
Model number coding

SRN65 C 2 QZ KK C0 +1270L P Z T -II

- SRN65: Model number
- C: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ lubricator
- KK: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol)/Light preload (C1), Medium preload (C0)/Heavy preload (CN1), Super heavy preload (CN2)
- +1270L: LM rail length (in mm)
- P: Accuracy symbol — High Accuracy grade (H)/Precision grade (P), Super Precision grade (SP)/Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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. See **A1-584** for contamination protection accessories. See **A1-77** for radial clearance symbol, See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Models SRN55 and 65 SLC

Unit: mm

	LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m[5]						Mass	
	Width		Height	Pitch		Length[3]	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block		kg	kg/m
	53	43.5	43	60	16×23×20	3060	131 125	266 300	5.82 6.5	33 37.2	5.82 6.5	33 37.2	8.19 9.55		5.1	15.8
	53	43.5	43	60	16×23×20	3060	167 160	366 411	10.8 12.1	57 64	10.8 12.1	57 64	11.2 13.1		7.1	15.8
	53	43.5	43	60	16×23×20	3060	210 199	488 544	19.1 21	93.7 104	19.1 21	93.7 104	15.6 17.3		9.4	15.8
	63	53.5	49	75	18×26×22	3000	219 214	441 511	12.5 14.8	72.8 83.8	12.5 14.8	72.8 83.8	16.8 19.4		10.4	21.3
	63	53.5	49	75	18×26×22	3000	278 264	599 670	22.7 25.3	120 135	22.7 25.3	120 135	22.1 25.5		13.9	21.3
	63	53.5	49	75	18×26×22	3000	352 332	811 899	41.3 45.2	202 224	41.3 45.2	202 224	30.9 34.2		18.5	21.3

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-490**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

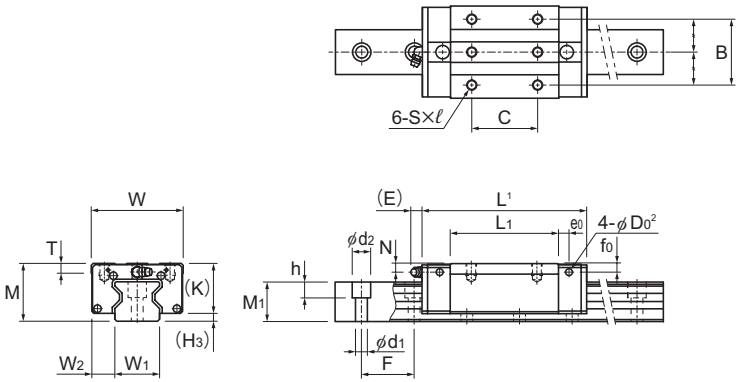
C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: The SRN-G is a cageless, Full-Roller type.
For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Models SRN-R, SRN-LR, and SRN-SLR



Models SRN35 and 45 R/LR

Model No.	Outer dimensions			LM block dimensions									Pilot hole for side nipple			
	Height M	Width W	Length[1] L	B	C	S×ℓ	L_1	T	K	N	E	Grease nipple	e_0	f_0	D_0[2]	H_3
SRN 35R SRN 35GR	44	70	125	50	50	M8×9	82.2	10.8	38	6.5	12	B-M6F	8	7	5.2	6
SRN 35LR SRN 35GLR	44	70	155	50	72	M8×9	112.2	10.8	38	6.5	12	B-M6F	8	7	5.2	6
SRN 35SLR SRN 35GSLR	44	70	180.8	50	100	M8×9	138	10.8	38	6.5	12	B-M6F	8	7	5.2	6
SRN 45R SRN 45GR	52	86	155	60	60	M10×11	107	10.8	45	7	12	B-M6F	8.5	7.6	5.2	7
SRN 45LR SRN 45GLR	52	86	190	60	80	M10×11	142	10.8	45	7	12	B-M6F	8.5	7.6	5.2	7
SRN 45SLR SRN 45GSLR	52	86	231.5	60	120	M10×11	183.5	10.8	45	7	12	B-M6F	8.5	7.6	5.2	7

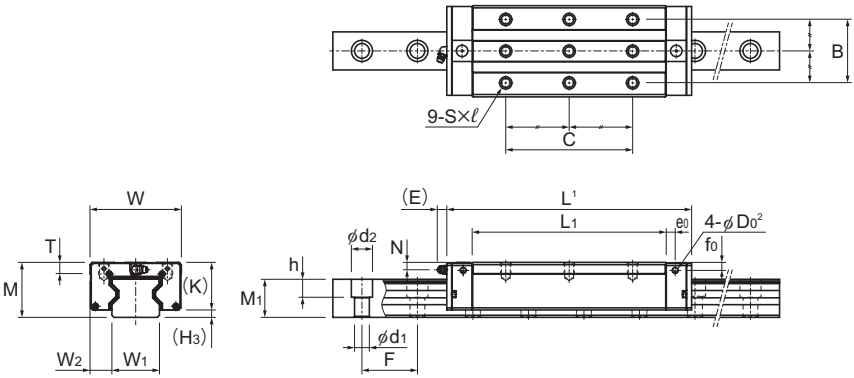
Model number coding

SRN45 LR 2 QZ KK C0 +1200L P Z T -II

- SRN45: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ lubricator
- KK: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol — High Accuracy grade (H)/Precision grade (P)/Super Precision grade (SP), Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See A1-584 for contamination protection accessories. See A1-77 for radial clearance symbol, See A1-81 for accuracy symbol. See A1-13 for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Models SRN35 and 45 SLR

Unit: mm

	LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m [5]					Mass	
	Width		Height	Pitch		Length[3]	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
	34	18	30	40	9×14×12	3000	59.1 55.3	119 131	1.66 1.77	10.1 11.1	1.66 1.77	10.1 11.1	2.39 2.69	1.1	6.9
	34	18	30	40	9×14×12	3000	76 71.4	165 182	3.13 3.39	17 18.8	3.13 3.39	17 18.8	3.31 3.74	1.5	6.9
	34	18	30	40	9×14×12	3000	87.9 83.4	199 222	4.53 5	23.9 26.6	4.53 5	23.9 26.6	4.09 4.56	1.8	6.9
	45	20.5	36	52.5	14×20×17	3090	91.9 87.8	192 216	3.49 3.9	20 22.5	3.49 3.9	20 22.5	4.98 5.87	2	11.3
	45	20.5	36	52.5	14×20×17	3090	115 110	256 288	6.13 6.87	32.2 36.3	6.13 6.87	32.2 36.3	6.64 7.83	2.6	11.3
	45	20.5	36	52.5	14×20×17	3090	139 133	328 368	9.99 11.1	50 56	9.99 11.1	50 56	8.91 10	3.4	11.3

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-490**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

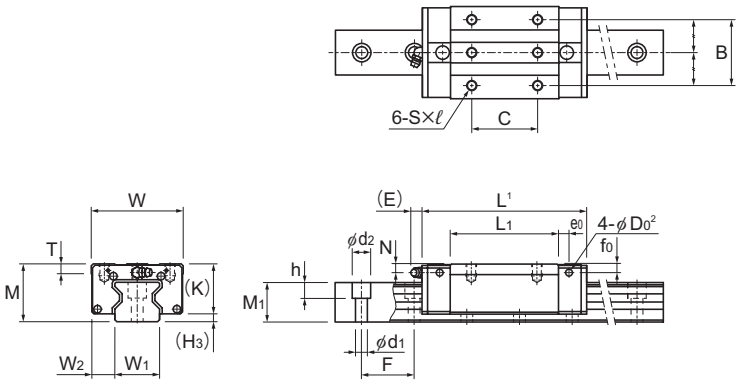
C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: The SRN-G is a cageless, Full-Roller type.
For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Models SRN-R, SRN-LR, and SRN-SLR



Models SRN55 and 65 R/LR

Model No.	Outer dimensions			LM block dimensions									Pilot hole for side nipple			
	Height M	Width W	Length[1] L	B	C	S×ℓ	L_1	T	K	N	E	Grease nipple	e_0	f_0	D_0[2]	H_3
SRN 55R SRN 55GR	63	100	185	75	75	M12×13	129	13.8	53	8	16	B-PT1/8	10	9.8	5.2	10
SRN 55LR SRN 55GLR	63	100	235	75	95	M12×13	179.2	13.8	53	8	16	B-PT1/8	10	9.8	5.2	10
SRN 55SLR SRN 55GSLR	63	100	292	75	150	M12×13	236.2	13.8	53	8	16	B-PT1/8	10	9.8	5.2	10
SRN 65R SRN 65GR	75	126	244.9	76	70	M16×16	171.7	19.5	65	14	16	B-PT1/8	9	13	5.2	10
SRN 65LR SRN 65GLR	75	126	303	76	120	M16×16	229.8	19.5	65	14	16	B-PT1/8	9	13	5.2	10
SRN 65SLR SRN 65GSLR	75	126	380	76	200	M16×16	306.8	19.5	65	14	16	B-PT1/8	9	13	5.2	10

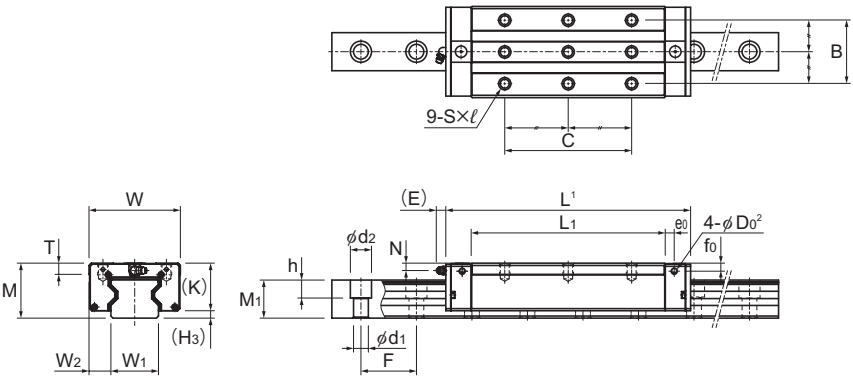
Model number coding

SRN65 LR 2 QZ KK C0 +1270L P Z T -II

- SRN65: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ lubricator
- KK: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +1270L: LM rail length (in mm)
- P: Accuracy symbol — High Accuracy grade (H)/Precision grade (P)/Super Precision grade (SP), Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See **A1-584** for contamination protection accessories. See **A1-77** for radial clearance symbol, See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Models SRN55 and 65 SLR

Unit: mm

	LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m [5]						Mass	
	Width		Height	Pitch		Length[3]	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block		kg	kg/m
	53	23.5	43	60	16×23×20	3060	131 125	266 300	5.82 6.5	33 37.2	5.82 6.5	33 37.2	8.19 9.55		3.3	15.8
	53	23.5	43	60	16×23×20	3060	167 160	366 411	10.8 12.1	57 64	10.8 12.1	57 64	11.2 13.1		4.6	15.8
	53	23.5	43	60	16×23×20	3060	210 199	488 544	19.1 21	93.7 104	19.1 21	93.7 104	15.6 17.3		5	15.8
	63	31.5	49	75	18×26×22	3000	219 214	441 511	12.5 14.8	72.8 83.8	12.5 14.8	72.8 83.8	16.8 19.4		7.1	21.3
	63	31.5	49	75	18×26×22	3000	278 264	599 670	22.7 25.3	120 135	22.7 25.3	120 135	22.1 25.5		9.4	21.3
	63	31.5	49	75	18×26×22	3000	352 332	811 899	41.3 45.2	202 224	41.3 45.2	202 224	30.9 34.2		12.6	21.3

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-490**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: The SRN-G is a cageless, Full-Roller type.
For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Standard Lengths and Maximum Lengths of LM Rails

Table 4 shows the standard lengths and the maximum lengths of model SRN variations. If the maximum length of the desired LM rail exceeds these values, jointed rails will be used. Contact THK for details.
For special rail lengths, it is recommended to use a value corresponding to the G and g dimensions from the table. As the G and g dimensions increase, this portion becomes less stable, and the accuracy performance is severely impacted.

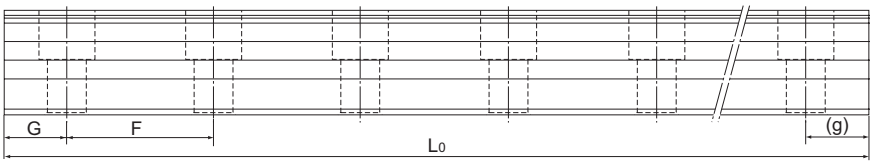


Table 4: Standard Lengths and Maximum Lengths of Model SRN LM Rails

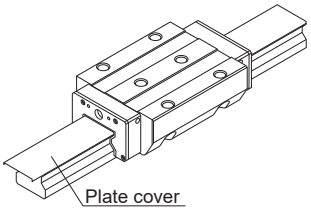
Unit: mm

Model No.	SRN 35	SRN 45	SRN 55	SRN 65
LM rail standard lengths (L_0)	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620
Standard pitch F	40	52.5	60	75
G, g	20	22.5	30	35
Max length	3000	3090	3060	3000

Notes: The maximum length varies with accuracy grades. Contact THK for details.
If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

Plate Cover

By covering the LM rail's mounting holes with ultra-thin stainless steel (SUS304) plates, the effectiveness of the end seals increases drastically, helping prevent foreign materials and liquid from entering from the top of the LM rail. Contact THK for further details regarding mounting.

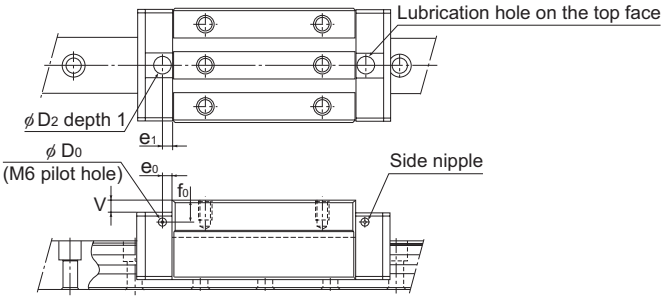


Notes: The Model SRN with plate cover is not a standard specification. (Please note it is not possible to add just the plate cover afterwards.)
The LM block must be removed from the LM rail when mounting. When doing this, a removing/mounting jig (see **A1-611**) is required. Please contact THK for details.
Plate covers are available for models SRN 35 to 65.

Lubrication Hole

Lubrication Hole for Model SRN

Model SRN allows lubrication from both the side and top faces of the LM block. The lubrication hole of standard types is not drilled through in order to prevent foreign material from entering the LM block. When using the lubrication hole, contact THK.



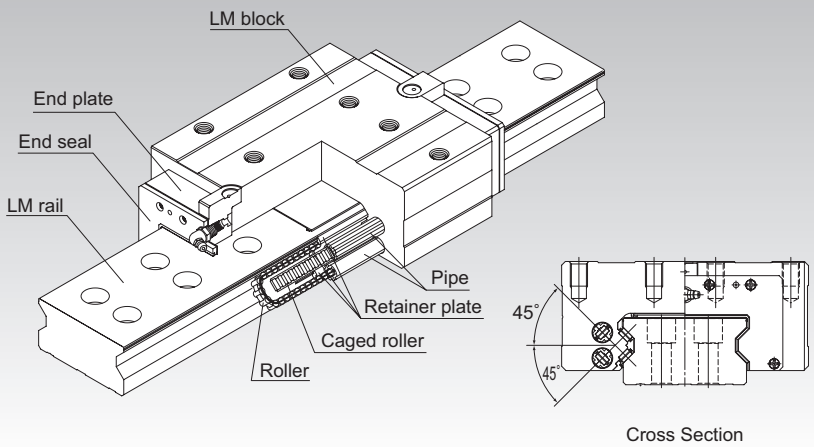
Unit: mm

Model No.		Pilot hole for side nipple			Applicable nipple	Lubrication hole on the top face			
		e_0	f_0	D_0		D_2	(O-ring)	V	e_1
SRN	35C 35LC 35SLC	8	7.0	5.2	M6F	10.2	(P7)	0.4	6
	35R 35LR 35SLR	8	7.0	5.2	M6F	10.2	(P7)	0.4	6
	45C 45LC 45SLC	8.5	7.6	5.2	M6F	10.2	(P7)	0.4	7
	45R 45LR 45SLR	8.5	7.6	5.2	M6F	10.2	(P7)	0.4	7
	55C 55LC 55SLC	10	9.8	5.2	M6F	10.2	(P7)	0.4	11
	55R 55LR 55SLR	10	9.8	5.2	M6F	10.2	(P7)	0.4	11
	65C 65LC 65SLC	9	13	5.2	M6F	10.2	(P7)	0.4	10
	65R 65LR 65SLR	9	13	5.2	M6F	10.2	(P7)	0.4	10

Note: Upper surface lubrication is oil lubrication only. Contact THK if you are considering using the lubrication hole on the top face for grease lubrication.

SRW

Ultra-Rigid, Wide Caged Roller LM Guide Model SRW



Cross Section

Note: For the caged roller, see A1-446.

Selection Criteria A1-10
Design Highlights A1-516
Options A1-541
Model No. A1-614
Handling Precautions A1-620
Accessories for Lubrication A24-1
Mounting Procedure B1-91

Equivalent Moment Factor A1-45
Rated Loads in All Directions A1-63
Equivalent Factor in Each Direction A1-65
Radial Clearance A1-77
Accuracy Standards A1-89
Shoulder Height of the Mounting Base and the Corner Radius A1-528
Reference Error Tolerance for the Mounting Surface A1-497
Dimensions of Each Model with Options Attached A1-555

Structure and Features

Based on the Caged Roller LM Guide Model SRG, this model has a wider LM rail and two rows of LM rail mounting holes to achieve high mounting strength and mounting stability. It is an ultra-rigid roller guide that uses roller cages to allow low-friction, smooth motion, and long-term maintenance-free operation.

Ultra-High Rigidity

Since it has a wide rail and can be secured on the table using two rows of mounting bolts, the mounting strength is significantly increased. In addition, since the crosswise raceway distance (L) is large, Model SRW is structurally strong against a moment load (Mc moment) in the rolling direction. Increased rigidity is achieved by using rollers with low elastic deformation as its rolling elements and having the overall roller length more than 1.5 times greater than the roller diameter.

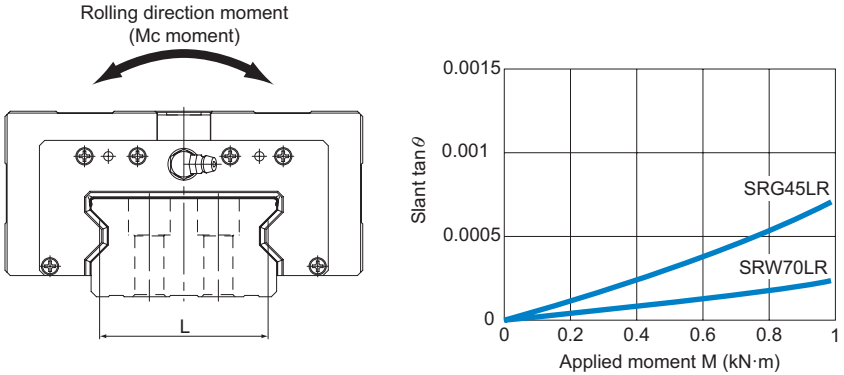


Fig. 1: Result of Comparison between Models SRW and SRG in Moment Rigidity in the Rolling Direction (Mc Moment)

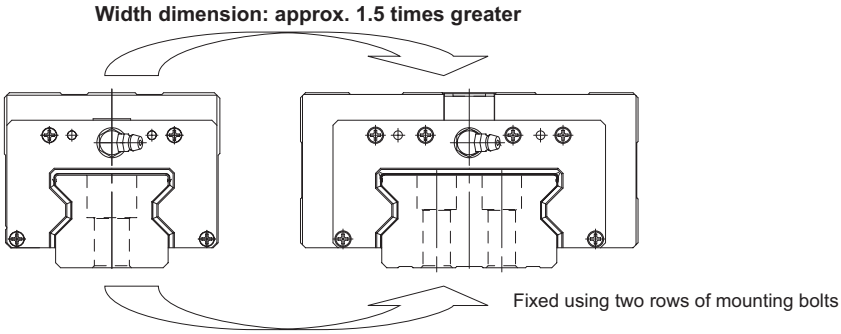


Fig. 2: Comparison between Models SRW and SRG in Cross Section

Smooth Motion through Skewing Prevention

The roller cage allows rollers to form an evenly spaced line while circulating, thus preventing the rollers from skewing as the block enters a loaded area. This minimizes rolling resistance fluctuation and achieves stable, smooth motion.

Long-Term Maintenance-Free Operation

Use of the roller cage eliminates friction between rollers and enables the lubricant to be retained in grease pockets formed between adjacent rollers. As the rollers circulate, the grease pocket serves to provide the required amount of lubricant to the contact curvature of the spacer and the roller, thus achieving long-term maintenance-free operation.

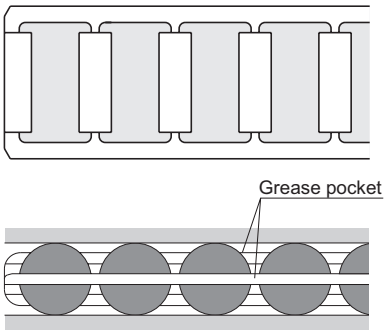


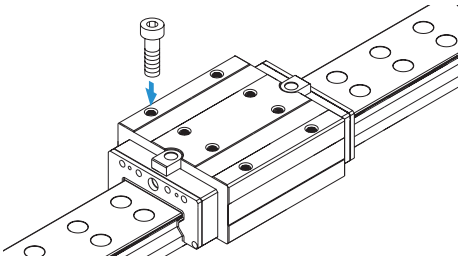
Fig. 3

Types and Features

Model SRW-LR

Dimensional Table⇒A1-498

The LM block has tapped holes.



Reference Error Tolerance for the Mounting Surface

The Caged Roller LM Guide Model SRW features high rigidity because it uses rollers as its rolling element, and it also features a roller cage, which prevents the rollers from skewing. However, high machining accuracy is required in the mounting surface. If the error on the mounting surface is large, it will affect the rolling resistance and the service life. The following shows the reference error tolerance according to the radial clearance.

Table 1: Reference Horizontal Error Tolerance (P) between Two Rails
Unit: μm

Radial clearance / Model No.	Normal	C1	C0
SRW 70	13	9	7
SRW 85	16	11	8
SRW 100	20	14	11
SRW 130	26	18	14
SRW 150	30	21	16

Table 2: Reference Vertical Error Tolerance (X) between Two Rails
Unit: mm

Radial clearance	Normal	C1	C0
Reference vertical error tolerance X	0.0002a	0.00014a	0.000072a

$X = X_1 + X_2$

X_1: Difference in rail mounting surface height

X_2: Difference in block mounting surface height

Example of calculation

When the rail span :

a = 500 mm

Reference vertical error tolerance

$X = 0.0002 \times 500$

$= 0.1$

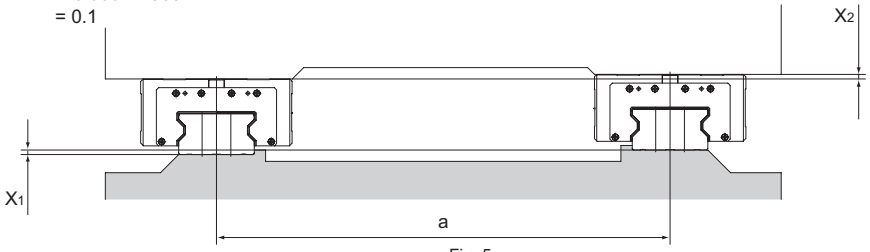


Fig. 5

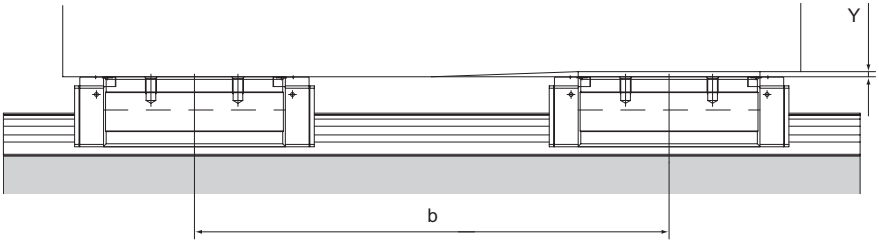


Fig. 6

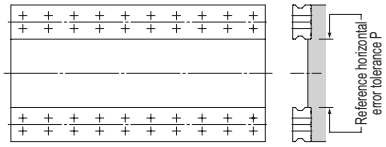
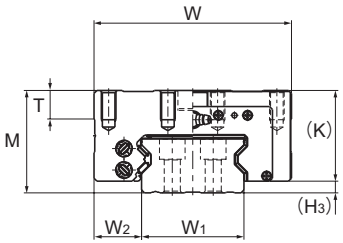


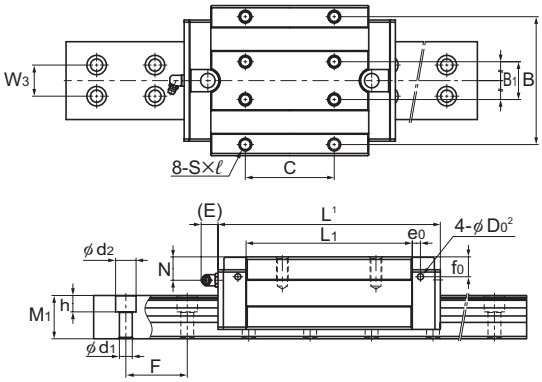
Fig. 4

Table 3: Reference Vertical Error Tolerance (Y) in the Axial Direction
Unit: mm

Reference vertical error tolerance Y	0.000036b

Model SRW-LR





Models SRW70 to 100LR

Model No.	Outer dimensions			LM block dimensions										Pilot hole for side nipple			
	Height	Width	Length										Grease nipple				
	M	W	L	B	B1	C	S×ℓ	L1	T	K	N	E		e0	f0	D0²	H3
SRW 70LR	70	135	190	115	34	80	M10×20	142	20	62	20	16	B-PT1/8	7	19	5.2	8
SRW 85LR	80	165	235	140	40	95	M12×19	179.2	28	70	22	16	B-PT1/8	9	19.5	5.2	10
SRW 100LR	100	200	303	172	50	110	M14×20	229.8	20	88.5	27	16	B-PT1/8	9	26	5.2	11.5
SRW 130LR	130	260	350	220	65	140	M20×35	250.8	30	114	25	16	B-PT1/8	15	42	8.2	16
SRW 150LR	150	300	395	260	75	200	M20×40	280.2	35	134	28.8	16	B-PT1/4	15	53	8.2	16

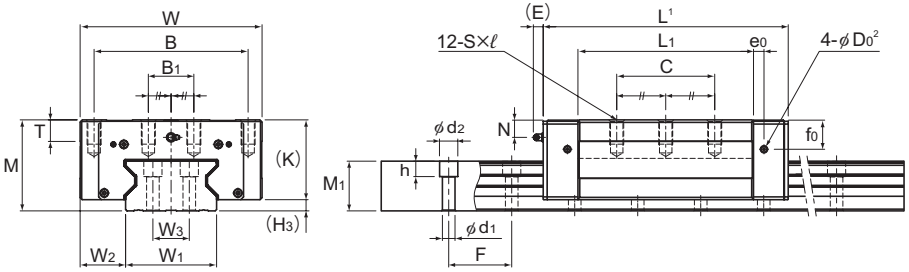
Model number coding

SRW70LR 2 QZ KKHH C0 +1200L P Z T -II

- SRW70LR: Model number
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol
- C0: Radial clearance symbol — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol — Precision grade (P)/Super Precision grade (SP), Ultra Precision grade (UP)
- Z: With plate cover
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See A1-584 for contamination protection accessories. See A1-77 for radial clearance symbol, See A1-89 for accuracy symbol. See A1-13 for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Models SRW130 and 150LR

Unit: mm

	LM rail dimensions							Basic load rating[4]		Static permissible moment kN·m [5]					Mass	
	Width			Height	Pitch		Length[3]	C	C0	MA		MB		MC	LM block	LM rail
	W1 0 -0.05	W2	W3	M1	F	d1×d2×h	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
	70	32.5	28	37	52.5	11×17.5×14	3090	115	256	6.13	32.2	6.13	32.2	10.2	6.3	18.6
	85	40	32	43	60	14×20×17	3060	167	366	10.8	57	10.8	57	17.5	11	26.7
	100	50	38	54	75	16×23×20	3000	278	599	22.7	120	22.7	120	33.9	21.6	35.9
	130	65	52	71	90	18×26×22	3000	497	990	45.3	239	45.3	239	74.2	41.7	61
	150	75	60	77	105	24×35×28	3000	601	1170	60	319	60	319	101.6	65.1	74.4

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-500**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Standard Lengths and Maximum Lengths of LM Rails

Table 4 shows the standard lengths and the maximum lengths of model SRW variations. If the maximum length of the desired LM rail exceeds these values, jointed rails will be used.
For special rail lengths, it is recommended to use a value corresponding to the G and g dimensions from the table. As the G and g dimensions increase, this portion becomes less stable, and the accuracy performance is severely impacted.
If desiring jointed use of this model, be sure to indicate the overall length so that we can manufacture the product without leaving a level difference in the joint.

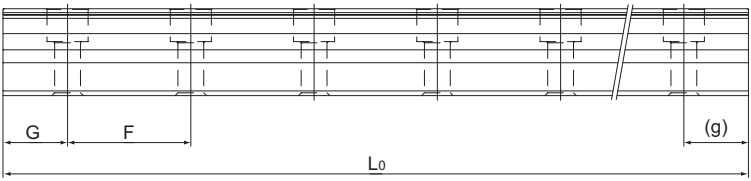


Table 4: Standard Lengths and Maximum Lengths of LM Rails for Model SRW

Unit: mm

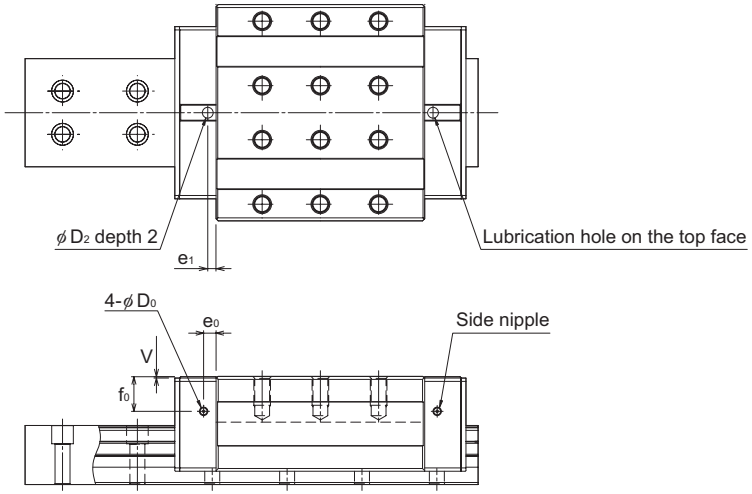
Model No.	SRW 70	SRW 85	SRW 100	SRW 130	SRW 150
LM rail standard lengths (L_0)	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620	1530 1890 2250 2610	1340 1760 2180 2600
Standard pitch F	52.5	60	75	90	105
G, g	22.5	30	35	45	40
Max length	3090	3060	3000	3000	3000

Notes: The maximum length varies with accuracy grades. Contact THK for details.
If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

Lubrication Hole

Lubrication Hole for Model SRW

Model SRW allows lubrication from both the side and top faces of the LM block. The lubrication hole of standard types is not drilled through in order to prevent foreign material from entering the LM block. When using the lubrication hole, contact THK.



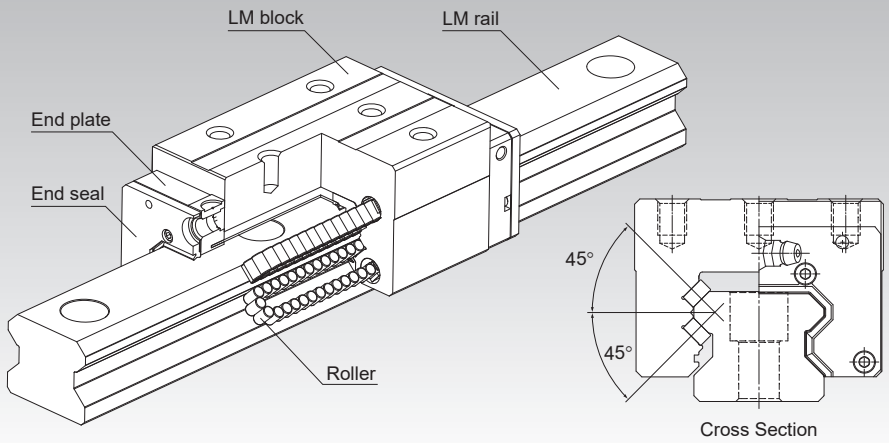
Unit: mm

Model No.		Pilot hole for side nipple			Applicable nipple	Lubrication hole on the top face			
		e_0	f_0	D_0		D_2	(O-ring)	V	e_1
SRW	70	7	17	5.2	M6F	13	(P10)	0.4	2.7
	85	9	18.5	5.2	M6F	13	(P10)	0.4	9.9
	100	9	23.5	5.2	M6F	13	(P10)	0.4	10.1
	130	15	42	8.2	PT1/8	13	(P10)	0.4	10
	150	15	53	8.2	PT1/8	13	(P10)	0.4	10

Note: Upper surface lubrication is oil lubrication only. Contact THK if you are considering using the lubrication hole on the top face for grease lubrication.

HRX

Super-Rigid Full-Roller LM Guide Model HRX



Selection Criteria A1-10
Design Highlights A1-516
Options A1-541
Model No. A1-614
Handling Precautions A1-620
Accessories for Lubrication A24-1
Mounting Procedure B1-91

Equivalent Moment Factor A1-45
Rated Loads in All Directions A1-63
Equivalent Factor in Each Direction A1-65
Radial Clearance A1-77
Accuracy Standards A1-81
Shoulder Height of the Mounting Base and the Corner Radius A1-528
Reference Error Tolerance for the Mounting Surface A1-506
Dimensions of Each Model with Options Attached A1-555

Structure and Features

Rollers roll in four rows of raceways precision-ground on an LM rail and an LM block, and end plates incorporated in the LM block allow the rollers to circulate. Model HRX has a larger mounting surface tolerance than our conventional roller products due to the front-to-front raceways (DF set). Also, the extended length of the metal LM block and increased number of load-bearing rollers achieve an improved static load rating.

Super-High Rigidity

A higher rigidity is achieved by using highly rigid rollers as the rolling elements and having the overall roller length more than 1.5 times greater than the roller diameter.

4-way Equal Load

Each row of rollers is arranged at a 45° contact angle so the LM block will have an equal load rating in all directions: radial, reverse-radial, and horizontal. This ensures high rigidity in all directions.

Smooth Motion through Skewing Prevention

The new guide mechanism prevents skewing as the block enters a loaded area. This minimizes rolling resistance fluctuation and achieves stable, smooth motion.

Global Standard Size

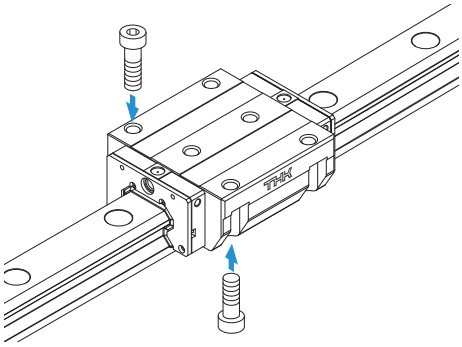
HRX is designed to have dimensions almost the same as that of Full Ball LM Guide model HSR, which THK as a pioneer of the linear motion system has developed and is practically a global standard size.

Types and Features

Model HRX-C

Dimensional Table⇒A1-508

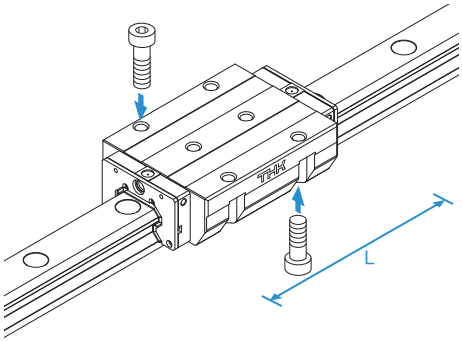
The flange of the LM block has tapped holes.
Can be mounted from the top or the bottom.
Used in places where the table cannot have through holes for mounting bolts.



Model HRX-LC

Dimensional Table⇒A1-508

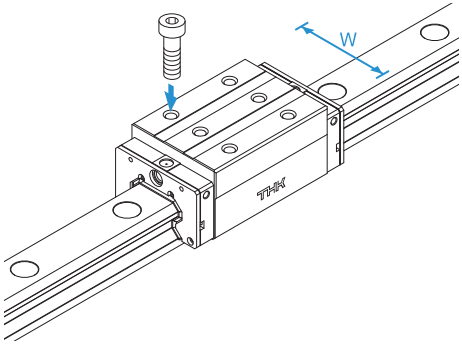
The LM block has the same cross-sectional shape as the Model HRX-C, but it has a longer overall LM block length (L) and a greater rated load.



Model HRX-R

Dimensional Table⇒A1-510

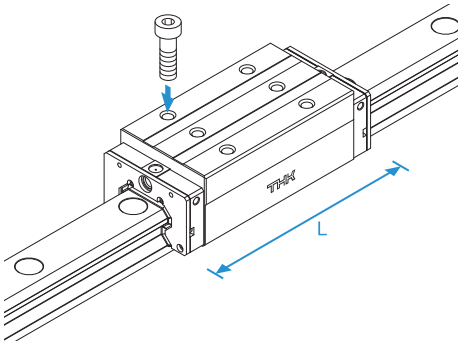
The LM block has a smaller width (W) and tapped holes.
Used in places where the space for table width is limited.



Model HRX-LR

Dimensional Table⇒A1-510

The LM block has the same cross-sectional shape as model HRX-R, but has a longer overall LM block length (L) and a greater rated load.



Reference Error Tolerance for the Mounting Surface

The Roller Type LM Guide Model HRX features high rigidity because it uses rollers as its rolling element. The new guide mechanism prevents roller skewing. However, high machining accuracy is required in the mounting surface. If the error of the mounting surface is large, it will affect the rolling resistance and the service life. The following shows the reference error tolerance according to the radial clearance.

Table 1: Reference Horizontal Error Tolerance (P) between Two Rails

Unit: μm

Radial Clearance / Model No.	C0
HRX25	7
HRX30	8
HRX35	9
HRX45	11
HRX55	13
HRX65	17

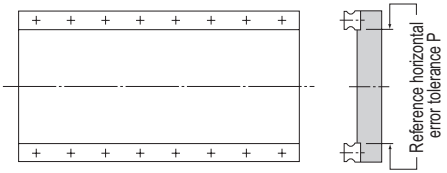


Fig. 1

Table 2: Reference Vertical Error Tolerance (X) between Two Rails

Unit: mm

Radial Clearance	C0
Reference vertical error tolerance X	0.00014a

$X = X_1 + X_2$ X_1 : Level difference on the rail mounting surface

X_2 : Level difference on the block mounting surface

Example of calculation

Rail span when a = 500 mm

Reference vertical error tolerance $X = 0.00014 \times 500 = 0.07$

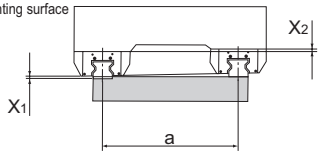


Fig. 2

Table 3: Reference Vertical Error Tolerance (Y) in the Axial Direction

Unit: mm

Reference vertical error tolerance Y	0.00004b

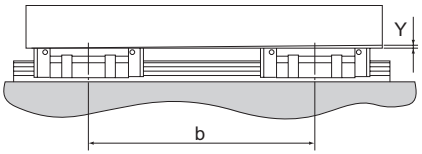
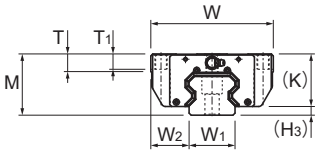


Fig. 3

Models HRX-C and HRX-LC



Model No.	Outer dimensions			LM block dimensions												Pilot hole for side nipple		
	Height M	Width W	Length[1] L	B	C	C_2	S	H	L_1	T	T_1	K	N	E	Grease nipple	e_0	f_0	D_0[2]
HRX 25C HRX 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
HRX 30C HRX 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
HRX 35C HRX 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
HRX 45C HRX 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
HRX 55C HRX 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
HRX 65C HRX 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

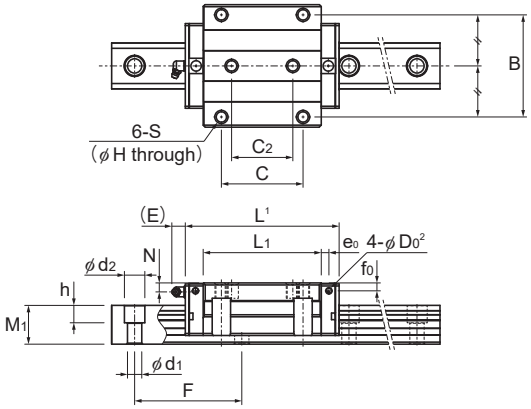
Model number coding

HRX45 LC 2 QZ SS C0 +1200L P T -II

- HRX45: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- SS: Contamination protection accessory symbol
- C0: Radial clearance symbol — Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol — High Accuracy grade (H)/Precision grade (P)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See A1-584 for contamination protection accessories. See A1-77 for radial clearance symbol. See A1-81 for accuracy symbol. See A1-13 for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Unit: mm

		LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m [5]					Mass	
		Width		Height	Pitch		Length[3]	C	C_0	M_A		M_B		M_C	LM block	LM rail
	H_3	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
	5	23	23.5	21.5	60	7×11×9	3000	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	3.2
	5	28	31	23.5	80	9×14×12	3000	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	4.4
	6.5	34	33	29	80	9×14×12	3000	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	6.3
	8.5	45	37.5	38	105	14×20×17	3090	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	10.9
	11	53	43.5	44	120	16×23×20	3060	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	15.6
	12	63	53.5	53	150	18×26×22	3000	206 257	567 756	18.4 32	86.5 147	18.4 32	86.5 147	12.3 16.4	13.3 17.9	22.6

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See **A1-555** or **A1-578**)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-512**.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

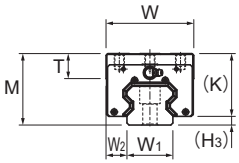
C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see **A1-12**, Lubricant: see **A24-2**)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Models HRX-R and HRX-LR



Model No.	Outer dimensions			LM block dimensions									Pilot hole for side nipple		
	Height M	Width W	Length[1] L	B	C	S×ℓ	L_1	T	K	N	E	Grease nipple	e_0	f_0	D_0[2]
HRX 25R HRX 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
HRX 30R HRX 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
HRX 35R HRX 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
HRX 45R HRX 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
HRX 55R HRX 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
HRX 65R HRX 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

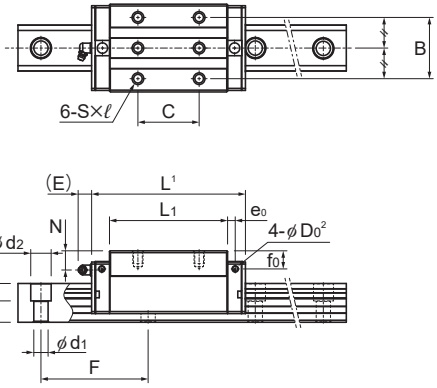
Model number coding

HRX45 LR 2 QZ SS C0 +1200L P T -II

- HRX45: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- SS: Contamination protection accessory symbol
- C0: Radial clearance symbol — Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol — High Accuracy grade (H)/Precision grade (P)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
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.
See **A1-584** for contamination protection accessories. See **A1-77** for radial clearance symbol. See **A1-81** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.

Download data from the THK Online Services website. https://www.thk.com/



Unit: mm

		LM rail dimensions						Basic load rating[4]		Static permissible moment kN·m [5]					Mass	
		Width		Height	Pitch		Length[3]	C	C_0	M_A		M_B		M_C	LM block	LM rail
	H_3	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	2 blocks	1 block	2 blocks	1 block	kg	kg/m
	5	23	12.5	21.5	60	7×11×9	3000	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	3.2
	5	28	16	23.5	80	9×14×12	3000	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	4.4
	6.5	34	18	29	80	9×14×12	3000	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	6.3
	8.5	45	20.5	38	105	14×20×17	3090	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	10.9
	11	53	23.5	44	120	16×23×20	3060	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	15.6
	12	63	31.5	53	150	18×26×22	3000	206 257	567 756	18.4 32	86.5 147	18.4 32	86.5 147	12.3 16.4	12 16	22.6

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
If other contamination protection accessories or lubricant equipment are installed, the total block length will increase. (See A1-555 or A1-578)

[2] D_0 are the pilot holes for when a grease nipple is desired for a product with LaCS or a QZ Lubricator.
Pilot holes are not drilled through for models other than those stated above.
For grease nipple mount machining, contact THK.

[3] The maximum length indicates the standard maximum length of an LM rail. (See A1-512.)

[4] The basic dynamic load rating of the roller guide is a value based on a nominal life of 100 km.
The conversion to basic dynamic load rating for a nominal life of 50 km can be obtained from the following equation.

$$C_{50} = C \times 1.23$$

C_{50} : The basic dynamic load rating for a nominal load of 50 km
C : The basic dynamic load rating in the dimensional table

[5] Static permissible moment
1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

Notes: For oil lubrication, be certain to let THK know the mounting orientation and where the LM block piping joint should be attached.
(Mounting orientation: see A1-12, Lubricant: see A24-2)
The removing/mounting jig is not provided as standard. To obtain one, please contact THK.

Options⇒A1-541

Standard Lengths and Maximum Lengths of LM Rails

Table 4 shows the standard and maximum lengths of the HRX model rail. If a rail length longer than the listed max length is required, rails may be jointed to meet the overall length. Contact THK for details.
For special rail lengths, it is recommended to use a value corresponding to the G,g dimension from the table. As the G,g dimension increases, this portion becomes less stable, and the accuracy performance is severely impacted.

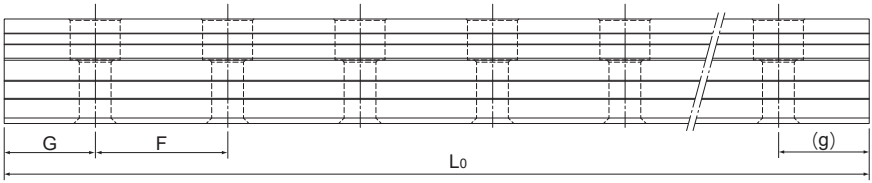


Table 4: Standard Lengths and Maximum Lengths of LM Rails for Model HRX

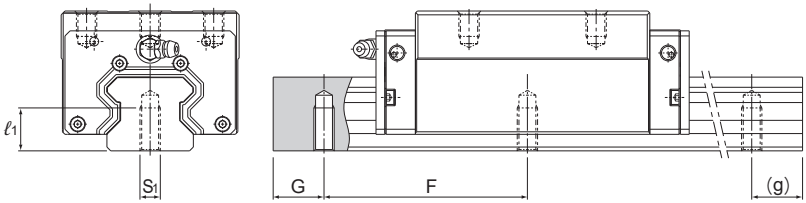
Unit: mm

Model No.	HRX 25	HRX 30	HRX 35	HRX 45	HRX 55	HRX 65
LM rail standard length (L_0)	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1720 1840 1960 2080 2200 2320 2440	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620
Standard pitch F	60	80	80	105	120	150
G, g	20	20	20	22.5	30	35
Max length	3000	3000	3000	3090	3060	3000

Notes: The maximum length varies with accuracy grades. Contact THK for details.
If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

Tapped-Hole Type LM Rail

Model HRX rails also include a type where the LM rail is tapped from the bottom. This type is useful when mounting from the bottom of the base and when increased contamination protection is desired.



For standard pitches of the taps and the G and g dimensions, see **A1-512** on Table 4.

Table 5: Dimensions of the LM Rail Tap

Unit: mm

Model No.	S_1	Effective tap depth ℓ_1
HRX25	M6	12
HRX30	M8	15
HRX35	M8	17
HRX45	M12	24
HRX55	M14	24
HRX65	M20	30

Model number coding

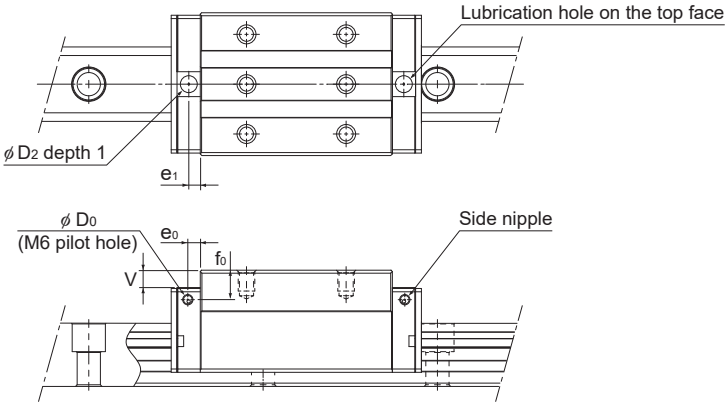
HRX45LR2SS+1200LP K

Symbol for tapped-hole LM rail

Lubrication hole

Lubrication Hole for Model HRX

The Model HRX allows lubrication from both the side and top faces of the LM block. In order to prevent foreign material from entering the LM block, lubrication holes are not through holes in blocks with regular specifications. When using the lubrication hole, contact THK.



Unit: mm

Model No.		Pilot hole for side nipple			Applicable nipple	Lubrication hole on the top face			
		e_0	f_0	D_0		D_2	(O-ring)	V	e_1
HRX	25C 25LC	6	6.2	5.2	M6F	6.2	(P3)	0.3	4.5
	25R 25LR	6	10.2	5.2	M6F	6.2	(P3)	4.3	4.5
	30C 30LC	6.2	9.5	5.2	M6F	6.2	(P3)	0.4	4.5
	30R 30LR	6.2	12.5	5.2	M6F	6.2	(P3)	3.4	4.5
	35C 35LC	7.2	9.5	5.2	M6F	10.2	(P7)	0.4	5.8
	35R 35LR	7.2	16.5	5.2	M6F	10.2	(P7)	7.4	5.8
	45C 45LC	7.5	7.8	5.2	M6F	10.2	(P7)	0.4	6.9
	45R 45LR	7.5	17.8	5.2	M6F	10.2	(P7)	10.4	6.9
	55C 55LC	6.8	9.3	5.2	M6F	10.2	(P7)	0.4	6.8
	55R 55LR	6.8	19.3	5.2	M6F	10.2	(P7)	10.4	6.8
	65C 65LC	8.7	16.6	5.2	M6F	10.2	(P7)	0.4	8.7
	65R 65LR	8.7	26.6	5.2	M6F	10.2	(P7)	10.4	8.7

Note: Upper surface lubrication is oil lubrication only. Contact THK if you are considering using the lubrication hole on the top face for grease lubrication.

Designing the Guide System

THK offers various types of LM Guide in order to accommodate diverse operating conditions. Supporting ordinary horizontal, vertical, inverted, and slanted installation, as well as wall mounting and single-axis applications capable of receiving a moment, the wide array of LM Guide types makes it easy to obtain a linear guide system with a long service life and high rigidity while minimizing the required space for installation.

However, it is necessary to consider the position of the grease nipple or piping joint on the LM block in the context of the overall mounting orientation.

If the mounting orientation is other than horizontal, the lubricant may not reach the raceway completely. Be sure to let THK know the mounting orientation and the exact position in each LM block where a grease nipple or piping joint should be attached.

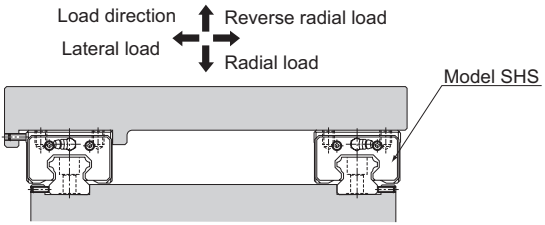
Even in an LM Guide with seals, the internal lubricant gradually seeps out during operation. Therefore, the system needs to be lubricated at an interval appropriate to the operating conditions.

For the mounting orientation and the lubrication, see A1-12 and A24-2, respectively.

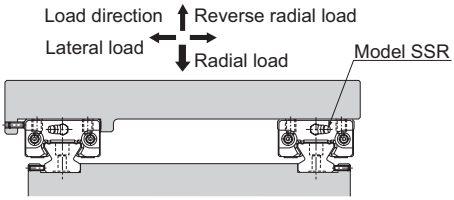
Examples of Guide System Arrangements

The following are representative guide systems and arrangements for installing an LM Guide. (For indication of the reference surface, see A1-539.)

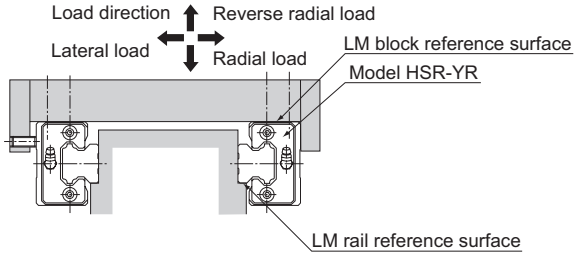
Double-rail configuration when high rigidity is required in all directions



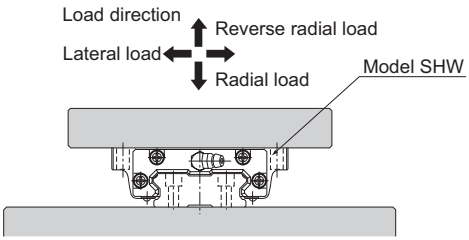
Double-rail configuration when high rigidity is required in the radial direction



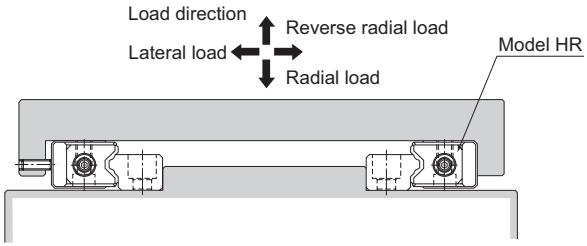
When high rigidity is required in all directions and the installation space is limited in height



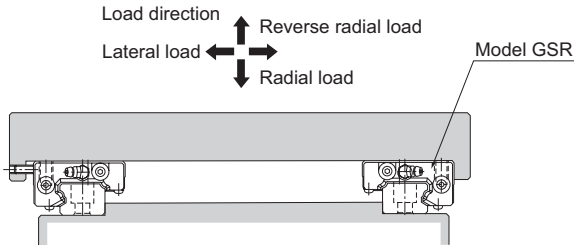
Single-rail configuration



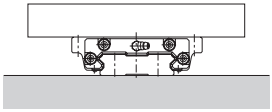
When the minimum possible height of the equipment is allowed (adjustable preload type)



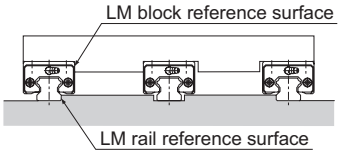
When a medium load is applied and the mounting surface is rough (preload, self-adjusting type)



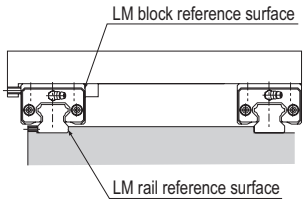
Single-rail configuration

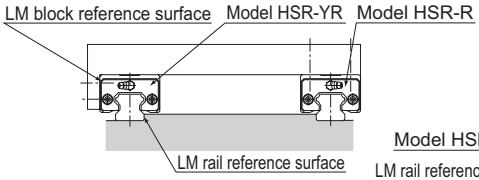


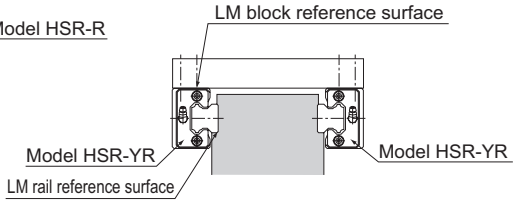
Triple-rail configuration

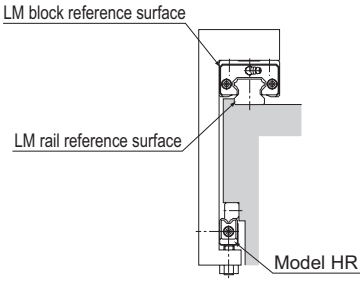


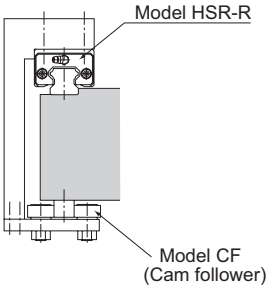
Double-rail configuration

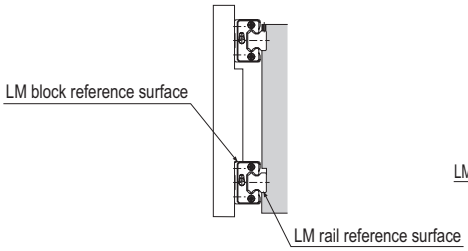


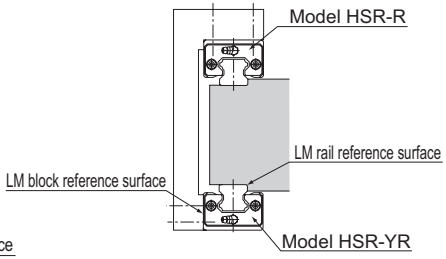




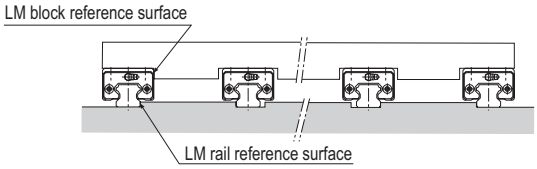


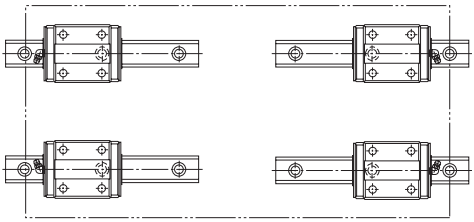


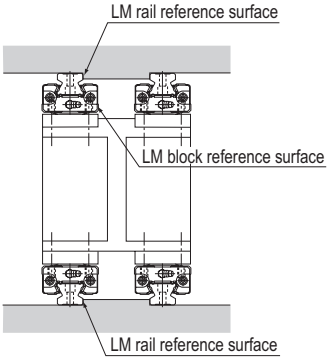


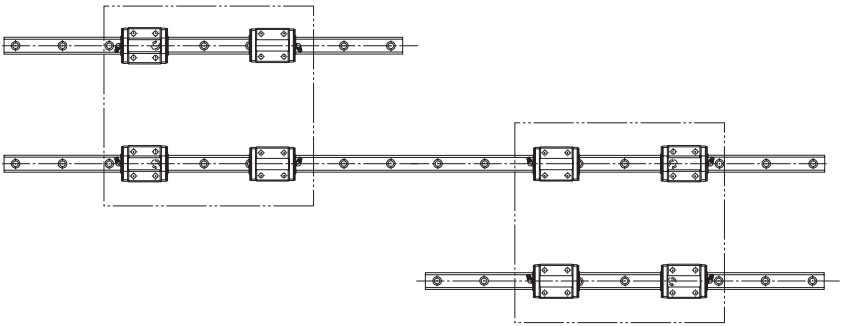


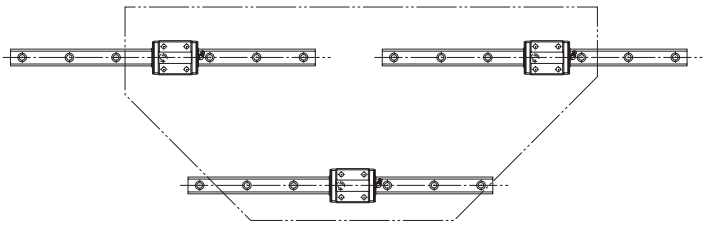
Multi-rail configuration







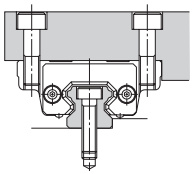
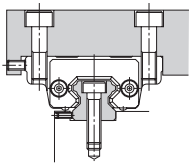
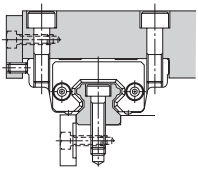
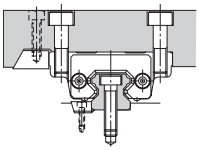




Methods for Securing an LM Guide Based on Operating Conditions

LM Guide models are categorized into two groups by their mounting space and structure: types that are mounted with bolts from the top, and types that are mounted from the bottom. LM rails are also divided into types secured with bolts and those secured with clamps (model JR). This wide array of types allows you to select a model that best suits your application.
There are several ways to mount an LM Guide as shown in Table 1. When the machine is subject to vibrations that may cause the LM rails or LM blocks to loosen, we recommend the securing method indicated by Fig. 1 on A1-522. (If two or more rails are used in parallel, only the LM block on the master rail should be secured from the side.) If this method is not applicable for a structural reason, hammer in knock pins to secure the LM blocks as shown in Table 2 on A1-522. When using knock pins, machine the top and bottom surfaces of the LM rail by 2 mm to 3 mm using a carbide end mill before drilling the holes since the surfaces are hardened.

Table 1: Major Securing Methods on the Master-Rail Side

(a) Secured only with side reference surfaces	(b) Secured with set screws
	
(c) Secured with a presser plate	**(d) Secured with tapered gibs**
	

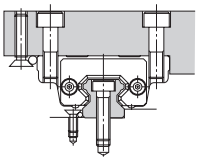
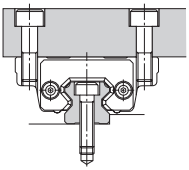
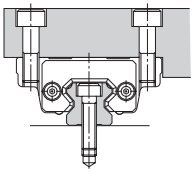
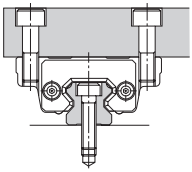
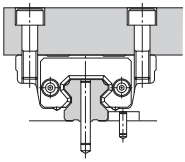
(e) Secured with pins


Table 2: Major Securing Methods on the Subsidiary-Rail Side

(a) Secured only with the side reference surface of the rail	(b) Secured only with the side reference surface of the block
	
(c) Secured without a side reference surface	**(d) Secured with dowel pins**
	

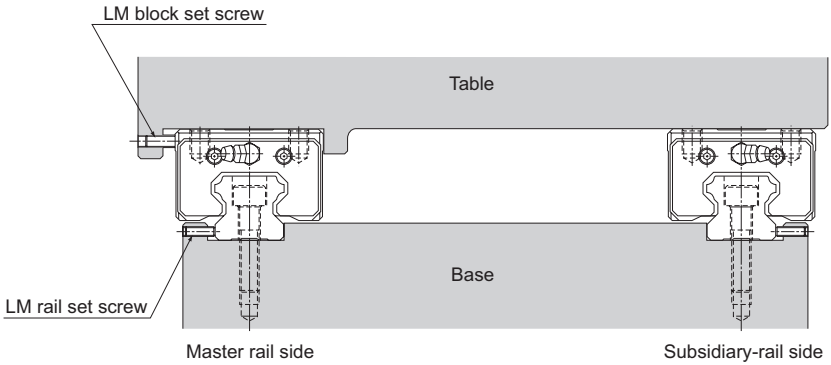
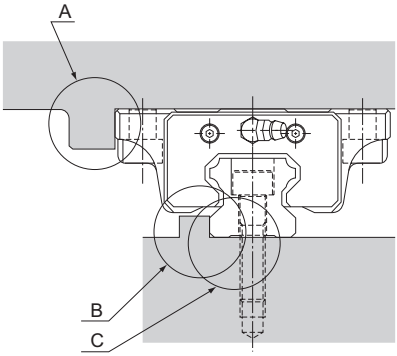


Fig. 1: When the Machine Receives Vibrations or Impacts

Designing a Mounting Surface

Designing a Mounting Surface

If particularly high accuracy is required for the machine to which an LM Guide is to be mounted, it is necessary to mount the LM rail with high accuracy. To achieve the desired accuracy, be sure to consider the following points when designing the mounting surface.



Corner Shape

If an LM rail or LM block is mounted to a surface that has corners machined with a larger curved radius than the chamfer dimension of the LM rail or LM block, then the surface of the rail or the block may not make proper contact with the mounting surface. Therefore, when designing a mounting surface, it is important to carefully read the description of the “corner shape” for the subject model. (Fig. 2)

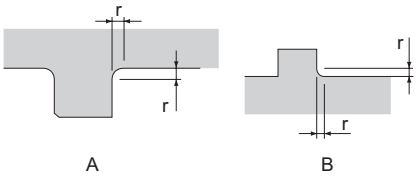


Fig. 2

Perpendicularity with the Reference Surface

If the perpendicularity between the surface to which the LM rail or LM block will be mounted and the reference surface is not accurate, then the surface of the rail or the block may not make proper contact with the reference surface. Therefore, it is important to take into account the error in the perpendicularity between the mounting surface and the reference surface. (Fig. 3)

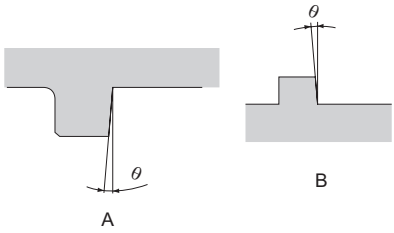


Fig. 3

Dimensions of the Reference Surface

When designing the reference surface, be sure to take its height and thickness into account. If the reference surface is too high, it may interfere with the LM block. If it is too low, the LM rail or the LM block may not closely contact the mounting surface depending on the chamfer of the rail or the block. Additionally, if the reference surface is too thin, the desired accuracy may not be obtained due to poor rigidity when a lateral load is applied or when performing positioning using a lateral mounting bolt. (Fig. 4)

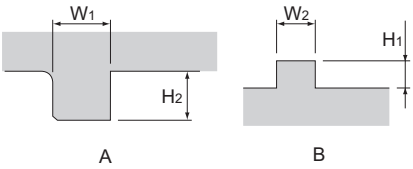


Fig. 4

Dimensional Tolerance between the Reference Surface and the Mounting Holes

If the dimensional tolerance between the reference surface for the LM rail or the LM block and the mounting holes is too large, the rail or the block may not closely contact the surface of the base when mounted.
Normally, the tolerance should be within ±0.1 mm depending on the model. (Fig. 5)

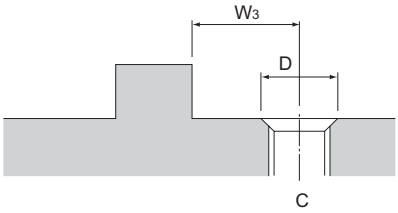


Fig. 5

Chamfer of the Tapped Mounting Hole

To mount the LM rail, the mounting surface needs to be tapped and the tapped hole has to be chamfered. If the chamfer of the tapped hole is too large or too small, it may affect the accuracy. (Fig. 6)

Guidelines for the chamfer dimension:
Chamfer diameter D = nominal diameter of the bolt + pitch

Example: Chamfer diameter D with M6 (pitch):
D = 6 + 1 = 7

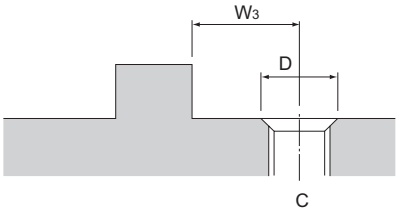
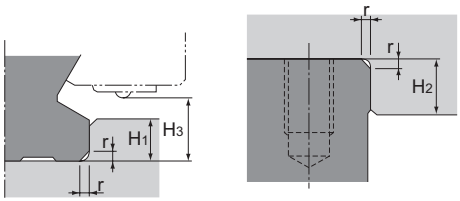


Fig. 6

Shoulder Height of the Mounting Base and the Corner Radius

Normally, the mounting base for the LM rail and the LM block has a reference surface on the side face of the shoulder of the base to allow for easy installation and highly accurate positioning.
The height of the reference surface shoulder varies with model numbers. See **A1-525** to **A1-531** for details.
The corner of the mounting shoulder must be machined to have a recess, or machined to be smaller than the “Corner radius r (max)” to prevent interference with the chamfer of the LM rail or the LM block.
The corner radius varies with model numbers. See **A1-525** to **A1-531** for details.



Shoulder for the LM Rail　　Shoulder for the LM Block (LM Casing)
Fig. 7

Models SR and SR-M1

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Maximum shoulder height for the LM block H_2	H_3
15	0.5	3.8	4	5.8
20	0.5	5	5	6
25	1	5.5	5	7
30	1	8	6	9.5
35	1	9	6	11.5
45	1	10	8	12.5
55	1.5	11	8	13.5
70	1.5	12	10	15
85	1.2	8	12	18.5
100	1.2	10	15	19
120	1.2	12	20	15
150	1.2	12	20	22

Model SR-MS

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
15	0.5	3.8	4	4.5
20	0.5	5	5	6

Model CSR

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	H_3
15	0.5	3	4.7
20	0.5	3.5	4
25	1	5	5.5
30	1	5	7
35	1	6	7.5
45	1	8	10

Model JR

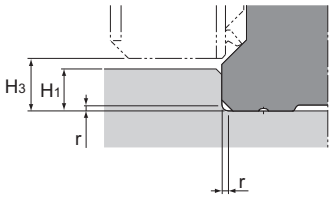
Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM block H_2
25	1	5
35	1	6
45	1	8
55	1.5	10

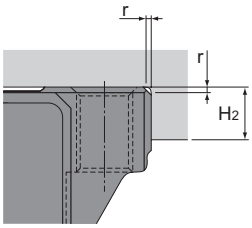
Model NSR-TBC

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
20	1	5	5	5.5
25	1	6	6	6.5
30	1	7	6	9
40	1	7	8	10.5
50	1	7	8	8
70	1	7	10	9.5



Shoulder for the LM Rail



Shoulder for the LM Block

Fig. 8

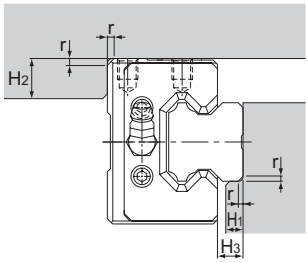


Fig. 9

Model SHS

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
15	0.5	2.5	4	3
20	0.5	3.5	5	4.6
25	1	5	5	5.8
30	1	5	5	7
35	1	6	6	7.5
45	1	7.5	8	8.9
55	1.5	10	10	12.7
65	1.5	15	10	19

Models SVR/SVS and NR-X/NRS-X

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
25	0.5	4	5	5.5
30	1	5	5	7
35	1	6	6	9
45	1	8	8	11.6
55	1.5	10	10	14
65	1.5	10	10	15

Note: If the optional side scraper or protector is attached, dimensions H_1 and H_3 differ from that without the options. For the dimensions after they are attached, see **A1-550** to **A1-551**.

Model NR/NRS

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
75	1.5	12	12	15
85	1.5	14	14	17
100	2	16	16	20

Model SCR

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	H_3
15	0.5	2.5	3
20	0.5	3.5	4.6
25	1	5	5.8
30	1	5	7
35	1	6	7.5
45	1	7.5	8.9
65	1.5	15	19

Model MX

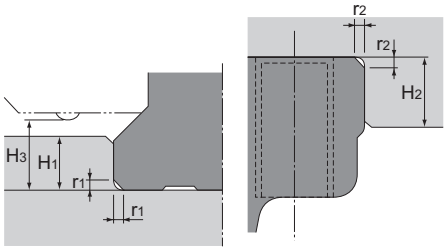
Unit: mm

Model No.	Corner radius for the LM rail r (max)	Shoulder height for the LM rail H_1	H_3
5	0.1	1.2	1.5
7W	0.1	1.7	2

Model HSR-YR

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
15	0.5	3	4	3.5
20	0.5	3.5	5	4
25	1	5	5	5.5
30	1	5	5	7
35	1	6	6	7.5
45	1	8	8	10
55	1.5	10	10	13
65	1.5	10	10	14



Shoulder for the LM Rail Shoulder for the LM Block

Fig. 10

Models HSR, HSR-M1, and HSR-M2

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
8X	0.3	0.5	1.6	6	2.1
10X	0.3	0.5	1.7	5	2.2
12X	0.8	0.5	2.6	4	3.1
15	0.5	0.5	3	4	4.7
20	0.5	0.5	3.5	5	4
25	1	1	5	5	5.5
30	1	1	5	5	7
35	1	1	6	6	7.5
45	1	1	8	8	10
55	1.5	1.5	10	10	13
65	1.5	1.5	10	10	14
85	1.5	1.5	12	14	16
100	2	2	16	16	20
120	2.5	2.5	17	18	20
150	2.5	2.5	20	20	22

Model HCR

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Maximum shoulder height for the LM block H_2	H_3
12	0.8	0.5	2.6	6	3.1
15	0.5	0.5	3	4	4.8
25	1	1	5	5	7
35	1	1	6	6	8.5
45	1	1	8	8	11.5
65	1.5	1.5	10	10	15

Model HMG

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Maximum shoulder height for the LM block H_2	H_3
15	0.5	0.5	3	4	3.5
25	1	1	5	5	5.5
35	1	1	6	6	7.5
45	1	1	8	8	11
65	1.5	1.5	10	10	16

Model EPF

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Maximum shoulder height for the LM block H_2	H_3
7M	0.2	0.4	1	3	1.5
9M	0.2	0.6	1	5	1.5
12M	0.5	0.6	1.5	6	2
15M	0.5	0.8	2.5	6.8	3

Model HSR-M1VV

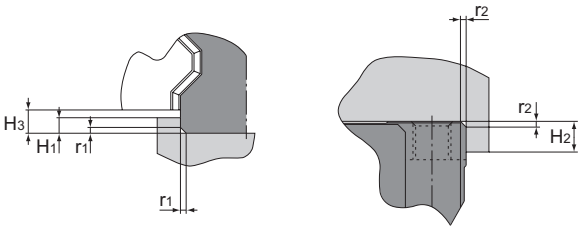
Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Maximum shoulder height for the LM block H_2	H_3
15	0.5	0.5	3	4	4.3

Model HDR

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
15	0.5	0.5	3	4	3.8
20	0.5	0.5	3.5	5	4.5
20U	0.5	0.5	3.5	5	5.4
25	1	1	3.6	5	4.6
25U	1	1	3.6	5	5.5
30	1	1	4.7	5	5.7
35	1	1	5.2	6	6.2
45	1	1	8	8	9.5
55	1.5	1.5	10	10	12
65	1.5	1.5	10	10	12.7



Shoulder for the LM Rail　　Shoulder for the LM Block

Fig. 11

Model SRG

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
15X	0.5	0.5	2.5	4	4
20X	0.5	0.5	3.5	5	4.6
25X	1	1	3.5	5	4.5
30X	1	1	4	5	5
35	1	1	5	6	6
45	1.5	1.5	6	8	8
55	1.5	1.5	8	10	10
65	1.5	2	9	10	11.5
85	1.5	1.5	12	14	16
100	2	2	12	16	16

Note: If the optional side scraper or protector is attached, dimensions H_1 and H_3 differ from that without the options. For the dimensions after they are attached, see A**1-550** to A**1-551**.

Model SRN

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
35	1	1	5	6	6
45	1.5	1.5	6	8	7
55	1.5	1.5	8	10	10
65	1.5	2	8	10	10

Model SRW

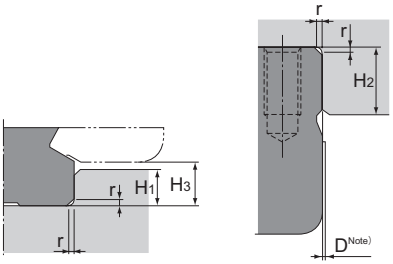
Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
70	1.5	1.5	6	8	8
85	1.5	1.5	8	10	10
100	1.5	2	9	10	11.5
130	1.5	1.5	12	14	16
150	2	2	12	16	16

Model HRX

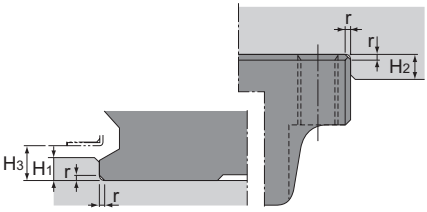
Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
25	1	1	4	5	5
30	1	1	4	5	5
35	1	1	5.5	6	6.5
45	1.5	1.5	6.5	8	8.5
55	1.5	1.5	9	10	11
65	1.5	2	9.5	10	12



Shoulder for the LM Rail　Shoulder for the LM Block

Fig. 12



Shoulder for the LM Rail　Shoulder for the LM Block

Fig. 13

Model SSR

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Maximum shoulder height for the LM block H_2	H_3	D
15 X	0.5	3.8	5.5	4.5	0.3
20 X	0.5	5	7.5	6	0.3
25 X	1	5.5	8	6.8	0.4
30 X	1	8	11.5	9.5	0.4
35 X	1	9	16	11.5	0.4

Note: When fitting the LM block against the reference surface, the resin layer may stick out from the overall width of the LM block by the dimension D. To avoid interference, machine the reference surface to have a recess or limit the reference surface shoulder's height below the dimension H_2.

Model SHW

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
12	0.5	1.5	4	2
14	0.5	1.5	5	2
17	0.4	2	4	2.5
21	0.4	2.5	5	3.3
27	0.4	2.5	5	3.5
35	0.8	3.5	5	4
50	0.8	3	6	4

Model HRW

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
12	0.5	1.5	4	2
14	0.5	1.5	5	2
17	0.4	2	4	2.5
21	0.4	2.5	5	3
27	0.4	2.5	5	3
35	0.8	3.5	5	4
50	0.8	3	6	3.4
60	1	5	8	6.5

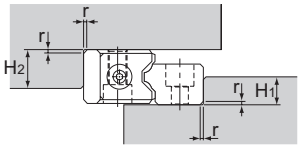


Fig. 14

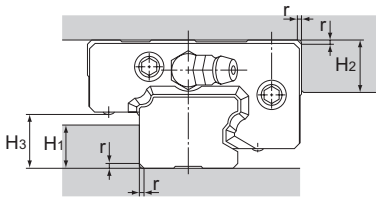


Fig. 15

Model HR

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2
918	0.3	5	6
1123	0.5	6	7
1530	0.5	8	10
2042	0.5	11	15
2555	1	13	18
3065	1	16	20
3575	1	18	26
4085	1.5	21	30
50105	1.5	26	32
60125	1.5	31	40

Model GSR

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
15	0.6	7	7	8
20	0.8	9	8	10.4
25	0.8	11	11	13.2
30	1.2	11	13	15
35	1.2	13	14	17.5

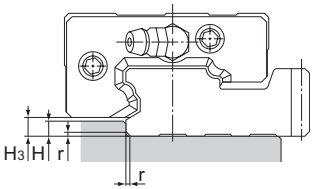
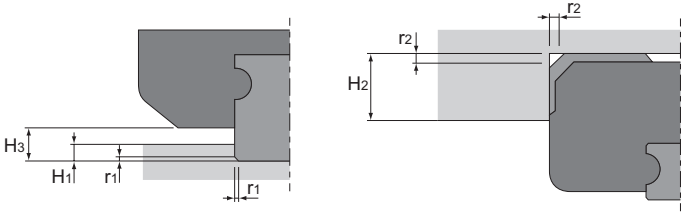


Fig. 16

Model GSR-R

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H	H_3
25	0.8	4	4.5
30	1.2	4	4.5
35	1.2	4.5	5.5



Shoulder for the LM Rail　　Shoulder for the LM Block

Fig. 17

Model SRS

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
5 M/N	0.1	0.3	1.2	2	1.5
5 WM/ WN	0.1	0.2	1.2	2.5	1.5
7 S/M/N	0.1	0.2	0.9	3.3	1.3
7 WS/ WM/WN	0.1	0.1	1.4	3.8	1.8
9 XS/ XM/XN	0.1	0.3	1.1	4.5	1.5
9 WS/ WM/WN	0.1	0.5	2.5	4.9	2.9
12 S/M/N	0.3	0.2	1.5	5.7	2.1
12 WS/ WM/WN	0.3	0.3	2.5	5.7	3
15 S/M/N	0.3	0.4	2.2	6.5	2.7
15 WS/ WM/WN	0.3	0.3	2.2	6.5	2.7
20 M	0.3	0.5	3	8.7	3.4
25 M	0.5	0.5	4.5	10.5	5

Model RSR

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
2 N	0.1	0.3	0.6	2.3	0.7
2 WN	0.1	0.3	0.9	2.9	1
3 M/N/ WM/WN	0.1	0.3	0.8	1.2	1
14 WVM	0.3	0.3	3.2	5	3.5

Model RSR-M1

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
20 M1V/M1N	0.5	0.5	5.5	5	7.5

Model RSX-M1

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3
9	0.1	0.3	1.1	3.3	2.2
9W	0.1	0.5	2.5	3.3	3.7
12	0.3	0.3	1.5	5.3	3
12W	0.3	0.3	2.5	5.8	4
15	0.3	0.4	2.2	5.8	4
15W	0.3	0.3	2.2	5.7	4

Model RSX

Unit: mm

Model No.	Corner radius for the LM rail r_1 (max)	Corner radius for the LM block r_2 (max)	Shoulder height for the LM rail H_1	Shoulder height for the LM block H_2	H_3 (UU option)	H_3 (UUHH option)	H_3 (QZUU option)	H_3 (QZUUHH option)
5	0.1	0.3	1.2	2	1.5	—	—	—
5W	0.1	0.2	1.2	2.9	1.5	—	—	—
7	0.1	0.2	0.9	2.4	1.5	—	1.5	—
7W	0.1	0.1	1.4	2.9	2	—	2	—
9	0.1	0.3	1.1	3.3	2.2	2	2	2
9W	0.1	0.5	2.5	3.3	3.7	3	3.4	3
12	0.3	0.3	1.5	5.3	3	2.1	2.7	2.1
12W	0.3	0.3	2.5	5.8	4	3.1	3.7	3.1
15	0.3	0.4	2.2	5.8	4	2.9	3.5	2.9
15W	0.3	0.3	2.2	5.7	4	2.9	3.5	2.9
20	0.3	0.5	4.5	8.7	5	3.5	3.5	3.5
25	0.5	0.5	4.5	10.5	5	5	5	5

Note: See contamination protection accessory on A1-584.

Reference Error Tolerance for the Mounting Surface

The self-aligning capability of the LM Guide allows for smooth straight motion even when there is a slight distortion or error on the mounting surface.

Reference Horizontal Error Tolerance between Two Rails

Mounting surface error may affect the service life of the LM Guide. The following tables show the approximate reference horizontal error tolerance (P) between two rails in general use.

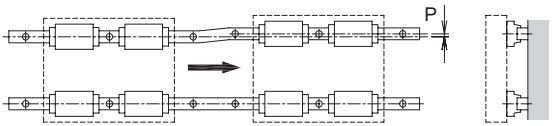


Fig. 18: Reference Horizontal Error Tolerance (P) between Two Rails

Models SHS, SCR, HSR, CSR, HSR-M1, HSR-M2, and HSR-M1VV

Unit: μm

Model No.	Normal clearance	Clearance C1	Clearance C0
8X	13	10	—
10X	16	12	—
12X	20	15	—
15	25	18	—
20	25	20	18
25	30	22	20
30	40	30	27
35	50	35	30
45	60	40	35
55	70	50	45
65	80	60	55
85	90	75	70
100	100	90	85
120	120	110	100
150	140	130	115

Model JR

Unit: μm

Model No.	—
25	100
35	200
45	300
55	400

Models SSR, SR, and SR-M1

Unit: μm

Model No.	Normal clearance	Clearance C1	Clearance C0
15	35	25	—
20	40	30	25
25	50	35	30
30	60	40	35
35	70	50	45
45	80	60	55
55	100	70	65
70	110	80	65
85	120	90	80
100	130	100	90
120	140	110	100
150	150	120	110

Models SVR, NR-X, and NR

Unit: μm

Model No.	Normal clearance	Clearance C1	Clearance C0
25	21	15	14
30	28	21	19
35	35	25	21
45	42	28	25
55	49	35	32
65	56	42	39
75	60	47	44
85	63	53	49
100	70	63	60

Models SVS, NRS-X, and NRS

Unit: μm

Model No.	Normal clearance	Clearance C1	Clearance C0
25	15	11	10
30	20	15	14
35	25	18	15
45	30	20	18
55	35	25	23
65	40	30	28
75	43	34	31
85	45	38	35
100	50	45	43

Models SHW and HRW

Unit: μm

Model No.	Normal clearance	Clearance C1	Clearance C0
12	13	10	—
14	16	12	—
17	20	15	—
21	25	18	—
27	25	20	—
35	30	22	20
50	40	30	27
60	50	35	30

Models SRS, RSX, RSR, RSX-M1, and RSR-M1

Unit: μm

Model No.	Normal clearance	Clearance C1
2	2	—
3	2	—
5	2	—
7	3	—
9	4	3
12	9	5
14	10	6
15	10	6
20	13	8
25	15	10

Model SR-MS

Unit: μm

Model No.	Clearance CS
15	8
20	8

Model HR

Unit: μm

Model No.	Normal clearance	Clearance C1	Clearance C0
918	10	7	—
1123	14	8	—
1530	18	12	—
2042	20	15	14
2555	35	24	20
3065	38	26	22
3575	42	28	24
4085	50	35	30
50105	55	42	38
60125	65	55	50

Models GSR and GSR-R

Unit: μm

Model No.	—
15	30
20	40
25	50
30	60
35	70

Model NSR-TBC

Unit: μm

Model No.	Normal clearance	Clearance C1
20	50	40
25	70	50
30	80	60
40	90	70
50	110	80
70	130	90

Model HDR

Unit: μm

Model No.	Normal clearance	Clearance C1	Clearance C0
15	25	18	—
20	25	20	18
25	30	22	20
30	40	30	27
35	50	35	30
45	60	40	35
55	70	50	45
65	80	60	55

Flatness of the Mounting Surface

Mounting surface error may affect the service life of the LM Guide. The reference values for the mounting surface flatness of models SRS, RSX, RSR, and SR-MS (for general use) are indicated here. Note that the service life of models not shown here may also be affected if the mounting surface is not flat.

Models SRS, RSX, and RSX-M1

Unit: mm

Model No.	Flatness error
5	0.015/200
7	0.025/200
9	0.035/200
12	0.050/200
15	0.060/200
20	0.070/200
25	0.070/200

Notes: As many factors can affect the mounting precision, we recommend using values 70% or less than those shown.
The figures shown apply to normal clearances. When using two or more rails with clearance C1, we recommend using 50% or less of the values shown.

Model SR-MS

Unit: mm

Model No.	Flatness error
15	0.020/200
20	0.020/200

Models RSR and RSR-M1

Unit: mm

Model No.	Flatness error
2	0.012/200
3	0.012/200
14	0.060/200
20	0.110/200

Notes: As many factors can affect the mounting precision, we recommend using values 70% or less than those shown.
The figures shown apply to normal clearances. When using two or more rails with clearance C1, we recommend using 50% or less of the values shown.

Reference Vertical Error Tolerance between Two Rails

Mounting surface error may affect the service life of the LM Guide. The table shows the value (X) of the reference vertical error tolerance in the axial direction for rail span (a), which is proportional to the rail span (a).

$X = X_1 + X_2$

X_1 : Level difference on the rail mounting surface

X_2 : Level difference on the block mounting surface

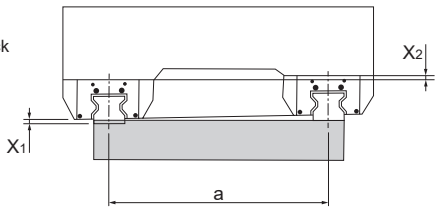


Fig. 19: Reference Vertical Error Tolerance (X) between Two Rails

Models SHS, HSR, SCR, CSR, HSR-M1, HSR-M2, and HSR-M1VV

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
8X	0.0003a	0.0002a	—
10X	0.0003a	0.0002a	—
12X	0.0003a	0.0002a	—
15	0.0006a	0.0005a	—
20	0.0006a	0.0005a	0.0004a
25	0.0006a	0.0005a	0.0004a
30	0.0006a	0.0005a	0.0004a
35	0.0006a	0.0005a	0.0004a
45	0.0006a	0.0005a	0.0004a
55	0.0006a	0.0005a	0.0004a
65	0.0006a	0.0005a	0.0004a
85	0.001a	0.0009a	0.0008a
100	0.001a	0.0009a	0.0008a
120	0.001a	0.0009a	0.0008a
150	0.001a	0.0009a	0.0008a

Models SSR, SR, and SR-M1

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
15	0.0008a	0.0007a	—
20	0.0008a	0.0007a	0.0006a
25	0.0008a	0.0007a	0.0006a
30	0.0008a	0.0007a	0.0006a
35	0.0008a	0.0007a	0.0006a
45	0.0008a	0.0007a	0.0006a
55	0.0008a	0.0007a	0.0006a
70	0.0008a	0.0007a	0.0006a
85	0.0011a	0.001a	0.0009a
100	0.0011a	0.001a	0.0009a
120	0.0011a	0.001a	0.0009a
150	0.0011a	0.001a	0.0009a

Models SVR, NR-X, and NR

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
25	0.00038a	0.00028a	0.00018a
30	0.00038a	0.00028a	0.00018a
35	0.00038a	0.00028a	0.00018a
45	0.00038a	0.00028a	0.00018a
55	0.00038a	0.00028a	0.00018a
65	0.00038a	0.00028a	0.00018a
75	0.00045a	0.00035a	0.00025a
85	0.00045a	0.00035a	0.00025a
100	0.00045a	0.00035a	0.00025a

Model JR

Unit: mm

Model No.	—
25	0.002a
35	0.002a
45	0.002a
55	0.002a

Models SVS, NRS-X, and NRS

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
25	0.00045a	0.00035a	0.00025a
30	0.00045a	0.00035a	0.00025a
35	0.00045a	0.00035a	0.00025a
45	0.00045a	0.00035a	0.00025a
55	0.00045a	0.00035a	0.00025a
65	0.00045a	0.00035a	0.00025a
75	0.00063a	0.00053a	0.00043a
85	0.00063a	0.00053a	0.00043a
100	0.00063a	0.00053a	0.00043a

Models SHW and HRW

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
12	0.00044a	0.00034a	—
14	0.00044a	0.00034a	—
17	0.00044a	0.00034a	—
21	0.00044a	0.00034a	—
27	0.00044a	0.00034a	—
35	0.00044a	0.00034a	0.00024a
50	0.00044a	0.00034a	0.00024a
60	0.00044a	0.00034a	0.00024a

Models SRS, RSX, RSR, RSX-M1, and RSR-M1

Unit: mm

Model No.	Normal clearance	Clearance C1
3	0.000075a	—
5	0.0001a	—
7	0.000125a	—
9	0.000175a	0.00003a
12	0.00025a	0.00006a
14	0.0003a	0.0001a
15	0.0003a	0.0001a
20	0.00035a	0.00015a
25	0.0004a	0.0002a

Model SR-MS

Unit: mm

Model No.	Clearance CS
15	0.020/200
20	0.020/200

Model HR

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
918	0.00009a	0.00003a	—
1123	0.0001a	0.00004a	—
1530	0.00018a	0.00012a	—
2042	0.00018a	0.00012a	0.0001a
2555	0.0003a	0.0002a	0.00017a
3065	0.00033a	0.00022a	0.00019a
3575	0.00035a	0.00024a	0.0002a
4085	0.00042a	0.0003a	0.00024a
50105	0.00049a	0.00035a	0.00028a
60125	0.00056a	0.0004a	0.00034a

Models GSR and GSR-R

Unit: mm

Model No.	—
15	0.00048a
20	0.0006a
25	0.00072a
30	0.00084a
35	0.00096a

Model NSR-TBC

Unit: mm

Model No.	Normal clearance	Clearance C1
20	0.0006a	0.00042a
25	0.00072a	0.00048a
30	0.00084a	0.00054a
40	0.00108a	0.00072a
50	0.0012a	0.00084a
70	0.00132a	0.00096a

Model HDR

Unit: μm

Model No.	Normal clearance	Clearance C1	Clearance C0
15	0.00037a	0.00027a	0.00017a
20	0.00037a	0.00027a	0.00017a
25	0.00037a	0.00027a	0.00017a
30	0.00037a	0.00027a	0.00017a
35	0.00037a	0.00027a	0.00017a
45	0.00037a	0.00027a	0.00017a
55	0.00037a	0.00027a	0.00017a
65	0.00037a	0.00027a	0.00017a

Reference Vertical Error Tolerance in the Axial Direction

Mounting surface error may affect the service life of the LM Guide. The table below shows the value (Y) of the reference vertical error tolerance in the axial direction for block span (b), which is proportional to the block span (b).

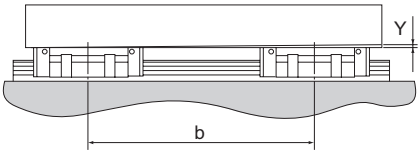


Fig. 20: Reference Vertical Error Tolerance (Y) in the Axial Direction

Models SHS, SCR, HSR, CSR, HSR-M1, HSR-M2, and HSR-M1VV

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
8X	0.00006b	0.00004b	—
10X	0.00006b	0.00004b	—
12X	0.00006b	0.00004b	—
15	0.00012b	0.0001b	—
20	0.00012b	0.0001b	0.00008b
25	0.00012b	0.0001b	0.00008b
30	0.00012b	0.0001b	0.00008b
35	0.00012b	0.0001b	0.00008b
45	0.00012b	0.0001b	0.00008b
55	0.00012b	0.0001b	0.00008b
65	0.00012b	0.0001b	0.00008b
85	0.0002b	0.00018b	0.00016b
100	0.0002b	0.00018b	0.00016b
120	0.0002b	0.00018b	0.00016b
150	0.0002b	0.00018b	0.00016b

Models SSR, SR, and SR-M1

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
15	0.00016b	0.00014b	—
20	0.00016b	0.00014b	0.00012b
25	0.00016b	0.00014b	0.00012b
30	0.00016b	0.00014b	0.00012b
35	0.00016b	0.00014b	0.00012b
45	0.00016b	0.00014b	0.00012b
55	0.00016b	0.00014b	0.00012b
65	0.00016b	0.00014b	0.00012b
70	0.00016b	0.00014b	0.00012b
85	0.00022b	0.0002b	0.00018b
100	0.00022b	0.0002b	0.00018b
120	0.00022b	0.0002b	0.00018b
150	0.00022b	0.0002b	0.00018b

Models SVR, NR-X, and NR

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
25	0.00008b	0.00006b	0.00004b
30	0.00008b	0.00006b	0.00004b
35	0.00008b	0.00006b	0.00004b
45	0.00008b	0.00006b	0.00004b
55	0.00008b	0.00006b	0.00004b
65	0.00008b	0.00006b	0.00004b
75	0.00009b	0.00007b	0.00005b
85	0.00009b	0.00007b	0.00005b
100	0.00009b	0.00007b	0.00005b

Models SVS, NRS-X, and NRS

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
25	0.00009b	0.00007b	0.00005b
30	0.00009b	0.00007b	0.00005b
35	0.00009b	0.00007b	0.00005b
45	0.00009b	0.00007b	0.00005b
55	0.00009b	0.00007b	0.00005b
65	0.00009b	0.00007b	0.00005b
75	0.00012b	0.0001b	0.00008b
85	0.00012b	0.0001b	0.00008b
100	0.00012b	0.0001b	0.00008b

Models SHW and HRW

Unit: mm

Model No.	Normal clearance	Clearance C1	Clearance C0
12	0.00009b	0.00007b	0.00005b
14	0.00009b	0.00007b	0.00005b
17	0.00009b	0.00007b	0.00005b
21	0.00009b	0.00007b	0.00005b
27	0.00009b	0.00007b	0.00005b
35	0.00009b	0.00007b	0.00005b
50	0.00009b	0.00007b	0.00005b
60	0.00009b	0.00007b	0.00005b

Model JR

Unit: mm

Model No.	—
25	0.00012b
35	0.00012b
45	0.00012b
55	0.00012b
60	0.00012b

Model SR-MS

Unit: mm

Model No.	Clearance CS
15	0.020/200
20	0.020/200

Model HDR

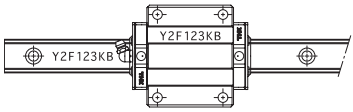
Unit: μm

Model No.	Normal clearance	Clearance C1	Clearance C0
15	0.00012b	0.0001b	0.00008b
20	0.00012b	0.0001b	0.00008b
25	0.00012b	0.0001b	0.00008b
30	0.00012b	0.0001b	0.00008b
35	0.00012b	0.0001b	0.00008b
45	0.00012b	0.0001b	0.00008b
55	0.00012b	0.0001b	0.00008b
65	0.00012b	0.0001b	0.00008b

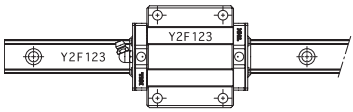
Master LM Guide Indicators and Combined Use

Master LM Guide Indicators

All LM rails mounted on the same plane are marked with the same serial number. The LM rail marked with “KB” after the serial number is the master LM rail. The LM block on the master LM rail has its reference surface finished to a designated precision, allowing it to serve as the positioning reference for tables (see Fig. 21). Normal grade LM Guides are not marked with “KB.” Therefore, any one of the LM rails having the same serial number can be used as the master LM rail.



Master LM Guide



Subsidiary LM Guide

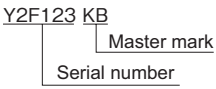
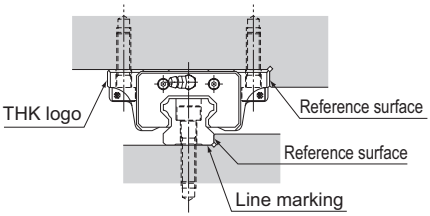


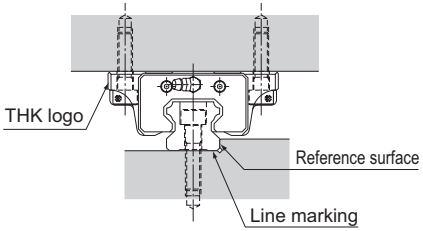
Fig. 21: Master and Subsidiary LM Guides Units (e.g. Model HSR-C)

Reference Surface Indicators

In the LM Guide, the reference surface of the LM block is opposite the surface marked with the THK logo, and that of the LM rail is on the surface marked with a line (see Fig. 22). Please specify if it is necessary to reverse the reference surface of the LM rail and block or if the grease nipple must be oriented in the opposite direction.



Master LM Guide



Subsidiary LM Guide

Fig. 22: Markings on the Reference Surface

Serial Number Marking and Combined Use of an LM Rail and LM Blocks

An LM rail and LM block(s) used in combination must have the same serial number. When removing an LM block from the LM rail and reinstalling the LM block, make sure that they have the same serial number and the numbers are oriented in the same direction (see Fig. 23).

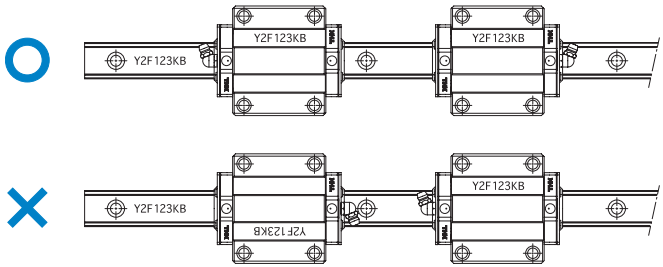


Fig. 23: Serial Number Marking and Combined Use of an LM Rail and LM Blocks (e.g. Model HSR-C)

Use of Jointed Rails

When a long LM rail is ordered, two or more rails will be jointed together to the desired length. When jointing rails, make sure that the joint match marks shown in Fig. 24 are correctly positioned.
When two LM Guide units with jointed rails are to be arranged parallel to each other, they will be manufactured so that they have axial symmetry (are mirror images of each other) as a set.

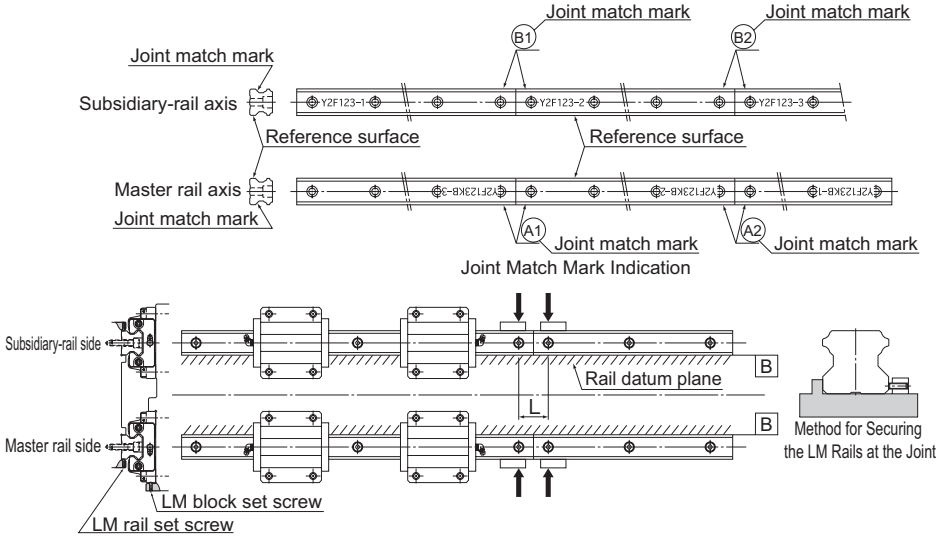


Fig. 24: Use of Jointed Rails

LM Guide

Options

Table of Supported Options by Models

Model No.		Type	Contamination protection												
			End seal	Side seal	Inner seal	End seal + side seal (+ inner seal)	Double seals + side seal (+ inner seal)	End seal + side seal (+ inner seal) + metal scraper	Double seals + side seal (+ inner seal) + metal scraper	Laminated Contact Scraper LaCS	Side scraper	End seal + protector	Double seals + protector	Low-resistance end seal	
		Symbol	UU	—	—	SS	DD	ZZ	KK	HH	YY	JJ	TT	LL	
Caged Ball	SHS	15 to 65	○	○	○	○★	○	○	○	○	—	—	—	—	
	SSR	15 to 35	○★	○	—	○	○	○	○	○	—	—	—	—	
	SVR/SVS	25 to 65	○	○	○	○	○	○	○	○	○	○	○	—	
	SHW	12, 14	○	○	—	○	—	—	—	○	—	—	—	—	
		17	○	○	—	○	○	○	○	○	—	—	—	—	
		21 to 50	○	○	○	○	○	○	○	○	—	—	—	—	
	SRS	5	○★	—	—	—	—	—	—	—	—	—	—	—	
		7	○★	○	—	○	—	—	—	—	—	—	—	—	
		9 to 25	○★	○	—	○	—	—	—	○	—	—	—	—	
	SCR	15 to 65	○	○	○	○	○	○	○	○	—	—	—	—	
	EPF	7 to 15	—	—	—	—	—	—	—	—	—	—	—	—	
Full-Ball	HSR	8X, 10X, 12X	○	○	—	○	—	—	—	—	—	—	—	—	
		15, 20, 25	○	○	—	○★	○	○[7]	○[7]	○	—	—	—	○	
		30, 35	○	○	—[7]	○★	○	○	○	○	—	—	—	○	
		45, 55, 65	○	○	—[7]	○★	○	○	○	○	—	—	—	○	
		85	○	○	—[7]	○★	○	○	○	○	—	—	—	—	
		100, 120, 150	○	○	—	○★	—	—	—	—	—	—	—	—	
	SR	15 to 25	○	○	—	○	○	○[8]	○[8]	—	—	—	—	○	
		30 to 70	○	○	—	○	○	○	○	—	—	—	—	—	
		85 to 150	○	○	—	○	—	—	—	—	—	—	—	—	
	NR-X/NRS-X	25 to 65	○	○	○	○	○	○	○	○	△[9]	○	○	—	
	NR/NRS	75, 85	○	○	○	○	○	○	○	○	—	—	—	—	
		100	○	○	○	○	○[10]	○[10]	○[10]	○[10]	—	—	—	—	
	HRW	12, 14	○★	○	—	○	—	—	—	—	—	—	—	—	
		17, 21	○★	—	—	—	○[11]	○[11]	○[11]	—	—	—	—	—	
		27 to 60	○★	○	—	○	○	○	○	—	—	—	—	—	

[1] Model SHS : Dedicated GC cap —Not applicable to model 15,
Stainless steel LM Guide —Applicable to models 15 to 25

[2] Model SSR : Dedicated GC cap —Applicable to all models except Model SSR15,
Stainless steel LM Guide —Applicable to XV, XW

[3] Models SVR and SVS : GG, PP —Applicable to models 25 and 30

[4] Model SHW : GG, PP —Applicable to models SHW21 and 27, Dedicated GC cap —Applicable to models SHW35, 50

[5] Model SRS : Dedicated cap CV —Applicable to models SRS 9W, 12 to 25,
Dedicated cap C —Applicable to models SRS 9W, 12 to 25

[6] Model SCR : Dedicated GC cap —Applicable to all models except Model SCR15

[7] Model HSR : Inner seals—Applicable to models 30 to 85
ZZ, KK—Grease nipples cannot be installed on model 15
GG—Only applicable to model 25
Steel Tape Model SP—Applicable to models 15 to 100
Dedicated CV caps—Applicable to models 12X to 100
Dedicated C caps—Applicable to models 12X to 100
Dedicated GC caps—Applicable to models 20 to 100
Dedicated LM cover—Applicable to models 25 to 55
Side nipples—Applicable to all models except 45YR and 55YR

[8] Model SR : ZZ, KK —Grease nipples cannot be installed on models SR15, 20,
Dedicated cap CV —Applicable to models SR15 to 85,
Dedicated cap C —Applicable to models SR15 to 85,
Dedicated cap GC —Applicable to models SR20 to 120,
Stainless steel LM Guides —Applicable to models SR15 to 35

[9] Model NR-X/NRS-X : YY —Not applicable to models NR-SLRX, NRS-SLRX, NR-SLCX, or NRS-SLCX.

Options

Table of Supported Options by Models

Symbols in the table ○: Applicable △: Applicable depending on model (see note)
★: Recommended by THK (standard stock item)

												Lubrication		Corrosion prevention	
	Low-resistance end seal + side seal	Light-Resistance Contact Seal LiCS	LiCS + side seal (+ inner seal)	High chemical resistance fluorine seal	Plate cover SV	Steel tape SP	Dedicated CV cap	Dedicated C cap	Dedicated GC cap	Dedicated bellows	Dedicated LM cover	QZ Lubrica-tor	End plate with side nipple	AP-HC, AP-C, AP-CF	Stainless steel LM Guide
	RR	GG	PP	FS	Z	Z	—	—	—	—	TPH (dedicated for HSR)	QZ	—	F	M
	—	○	○	—	—	○	○	○	△[1]	○	—	○	○	○	△[1]
	—	○	○	—	—	○	○	○	△[2]	○	—	○	○	○	△[2]
	—	△[3]	△[3]	—	—	○	○	○	○	○	—	○	○	○	—
	—	—	—	—	—	—	○	○	—	—	—	○	—	—	○
	—	—	—	—	—	—	○	○	—	○	—	○	—	○	○
	—	△[4]	△[4]	—	—	—	○	○	△[4]	○	—	○	—	○	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	○
	—	—	—	—	—	—	—	—	—	—	—	○	—	—	○
	—	—	—	—	—	—	△[5]	△[5]	—	—	—	○	—	—	○
	—	—	—	—	—	—	○	○	△[6]	—	—	○	○	○	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	△[7]	△[7]	—	—	—	—	—	○	○
	○	△[7]	—	—	—	○	○	○	△[7]	○	△[7]	○	○	○	○
	○	—	—	—	—	○	○	○	○	○	○	○	○	○	○
	○	—	—	—	—	○	○	○	○	○	△[7]	○	△[7]	○	—
	—	—	—	—	—	○	—	○	○	○	—	○	—	○	—
	—	—	—	—	—	△[7]	—	△[7]	△[7]	—	—	—	—	○	—
	○	—	—	—	—	○	○	○	△[8]	○	—	—	—	○	○
	—	—	—	—	—	○	○	○	○	○	—	—	—	○	△[8]
	—	—	—	—	—	—	△[8]	△[8]	△[8]	—	—	—	—	○	—
	—	—	—	—	—	○	○	○	○	○	—	○	○	○	—
	—	—	—	—	△[10]	○	—	○	△[10]	○	—	—	○	○	—
	—	—	—	—	—	○	—	○	○	○	—	○	○	○	—
	—	—	—	—	—	—	△[11]	△[11]	—	—	—	—	—	○	○
	—	—	—	—	—	—	○	○	—	○	—	—	—	○	○
	—	—	—	—	—	—	○	○	△[11]	△[11]	—	—	—	○	△[11]

[10] Model NR/NRS : DD, KK —NR/NRS100 cannot be equipped with a standard grease nipple. Please contact THK if a grease nipple is required.
ZZ, HH —Side nipple required for NR/NRS100.
Plate cover SV —Compatible with NR/NRS75. Dedicated GC caps —Compatible with all models except NR/NRS75.

[11] Model HRW : DD, KK —Grease nipple cannot be attached to model 17 only. Side seals cannot be attached to models 17 and 21 only.
ZZ —Side seals cannot be attached to models 17 and 21 only.
Dedicated CV cap —Applicable to models 14 to 60,
Dedicated C cap —Applicable to models 14 to 60,
Dedicated GC cap —Applicable to models 35 to 60,
Dedicated bellows —Applicable to models 17 to 50,
Stainless steel LM Guide —Applicable to models 12 to 35

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.

Model No.		Type	Contamination protection												
			End seal	Side seal	Inner seal	End seal + side seal (+ inner seal)	Double seals + side seal (+ inner seal)	End seal + side seal (+ inner seal) + metal scraper	Double seals + side seal (+ inner seal) + metal scraper	Laminated Contact Scraper LaCS	Side scraper	End seal + protector	Double seals + protector	Low-resistance end seal	
		Symbol	UU	—	—	SS	DD	ZZ	KK	HH	YY	JJ	TT	LL	
Full-Ball	RSX	5, 5W	○	—	—	—	—	—	—	—	—	—	—	—	
		7, 7W, 9, 9W, 12, 12W, 15, 15W, 20, 25	○	—	—	—	—	—	—	△[12]	—	—	—	—	
	RSR	2, 3	—	—	—	—	—	—	—	—	—	—	—	—	
		3W, 14	○	—	—	—	—	—	—	—	—	—	—	—	
	HR	918 to 2555	○	—	—	—	—	—	—	—	—	—	—	—	
		3065 to 60125	○	—	—	—	—	—	—	—	—	—	—	—	
	GSR	15 to 35	○★	○	—	○	○	○	○	—	—	—	—	—	
	GSR-R	25 to 35	○	○	—	○	○	○	○	—	—	—	—	—	
	CSR	15 to 25	○	○	—	○	○	○[17]	○[17]	—	—	—	—	○	
		30 to 45	○	○	○	○	○	○	○	—	—	—	—	○	
	MX	5, 7	○	—	—	—	—	—	—	—	—	—	—	—	
	JR	25 to 55	○	○	—	○	○	○	○	—	—	—	—	—	
	HCR	12	○	—	—	—	—	—	—	—	—	—	—	—	
		15 to 65	○	○	—	○	○	○[18]	○[18]	—	—	—	—	○[18]	
	HMG	15 to 65	○[19]	—	—	—	—	—	—	—	—	—	—	—	
	NSR	20 to 70	○	○	—	○	—	—	—	—	—	—	—	—	
	HDR	15 to 65	○	○	—	○	○	○	○	○	—	—	—	—	
	HSR-M1	15 to 35	○	○	—	○	—	—	—	—	—	—	—	—	
	SR-M1	15 to 35	○	○	—	○	—	—	—	—	—	—	—	—	
	RSX-M1	9, 9W, 12, 12W, 15, 15W	○	—	—	—	—	—	—	—	—	—	—	—	
	RSR-M1	20	○	—	—	—	—	—	—	—	—	—	—	—	
	HSR-M2	15 to 25	○	○	—	○	—	—	—	—	—	—	—	—	
Caged Roller	SRG	15X	○	○	○	○	○	—	—	○	—	—	—	—	
		20X, 25X, 30X	○	○	○	○	○	○	○	○	—	△[23]	△[23]	—	
		35, 45, 55, 65	○	○	○	○	○	○	○	○	○	○	○	—	
		85, 100	○	○	○	○	○[23]	○	○	○	—	—	—	—	
	SRN	35 to 65	○	○	○	○	○	○	○	○	—	—	—	—	
	SRW	70 to 100	○	○	○	○	○	○	○	○	—	—	—	—	
		130, 150	○	○	○	○	○	○	○	—	—	—	—	—	
Full-Roller	HRX	25 to 65	○	○	○	○	○	○	○	○	—	○	○	—	

[12] Model RSX : HH —Applicable to models 9 to 25, and 9W to 15W,
Dedicated CV cap —Applicable to models 9W, and 12 to 25,
Dedicated C cap —Applicable to models 9W, and 12 to 25

[13] Model RSR : Dedicated C cap —Applicable to Model RSR14W

[14] Model HR : Dedicated CV cap —Applicable to models HR1123 to 50105,
Dedicated C cap —Applicable to models HR1123 to 50105,
Dedicated GC cap —Applicable to models HR2042 to 50105

[15] Model GSR : Dedicated GC cap —Applicable to all models except Model GSR15

[16] Model GSR-R : AP-HC treatment of rack rail is not available

[17] Model CSR : ZZ, KK —Grease nipple cannot be attached to Model CSR15,
Dedicated GC cap —Applicable to all models except Model CSR15

[18] Model HCR : ZZ, KK —Grease nipple cannot be attached to Model HCR15.
When using joint LM rails, the contamination protection seal must be a low-resistance seal (contamination protection code: LL).

[19] Model HMG : Straight-and-curved seal (code: UU).
Dedicated GC caps —Applicable to Model HMG25

Options

Table of Supported Options by Models

Symbols in the table ○: Applicable △: Applicable depending on model (see note)
★: Recommended by THK (standard stock item)

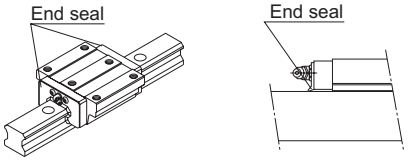
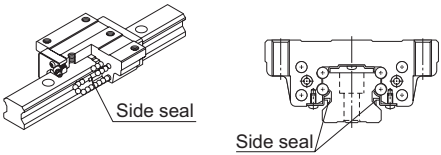
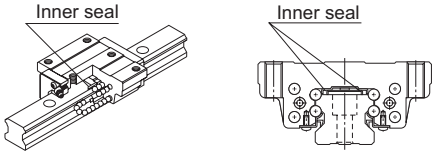
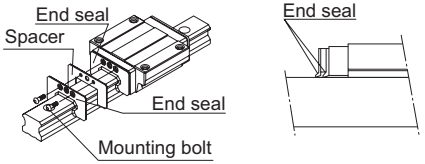
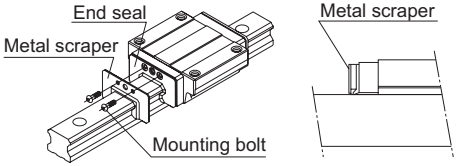
												Lubrication		Corrosion prevention	
	Low resistance end seal + side seal	Light-Resistance Contact Seal LiCS	LiCS + side seal (+ inner seal)	High chemical resistance fluorine seal	Plate cover	Steel tape SP	Dedicated CV cap	Dedicated C cap	Dedicated GC cap	Dedicated bellows	Dedicated LM cover	QZ Lubricator	End plate with side nipple	AP-HC, AP-C, AP-CF	Stainless steel LM Guide
	RR	GG	PP	FS	Z	Z	—	—	—	—	TPH (dedicated for HSR)	QZ	—	F	M
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	○
	—	—	—	—	—	—	△[12]	△[12]	—	—	—	○	—	○	○
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	○
	—	—	—	—	—	—	△[13]	△[13]	—	—	—	—	—	○	○
	—	—	—	—	—	—	△[14]	△[14]	△[14]	—	—	—	—	○	○
	—	—	—	—	—	—	△[14]	△[14]	△[14]	—	—	—	—	○	—
	—	—	—	—	—	—	○	○	△[15]	—	—	—	—	○	—
	—	—	—	—	—	—	—	○	○	—	—	—	—	○[16]	—
	○	—	—	—	—	—	○	○	△[17]	—	—	—	—	○	—
	○	—	—	—	—	—	○	○	○	—	—	—	—	○	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	○
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	—
	○	—	—	—	—	—	○	○	—	—	—	—	—	○	—
	—	—	—	—	—	—	○	○	△[19]	—	—	—	—	○	—
	—	—	—	—	—	—	○	○	○	○	—	—	—	○	—
	—	—	—	—	○	—	○	○	△[20]	—[20]	—	○	○	—	—
	—	—	—	—	—	—	△[21]	△[21]	—	—	—	—	—	○	
	—	—	—	—	—	—	○[22]	○[22]	—	—	—	—	—	○	
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	
	—	—	—	—	—	—	○	○	—	—	—	—	—	○	
	—	○	○	—	—	—	○	○	—	○	—	○	○	○[23]	—
	—	○	○	—	△[23]	—	○	○	○	○	—	○	○	○[23]	—
	—	—	—	○	○	—	○	○	○	○	—	○	○	○[23]	—
	—	—	—	—	○	—	—	○	○	○	—	○	○	○[23]	—
	—	—	—	—	○	—	○	○	○	—	—	○	○	○[24]	—
	—	—	—	—	○	—	○	○	○	○	—	○	○	○[25]	—
	—	—	—	—	—	—	△[25]	○	○	○	—	○	○	○[25]	—
	—	—	—	—	—	○	○	○	○	○	—	○	○	○[26]	—

[20] Model HDR : Dedicated GC cap —Applicable to all models except Model HDR15
Contact THK if a dedicated bellows is desired.
[21] Model HSR-M1 (for high temperatures) : Dedicated cap CV —Only works at room temperature,
Dedicated cap C —Only works at room temperature
[22] Model SR-M1 (for high temperatures) : Dedicated cap CV —Only works at room temperature,
Dedicated cap C —Only works at room temperature
[23] Model SRG : DD —Side nipple required for model 100.
JJ, TT —Applicable to models 30X to 65
Plate cover (see A**1-472**) —Applicable to models 25X to 100,
AP-HC surface treatment is not available
[24] Model SRN : Plate cover SV —Applicable to models 35 to 65
AP-HC surface treatment is not available
[25] Model SRW : Dedicated CV caps —Applicable to models 70 to 130,
AP-HC surface treatment is not available
[26] Model HRX : AP-HC surface treatment is not available

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.

Seal and Metal Scraper

- For the supported models, see the table of options by model number on A1-542.
- For the LM block length (dimension L) with seals attached, see A1-555 to A1-563.
- For the maximum seal resistance, see A1-570 to A1-572.

Item name	Schematic diagram/mounting location	Purpose/location of use
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
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
Metal scraper (non-contact)		Used in locations where welding spatter may adhere to the LM rail

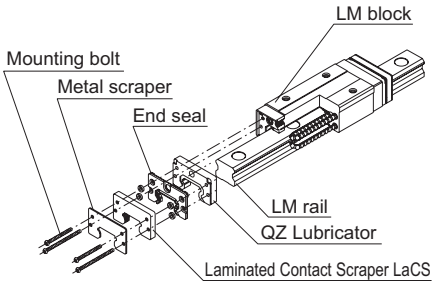
Symbol	Contamination protection accessories
UU	With end seal
SS	With end seal + side seal + inner seal[1]
DD	With double seals + side seal + inner seal[1]
ZZ	With end seal + side seal + inner seal[1] + metal scraper
KK	With double seals + side seal + inner seal[1] + metal scraper

[1] Some models are not equipped with inner seals (see A1-542).

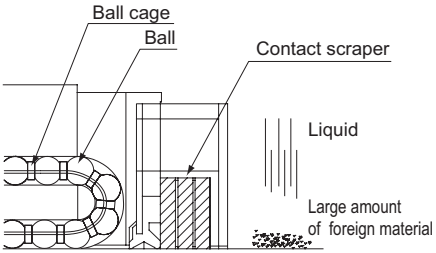
Laminated Contact Scraper LaCS

●For the supported models, see the table of options by model number on A1-542.
●For the LM block dimension (L dimension) with Laminated Contact Scraper LaCS attached, see A1-555 to A1-563.
●For the resistance value of the Laminated Contact Scraper LaCS, see A1-573.
●For precautions on using the Laminated Contact Scraper LaCS, see A1-623.

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



External View



Structural Drawing

Features

- Since the 3 layers of scrapers fully contact the LM rail, LaCS is highly capable of removing minute foreign material.
- Since it uses oil-impregnated, foam synthetic rubber with a self-lubricating function, low friction resistance is achieved.

Symbol	Contamination protection accessories
UUHH	With end seal + LaCS
SSHH	With end seal + side seal + inner seal[1] + LaCS
DDHH	With double seals + side seal + inner seal[1] + LaCS
ZZHH	With end seal + side seal + inner seal[1] + metal scraper + LaCS
KKHH	With double seals + side seal + inner seal[1] + metal scraper + LaCS
JJHH[2]	With end seal + side seal + inner seal[1] + LaCS + protector (serving also as metal scraper)
TTHH[2]	With double seals + side seal + inner seal[1] + LaCS + protector (serving also as metal scraper)

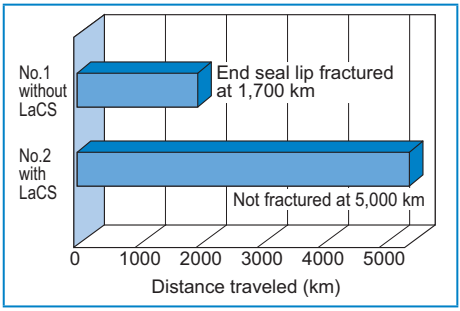
[1] Some models are not equipped with inner seals (see A1-542).
[2] JJHH and TTHH are only available for models SVR/SVS, NR-X/NRS-X, SRG, and HRX.
Note: For models SVR/SVS, NR-X/NRS-X, SRG, and HRX with HH specifications (with LaCS), a protector (A1-551) can be installed. Contact THK if you want to use the protector with other options.

● Test in an environment with a water-soluble coolant

Test environment: water-soluble coolant

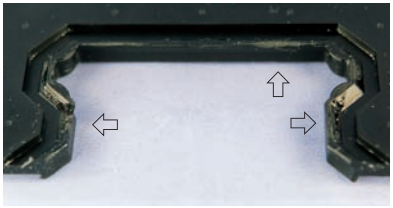
Item		Description
Tested model	No.1	SHS45R1SS+3000L (end seal only)
	No.2	SHS45R1SSHH+3000L (end seal and LaCS)
Maximum speed		200 m/min
Environmental conditions		Coolant spray amount: 5 times per 24 h

Test results



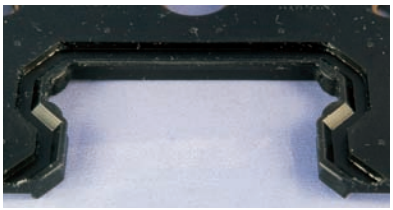
Magnified view of the end seal lip

No. 1: without LaCS - lip fractured at 1,700 km



⇦Areas marked with arrow are fractured

No. 2: with LaCS - no anomaly observed after traveling 5,000 km



Lip has not been fractured

● Test in an environment with minute foreign material

Test environment: minute foreign material

Item		Description
Tested model	No.1	Caged Ball LM Guide #45R (DD+600L) double seals only
	No.2	Caged Ball LM Guide #45R (HH+600L) LaCS only
Max speed/ acceleration		60 m/min, 1 G
External load		9.6 kN
Foreign material conditions		Type: FCD450#115 (particle diameter: 125 μm or less)
		Spray amount: 1 g/1 h (Total: 120 g)

No. 1 Traveled 100 km (double-seal configuration)



Large amount of foreign matter has entered the raceway

Test results: amount of foreign material entering the raceway

Seal configuration		Mass (g) of foreign material entering the raceway
Double-seal configuration (2 layers of end seals)	Tested model 1	0.3
	Tested model 2	0.3
	Tested model 3	0.3
Laminated Contact Scraper LaCS specification	Tested model 1	0
	Tested model 2	0
	Tested model 3	0

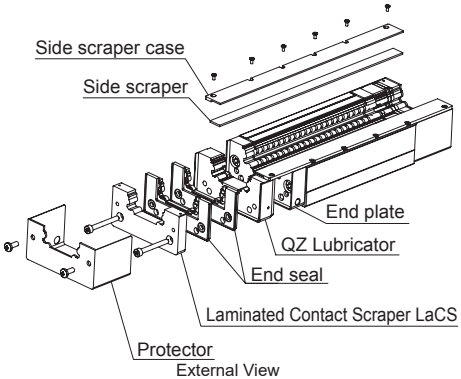
No. 2 Traveled 100 km (LaCS only)



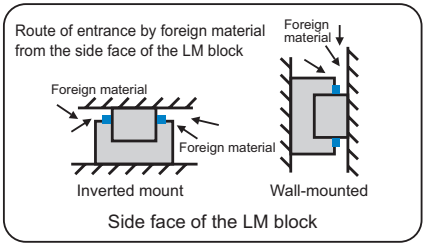
No foreign matter entering the raceway observed

Side Scraper

- Applicable models: models SVR/SVS, NR-X/NRS-X, and SRG
- For the resistance of side scraper, see A1-574.
- For the LM block length (dimension L) with side scrapers attached, see A1-555.
- For notes regarding how to handle the side scraper, see A1-623.

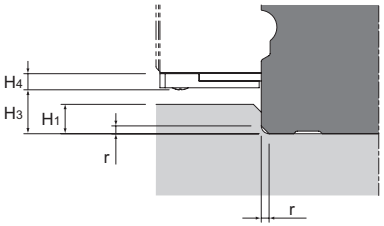


External View
(Ex: in case of QZTTHHYY type)



Features

- Minimizes foreign material entering from the side of the LM Guide in a harsh environment.
- This is effective at contamination protection when the system is inverted or mounted on a wall.



Side view of the LM block after the side scraper is mounted

Shoulder Height of the Mounting Surface and Corner Radius of Model SVR/SVS or NR-X/NRS-X After Mounting Side Scraper

Unit: mm

Model No.	Corner radius r (max)	Shoulder height of the LM rail H_1	H_3	Side scraper thickness H_4
25	0.5	2	2.9	2.6
30	1	3.5	4.4	
35	1	5.5	6.4	
45	1	8	9	
55	1.5	10.5	11.4	
65	1.5	11	12.3	

Shoulder Height of the Mounting Surface and Corner Radius of Model SRG After Mounting Side Scraper

Unit: mm

Model No.	Corner radius r (max)	Shoulder height of the LM rail H_1	H_3	Side scraper thickness H_4
35	1	3	4	2
45	1	3.5	5.5	2.5
55	1.5	5.5	7.5	2.5
65	1.5	6	8.5	3

Model number coding

SVR45 LR 1 QZ JJHH YY C1 +1200L

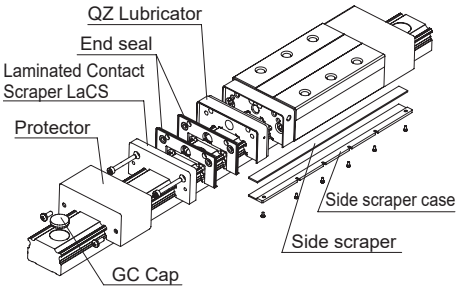
YY: With side scraper[1]

[1] The side scraper can accommodate various options of contamination protection accessories and lubrication accessories. For details, contact THK.

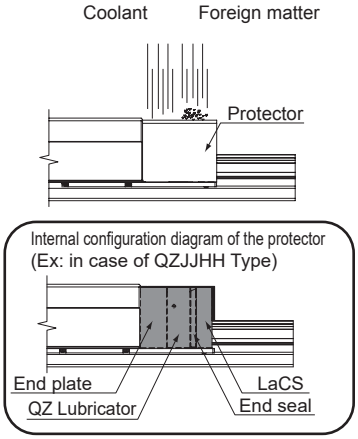
Notes: The side scraper is not sold alone.
Models NR-SLRX/NRS-SLRX and NR-SLCX/NRS-SLCX are not supported.

Protector

●Applicable models: models SVR/SVS, NR-X/NRS-X, SRG, and HRX
●HH type (with LaCS) for models SVR/SVS, NR-X/NRS-X, SRG, and HRX is provided with the protector.
●For the LM block length (dimension L) with protectors attached, see A1-555.

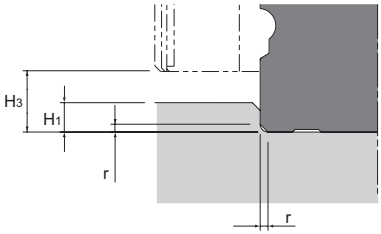


External View
(Ex: in case of QZTTHHYY type)



Features

- The protector minimizes the entrance of foreign material even in harsh environments where foreign material such as fine particles and liquids are present.



Side view of the LM block after the protector is mounted

The shoulder height of the mounting surface and the corner radius after the protector of model HRX is mounted

Unit: mm

Model No.	Corner radius r (max)	Shoulder height for the LM rail H_1	H_3
25	1	4	5
30	1	4	5
35	1	5.5	6.5
45	1.5	6.5	8.5
55	1.5	9	11
65	1.5	9.5	12

The Shoulder Height of the Mounting Surface and Corner Radius of Model SVR/SVS or NR-X/NRS-X After Protector is Mounted

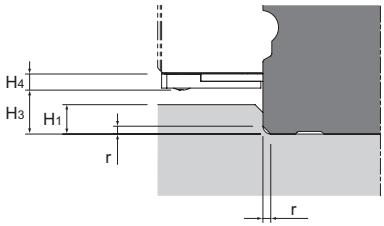
Unit: mm

Model No.	Corner radius r (max)	Shoulder height of the LM rail H_1	H_3
25	0.5	4	5.5
30	1	5	7
35	1	6	9
45	1	8	11.6
55	1.5	10	14
65	1.5	10	15

Shoulder Height of the Mounting Surface and Corner Radius After the Protector of Model SRG is Mounted

Unit: mm

Model No.	Corner radius r (max)	Shoulder height of the LM rail H_1	H_3
30X	1	4	5
35	1	5	6
45	1.5	6	8
55	1.5	8	10
65	1.5	9	11.5



Side view of the LM block after the protector and side scraper are mounted

Shoulder Height of the Mounting Surface and Corner Radius of Model SVR/SVS or NR-X/NRS-X After Protector and Side Scraper are Mounted

Unit: mm

Model No.	Corner radius r (max)	Shoulder height of the LM rail H_1	H_3	Side scraper thickness H_4
25	0.5	2	2.9	2.6
30	1	3.5	4.4	
35	1	5.5	6.4	
45	1	8	9	
55	1.5	10.5	11.4	
65	1.5	11	12.3	

Shoulder Height of the Mounting Surface and Corner Radius of Model SRG after Protector and Side Scraper are Mounted

Unit: mm

Model No.	Corner radius r (max)	Shoulder height of the LM rail H_1	H_3	Side scraper thickness H_4
35	1	3	4	2
45	1	3.5	5.5	2.5
55	1.5	5	7	3
65	1.5	6	8.5	3

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

Light-Resistance Contact Seal LiCS

●For the supported models, see the table of options by model number on A1-542.
●For the LM block dimension (L dimension) with Light-Resistance Contact Seal LiCS attached, see A1-567.
●For the resistance value of the Light-Resistance Contact Seal LiCS, see A1-574.
●For precautions on using the Light-Resistance Contact Seal LiCS, see A1-624.

LiCS is a light sliding resistance contact seal. It is effective in removing dust on the raceway and retaining a lubricant such as grease. It achieves extremely low drag and smooth, stable motion.

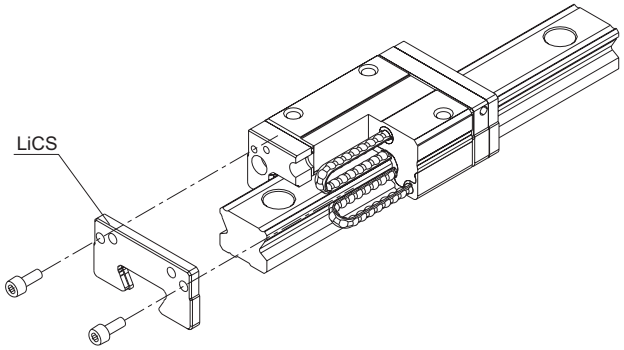


Fig. 1: Structural Drawing of SSR + LiCS

Features

Light-Resistance Contact Seal LiCS is a seal that uses a light-resistance material in its sealing element and contacts the LM rail raceway to achieve low sliding resistance. It is optimal for applications where low sliding resistance is required in a clean environment, such as semiconductor-related devices, inspection devices, and OA equipment.

- Since the sealing element contacts the LM rail raceway, it is effective in removing dust on the raceway.
- Use of oil-impregnated, expanded synthetic rubber, which has excellent self-lubricating properties, achieves low drag resistance.

Model number coding

SSR20 XW 2 GG C1 +640L P -II

Light-Resistance Contact Seal LiCS on both ends

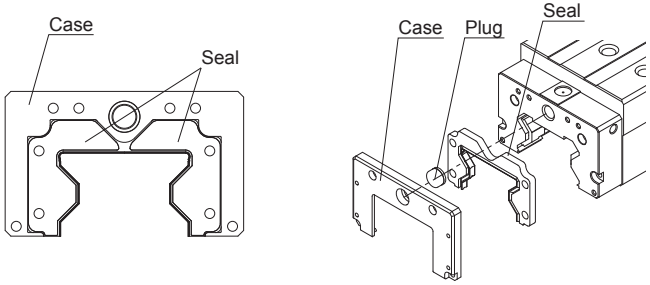
Symbol	Contamination protection accessories
GG	LiCS
PP	With LiCS + side seal + inner seal[1]

[1] Some models are not equipped with inner seals (see A1-542).

High Chemical Resistance Fluorine Seal FS

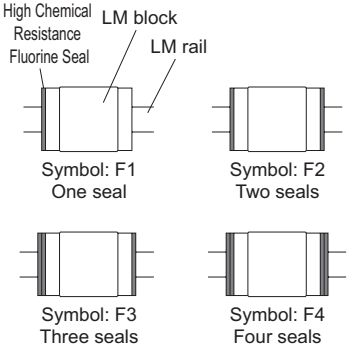
- Applicable models: models SRG35, SRG45, SRG55, and SRG65
- For the LM block dimension (L dimension) with a high chemical resistance fluorine seal attached, see A1-569.
- For the resistance value of the high chemical resistance fluorine seal , see A1-574.
- For precautions on using the high chemical resistance fluorine seal , see A1-624.

The high chemical-resistance fluorine seal is made of fluororubber and has excellent chemical resistance. The fluorine seal can be inserted from the upper surface of the LM rail and is easy to install.



Components/Structure

Symbol	Contamination protection accessories
F2	Fluorine seals + side seals + inner seals
FZ2	Fluorine seals + side seals + inner seals + metal scrapers
FJ2	Fluorine seals + side seals + inner seals + protectors
F4	Fluorine seals (double) + side seals + inner seals
FZ4	Fluorine seals (double) + side seals + inner seals + metal scrapers
FJ4	Fluorine seals (double) + side seals + inner seals + protectors
QZF2	Fluorine seals + side seals + inner seals + QZ
QZFZ2	Fluorine seals + side seals + inner seals + metal scrapers + QZ
QZFJ2	Fluorine seals + side seals + inner seals + QZ + protectors
QZF4	Fluorine seals (double) + side seals + inner seals + QZ
QZFZ4	Fluorine seals (double) + side seals + inner seals + metal scrapers + QZ
QZFJ4	Fluorine seals (double) + side seals + inner seals + QZ + protectors



Standard Assemblies

Model number coding

When purchasing in a set with an LM Guide
(Example) SRG45LR2QZ **F2** C0 + 1200LZ-Ⅱ
High chemical resistance fluorine seal symbol (see the standard assemblies diagram)

Note: Contact THK if you require seals on individual blocks in configurations that differ from those in the standard assemblies diagram.

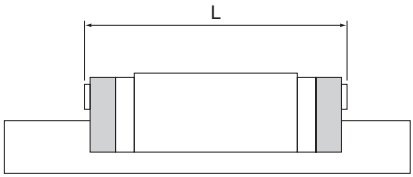
When purchasing high chemical resistance fluorine seals individually
(Example) SRG45-F1-Z
High chemical resistance fluorine seal symbol (F1 only for individual purchase)

Note: Individual purchases come in a set with the high chemical resistance fluorine seal, a case, and a plug.

Notes: If this product will be used in special environments, such as in a vacuum or at very low or high temperatures, contact THK.
This seal cannot be used in combination with an end seal or a Laminated Contact Scraper (LaCS).
Even with specifications for high chemical-resistance fluorine seals, use a bellows or cover to prevent machining chips and coolant from entering the product.

Dimensions of Each Model with Options Attached

The LM Block Length (Dimension L) with LaCS and Seals Attached



Unit: mm

Model No.		L								
		UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
SHS	15C/V/R	64.4	64.4	69.8	66.8	72.2	78.6	84	79.8	85.2
	15LC/LV	79.4	79.4	84.8	81.8	87.2	93.6	99	94.8	100.2
	20C/V	79	79	85.4	83	89.4	93.6	100	96	102.4
	20LC/LV	98	98	104.4	102	108.4	112.6	119	115	121.4
	25C/V/R	92	92	101.6	100.4	107.6	112	119.2	114.4	121.6
	25LC/LV/LR	109	109	118.6	117.4	124.6	129	136.2	131.4	138.6
	30C/V/R	106	106	116	113.8	122.4	129.4	138	131.8	140.4
	30LC/LV/LR	131	131	141	138.8	147.4	154.4	163	156.8	165.4
	35C/V/R	122	122	134.8	132.4	142.2	148	157.8	150.4	160.2
	35LC/LV/LR	152	152	164.8	162.4	172.2	178	187.8	180.4	190.2
	45C/V/R	140	140	152.8	151.2	161	169	178.8	172.2	182
	45LC/LV/LR	174	174	186.8	185.2	195	203	212.8	206.2	216
	55C/V/R	171	171	186.6	184.2	195.4	202	213.2	205.2	216.4
	55LC/LV/LR	213	213	228.6	226.2	237.4	244	255.2	247.2	258.4
	65C/V	221	221	238.6	236.2	248.6	258	270.4	261.2	273.6
	65LC/LV	272	272	289.6	287.2	299.6	309	321.4	312.2	324.6
SSR	15XV/XSB	40.3	40.3	47.3	44.9	50.7	59.5	65.3	60.7	66.5
	15XW/XTB	56.9	56.9	63.9	61.5	67.3	76.1	81.9	77.3	83.1
	20XV/XSB	47.7	47.7	54.6	53.4	60.3	67.7	74.6	70.1	77
	20XW/XTB	66.5	66.5	73.4	72.2	79.1	86.5	93.4	88.9	95.8
	25XV/XSB	60	60	67.4	65.7	73.1	80	87.4	82.4	89.8
	25XW/XTB	83	83	90.4	88.7	96.1	103	110.4	105.4	112.8
	30XV/XSB	66.7	66.7	74.8	72.4	80.5	90.7	98.8	93.1	101.2
	30XW/XTB	97	97	105.1	102.7	110.8	121	129.1	123.4	131.5
	35XV/XSB	77.5	77.5	86.5	84.3	93.3	103.5	112.5	105.9	114.9
	35XW/XTB	110.9	110.9	119.9	117.7	126.7	136.9	145.9	139.3	148.3
SHW	12CAM/CRM	37	37	—	—	—	48	—	—	—
	12HRM	50.4	50.4	—	—	—	61.4	—	—	—
	14CAM/CRM	45.5	45.5	—	—	—	60.7	—	—	—
	17CAM/CRM	51	51	54	53.4	56.4	66.2	69.2	67.4	70.4
	21CA/CR	59	59	64	63.2	68.2	75.6	80.6	77.2	82.2
	27CA/CR	72.8	72.8	78.6	77.8	83.6	89.4	95.2	91.8	97.6
	35CA/CR	107	107	114.4	112	119.4	129	136.4	131.4	138.8
	50CA/CR	141	141	149.2	147.4	155.6	166	174.2	168.4	176.6

Unit: mm

Model No.		L								
		UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
SRS	5M	16.9	—	—	—	—	—	—	—	—
	5N	20.1	—	—	—	—	—	—	—	—
	5WM	22.1	—	—	—	—	—	—	—	—
	5WN	28.1	—	—	—	—	—	—	—	—
	7S	19	19	—	—	—	—	—	—	—
	7M	23.4	23.4	—	—	—	—	—	—	—
	7N	31	31	—	—	—	—	—	—	—
	7WS	22.5	22.5	—	—	—	—	—	—	—
	7WM	31	31	—	—	—	—	—	—	—
	7WN	40.9	40.9	—	—	—	—	—	—	—
	9XS	21.5	21.5	—	—	—	33.1	—	—	—
	9XM	30.8	30.8	—	—	—	42.4	—	—	—
	9XN	40.8	40.8	—	—	—	52.4	—	—	—
	9WS	26.5	26.5	—	—	—	38.1	—	—	—
	9WM	39	39	—	—	—	50.6	—	—	—
	9WN	50.7	50.7	—	—	—	62.3	—	—	—
	12S	25	25	—	—	—	36.6	—	—	—
	12M	34.4	34.4	—	—	—	46	—	—	—
	12N	47.1	47.1	—	—	—	58.7	—	—	—
	12WS	30.5	30.5	—	—	—	42.1	—	—	—
	12WM	44.5	44.5	—	—	—	56.1	—	—	—
	12WN	59.5	59.5	—	—	—	71.1	—	—	—
	15S	32	32	—	—	—	46.2	—	—	—
	15M	43	43	—	—	—	57.2	—	—	—
	15N	60.8	60.8	—	—	—	75	—	—	—
	15WS	41.5	41.5	—	—	—	55.7	—	—	—
	15WM	55.5	55.5	—	—	—	69.7	—	—	—
	15WN	74.5	74.5	—	—	—	88.7	—	—	—
	20M	50	50	—	—	—	65.2	—	—	—
	25M	77	77	—	—	—	92.6	—	—	—
SCR	15S	64.4	64.4	69.8	66.8	72.2	78.9	84.4	79.9	85.2
	20S	79	79	85.4	83	89.4	94	100	96	102.5
	20	98	98	104.4	102	108.4	113	119	115	121.5
	25	109	109	118.6	117.4	124.6	129	136.2	131.4	138.6
	30	131	131	141	138.8	147.4	154.4	163	156.8	165.4
	35	152	152	164.8	162.4	172.2	178	187.8	180.4	190.2
	45	174	174	186.8	185.2	195	203	212.8	206.2	216
	65	272	272	289.6	287.2	299.6	309	321.4	312.2	324.6

Dimensions of Each Model with Options Attached

Unit: mm

Model No.		L								
		UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
HSR	8XSCM/XSRM	18	18	—	—	—	—	—	—	—
	8XCM/XRM	24	24	—	—	—	—	—	—	—
	8XLCM/XLRM	30.5	30.5	—	—	—	—	—	—	—
	10XSCM/XSRM	24	24	—	—	—	—	—	—	—
	10XCM/XRM	31	31	—	—	—	—	—	—	—
	10XLCM/XLRM	40	40	—	—	—	—	—	—	—
	12XSCM/XSRM	34	34	—	—	—	—	—	—	—
	12XCM/XRM	45	45	—	—	—	—	—	—	—
	12XLCM/XLRM	58	58	—	—	—	—	—	—	—
	15C/R/YR	56.6	56.6	61.8	58.2[1]	63.4[1]	76	81.2	77.2	82.4
	15LC/LR	74.6	74.6	79.8	76.2	81.4	94	99.2	95.2	100.4
	20C/R/CA/CB/YR	74	74	80.6	76.6	83.2	92	98.6	95.2	101.8
	20LC/LR/HA/HB	90	90	96.6	92.6	99.2	108	114.6	111.2	117.8
	25C/R/CA/CB/YR	83.1	83.1	90.7	86.7	94.3	101	108.6	105.3	112.9
	25LC/LR/HA/HB	102.2	102.2	109.8	105.8	113.4	120.1	127.7	124.4	132
	30C/R/CA/CB/YR	98	98	105.6	101.6	109.2	119.9	127.5	124.2	131.8
	30LC/LR/HA/HB	120.6	120.6	128.2	124.2	131.8	142.5	150.1	146.8	154.4
	35C/R/CA/CB/YR	109.4	109.4	117	113	120.6	132.4	140	135.6	143.2
	35LC/LR/HA/HB	134.8	134.8	142.4	138.4	146	157.8	165.4	161	168.6
	45C/R/CA/CB/XYR/YR	138.9	138.9	146.1	144.1	151.3	168	175.2	171.2	178.4
	45LC/LR/HA/HB	170.7	170.7	177.9	175.9	183.1	199.8	207	203	210.2
	55C/R/CA/CB/XYR/YR	162.9	162.9	170.1	168.1	175.3	192.6	199.8	195.8	203
	55LC/LR/HA/HB	201	201	208.2	206.2	213.4	230.7	237.9	233.9	241.1
	65XC/XR/XCA/XCB/XYR	190.5	190.5	197.7	195.3	202.5	224.3	231.5	227.5	234.7
	65XLC/XLR/XHA/XHB	250	250	257.2	254.8	262	283.8	291	287	294.2
	85R/A/B/CA/CB/YR	245.6	245.6	252.8	252.4	259.6	278.8	286	283.4	290.6
	85LR/LA/LB/HA/HB	303	303	310.2	309.8	317	336.2	343.4	340.8	348
	100HR/HA/HB	334	334	—	—	—	—	—	—	—
	120HR/HA/HB	365	365	—	—	—	—	—	—	—
	150HR/HA/HB	396	396	—	—	—	—	—	—	—
SR	15W/TB	57	57	62.2	58.4[1]	63.6[1]	—	—	—	—
	15V/SB	40.4	40.4	45.6	41.8[1]	47[1]	—	—	—	—
	20W/TB	66.2	66.2	72.8	70.6[1]	77.2[1]	—	—	—	—
	20V/SB	47.3	47.3	53.9	51.7[1]	58.3[1]	—	—	—	—
	25W/TB	83	83	90.6	87.4	95	—	—	—	—
	25V/SB	59.2	59.2	66.8	63.6	71.2	—	—	—	—
	30W/TB	96.8	96.8	104.4	99.4	107	—	—	—	—
	30V/SB	67.9	67.9	75.5	70.5	78.1	—	—	—	—
	35W/TB	111	111	118.6	113.6	121.2	—	—	—	—
	35V/SB	77.6	77.6	85.2	80.2	87.8	—	—	—	—
	45W/TB	126	126	134.6	129.4	138	—	—	—	—
	55W/TB	156	156	164.6	159.4	168	—	—	—	—
	70T	194.6	194.6	201.8	200.8	208	—	—	—	—
	85T	180	180	—	—	—	—	—	—	—
	100T	200	200	—	—	—	—	—	—	—
	120T	235	235	—	—	—	—	—	—	—
	150T	280	280	—	—	—	—	—	—	—

[1] Grease nipple cannot be installed.

Unit: mm

Model No.		L									
		UU	SS	DD	ZZ	KK	UUHH	SSHH	DDHH	ZZHH	KKHH
NR/NRS	75R/A/B	218	218	229	226.6	237.6	—	—	—	—	—
	75LR/LA/LB	274	274	285	282.6	293.6	—	—	—	—	—
	85R/A/B	246.7	246.7	257.7	256.1	267.1	—	—	—	—	—
	85LR/LA/LB	302.8	302.8	313.8	312.2	323.2	—	—	—	—	—
	100R/A/B	286.2	286.2	297.8	295.6	307.2	—	—	—	—	—
	100LR/LA/LB	326.2	326.2	337.8	335.6	347.2	—	—	—	—	—
HRW	12LRM	37	37	—	—	—	—	—	—	—	—
	14LRM	45.5	45.5	—	—	—	—	—	—	—	—
	17CA/CR	50.8	—	54	53.6	58.6	—	—	—	—	—
	21CA/CR	58.8	—	64.2	62.8	69	—	—	—	—	—
	27CA/CR	72.8	72.8	79	75.6	81.8	—	—	—	—	—
	35CA/CR	106.6	106.6	113.8	112	119.2	—	—	—	—	—
	50CA/CR	140.5	140.5	147.7	143.3	150.5	—	—	—	—	—
	60CA	158.9	158.9	169.7	165.1	175.9	—	—	—	—	—
RSX	5M	16.9	—	—	—	—	—	—	—	—	—
	5NM	20.1	—	—	—	—	—	—	—	—	—
	5WM	22.1	—	—	—	—	—	—	—	—	—
	5WNM	28.1	—	—	—	—	—	—	—	—	—
	7SM	19	—	—	—	—	—	—	—	—	—
	7M	23.4	—	—	—	—	—	—	—	—	—
	7NM	31	—	—	—	—	—	—	—	—	—
	7WSM	22.5	—	—	—	—	—	—	—	—	—
	7WM	31	—	—	—	—	—	—	—	—	—
	7WNM	40.9	—	—	—	—	—	—	—	—	—
	9SM	21.5	—	—	—	—	33.1	—	—	—	—
	9M	30.8	—	—	—	—	42.4	—	—	—	—
	9NM	40.8	—	—	—	—	52.4	—	—	—	—
	9WSM	26.5	—	—	—	—	38.1	—	—	—	—
	9WM	39	—	—	—	—	50.6	—	—	—	—
	9WNM	50.7	—	—	—	—	62.3	—	—	—	—
	12SM	25.6	—	—	—	—	35.6	—	—	—	—
	12M	35	—	—	—	—	45	—	—	—	—
	12NM	47.7	—	—	—	—	57.7	—	—	—	—
	12WSM	30.5	—	—	—	—	42.1	—	—	—	—
	12WM	44.5	—	—	—	—	56.1	—	—	—	—
	12WNM	59.5	—	—	—	—	71.1	—	—	—	—
	15SM	31.9	—	—	—	—	46.1	—	—	—	—
	15M	42.9	—	—	—	—	57.1	—	—	—	—
	15NM	60.7	—	—	—	—	74.9	—	—	—	—
	15WSM	41.5	—	—	—	—	55.7	—	—	—	—
	15WM	55.5	—	—	—	—	69.7	—	—	—	—
	15WNM	74.5	—	—	—	—	88.7	—	—	—	—
	20SM	38	—	—	—	—	53.2	—	—	—	—
	20M	50	—	—	—	—	65.2	—	—	—	—
	20NM	68	—	—	—	—	83.2	—	—	—	—
	25SM	54.5	—	—	—	—	72.7	—	—	—	—
	25M	77	—	—	—	—	95.2	—	—	—	—
	25NM	98	—	—	—	—	116.2	—	—	—	—

Options

Dimensions of Each Model with Options Attached

Unit: mm

Model No.		L								
		UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
RSR	2M	—	—	—	—	—	—	—	—	—
	2N	—	—	—	—	—	—	—	—	—
	3M	—	—	—	—	—	—	—	—	—
	3N	—	—	—	—	—	—	—	—	—
	3WM	14.9	—	—	—	—	—	—	—	—
	3WN	19.9	—	—	—	—	—	—	—	—
	14WVM	50	—	—	—	—	—	—	—	—
HR	918	45	—	—	—	—	—	—	—	—
	1123	52	—	—	—	—	—	—	—	—
	1530	69	—	—	—	—	—	—	—	—
	2042	91.6	—	—	—	—	—	—	—	—
	2042T	110.7	—	—	—	—	—	—	—	—
	2555	121	—	—	—	—	—	—	—	—
	2555T	146.4	—	—	—	—	—	—	—	—
	3065	145	—	—	—	—	—	—	—	—
	3065T	173.5	—	—	—	—	—	—	—	—
	3575	154.8	—	—	—	—	—	—	—	—
	3575T	182.5	—	—	—	—	—	—	—	—
	4085	177.8	—	—	—	—	—	—	—	—
	4085T	215.9	—	—	—	—	—	—	—	—
	50105	227	—	—	—	—	—	—	—	—
	50105T	274.5	—	—	—	—	—	—	—	—
	60125	329	—	—	—	—	—	—	—	—
GSR	15T	59.8	59.8	65[1]	65.8[1]	71[1]	—	—	—	—
	15V	47.1	47.1	52.3[1]	53.1[1]	58.3[1]	—	—	—	—
	20T	74	74	80.6	77.6	84.2	—	—	—	—
	20V	58.1	58.1	64.7	61.7	68.3	—	—	—	—
	25T	88	88	95	91.6	98.6	—	—	—	—
	25V	69	69	76	72.6	79.6	—	—	—	—
	30T	103	103	110.6	107.2	114.8	—	—	—	—
	35T	117	117	124.6	121.2	128.8	—	—	—	—
GSR-R	25T-R	88	88	95	91.6	98.6	—	—	—	—
	25V-R	69	69	76	72.6	79.6	—	—	—	—
	30T-R	103	103	110.6	107.2	114.8	—	—	—	—
	35T-R	117	117	124.6	121.2	128.8	—	—	—	—
CSR	15	56.6	56.6	61.8	58.2[1]	63.4[1]	—	—	—	—
	20S	74	74	80.6	76.6	83.2	—	—	—	—
	20	90	90	96.6	92.6	99.2	—	—	—	—
	25S	83.1	83.1	90.7	86.7	94.3	—	—	—	—
	25	102.2	102.2	109.8	105.8	113.4	—	—	—	—
	30S	98	98	105.6	101.6	109.2	—	—	—	—
	30	120.6	120.6	128.2	124.2	131.8	—	—	—	—
	35	134.8	134.8	142.4	138.4	146	—	—	—	—
	45	170.8	170.8	178	176	183.2	—	—	—	—
MX	5M	23.3	—	—	—	—	—	—	—	—
	7WM	40.8	—	—	—	—	—	—	—	—
JR	25A/B/R	83.1	83.1	90.7	89.4	97	—	—	—	—
	35A/B/R	113.6	113.6	125.6	122	134	—	—	—	—
	45A/B/R	145	145	159	150.8	164.8	—	—	—	—
	55A/B/R	165	165	175.4	170.4	180.8	—	—	—	—

[1] Grease nipple cannot be installed.

Unit: mm

Model No.		L								
		UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
HCR	12A+60/100R	44.6	—	—	—	—	—	—	—	—
	15A+60/150R	54.5	54.5	59.7	—	—	—	—	—	—
	15A+60/300R	55.5	55.5	60.7	57.1[1]	62.3[1]	—	—	—	—
	15A+60/400R	55.8	55.8	61	57.3[1]	62.5[1]	—	—	—	—
	25A+60/500R	81.6	81.6	89.2	85.5	93.1	—	—	—	—
	25A+60/750R	82.3	82.3	89.9	86	93.6	—	—	—	—
	25A+60/1000R	82.5	82.5	90.1	86.2	93.8	—	—	—	—
	35A+60/600R	107.2	107.2	114.8	111.2	118.8	—	—	—	—
	35A+60/800R	107.5	107.5	115.1	111.5	119.1	—	—	—	—
	35A+60/1000R	108.2	108.2	115.8	112	119.6	—	—	—	—
	35A+60/1300R	108.5	108.5	116.1	112.3	119.8	—	—	—	—
	45A+60/800R	136.7	136.7	143.9	142.1	149.2	—	—	—	—
	45A+60/1000R	137.3	137.3	144.5	142.7	149.9	—	—	—	—
	45A+60/1200R	137.3	137.3	144.5	142.7	149.9	—	—	—	—
	45A+60/1600R	138	138	145.2	143.3	150.5	—	—	—	—
	65A+60/1000R	193.8	193.8	201	199.4	206.6	—	—	—	—
	65A+60/1500R	195.4	195.4	202.6	200.8	208	—	—	—	—
	65A+45/2000R	195.9	195.9	203.1	201.3	208.5	—	—	—	—
	65A+45/2500R	196.5	196.5	203.7	201.8	209	—	—	—	—
	65A+30/3000R	196.5	196.5	203.7	201.8	209	—	—	—	—
HMG	15A	48	—	—	—	—	—	—	—	—
	25A	62.2	—	—	—	—	—	—	—	—
	35A	80.6	—	—	—	—	—	—	—	—
	45A	107.6	—	—	—	—	—	—	—	—
	65A	144.4	—	—	—	—	—	—	—	—
NSR-TBC	20TBC	67	—	—	—	—	—	—	—	—
	25TBC	78	—	—	—	—	—	—	—	—
	30TBC	90	—	—	—	—	—	—	—	—
	40TBC	110	110	—	—	—	—	—	—	—
	50TBC	123	123	—	—	—	—	—	—	—
	70TBC	150	150	—	—	—	—	—	—	—
HDR	15SC/SV	43	43	47.4	44.2	48.6	56	60.4	57.2	61.6
	15C/R/V	61.4	61.4	65.8	65.2	69.6	77	81.4	78.2	82.6
	15LC/LR/LV	74.9	74.9	79.3	78.7	83.1	90.5	94.9	91.7	96.1
	20SC/SR	57.3	57.3	62.5	59.7	64.9	70.3	75.5	72.7	77.9
	20C/R	74.9	74.9	80.1	80.7	85.9	91.3	96.5	93.7	98.9
	20LC/LR	90.7	90.7	95.9	96.5	101.7	107.1	112.3	109.5	114.7
	20UV/US	43.8	49	54.2	54.8	60	65.4	70.6	67.8	73
	20UW/UT	63.6	68.8	74	74.6	79.8	85.2	90.4	87.6	92.8
	25SC/SV	63.9	63.9	69.1	66.3	71.5	77.9	83.1	80.3	85.5
	25C/R/V	87.6	87.6	92.8	93.4	98.6	105	110.2	107.4	112.6
	25LC/LR/LV	104.5	104.5	109.7	110.3	115.5	121.9	127.1	124.3	129.5
	25UV/US	51.8	57	62.2	62.8	68	74.4	79.6	76.8	82
	25UW/UT	75.7	80.9	86.1	86.7	91.9	98.3	103.5	100.7	105.9
	30SC/SV	73.5	73.5	80.1	75.9	82.5	91.5	98.1	93.9	100.5
	30C/R/V	102.1	102.1	108.7	107.8	114.4	123.4	130	125.8	132.4
	30LC/LR/LV	124.1	124.1	130.7	129.8	136.4	145.4	152	147.8	154.4
	35SC/SV	84.2	84.2	91.2	86.6	93.6	102.2	109.2	104.6	111.6
	35C/R/V	116.5	116.5	123.5	122.2	129.2	137.8	144.8	140.2	147.2
	35LC/LR/LV	139.5	139.5	146.5	145.2	152.2	160.8	167.8	163.2	170.2
	45C/R/V	145.6	145.6	152.6	153.2	160.2	171.0	178.0	174.2	181.2
	45LC/LR/LV	177.3	177.3	184.3	184.9	191.9	202.7	209.7	205.9	212.9
	55C/R/V	179.2	179.2	186.2	186.8	193.8	204.6	211.6	207.8	214.8
	55LC/LR/LV	217.3	217.3	224.3	224.9	231.9	242.7	249.7	245.9	252.9
	65C/R	199.2	199.2	206.6	206.8	214.2	228.6	236.0	231.8	239.2
	65LC/LR	258.8	258.8	266.2	266.4	273.8	288.2	295.6	291.4	298.8

[1] Grease nipple cannot be installed.

Options

Dimensions of Each Model with Options Attached

Unit: mm

Model No.		L								
		UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
HSR-M1	15M1C/M1R/M1YR	59.6	59.6	—	—	—	—	—	—	—
	15M1LC/M1LR	77.6	77.6	—	—	—	—	—	—	—
	20M1C/M1R/M1YR	76	76	—	—	—	—	—	—	—
	20M1LC/M1LR	92	92	—	—	—	—	—	—	—
	25M1C/M1R/M1YR	83.9	83.9	—	—	—	—	—	—	—
	25M1LC/M1LR	103	103	—	—	—	—	—	—	—
	30M1C/M1R/M1YR	98.8	98.8	—	—	—	—	—	—	—
	30M1LC/M1LR	121.4	121.4	—	—	—	—	—	—	—
	35M1C/M1R/M1YR	112	112	—	—	—	—	—	—	—
	35M1LC/M1LR	137.4	137.4	—	—	—	—	—	—	—
SR-M1	15M1W/M1TB	57	57	—	—	—	—	—	—	—
	15M1V/M1SB	40.4	40.4	—	—	—	—	—	—	—
	20M1W/M1TB	66.2	66.2	—	—	—	—	—	—	—
	20M1V/M1SB	47.3	47.3	—	—	—	—	—	—	—
	25M1W/M1TB	83	83	—	—	—	—	—	—	—
	25M1V/M1SB	59.2	59.2	—	—	—	—	—	—	—
	30M1W/M1TB	96.8	96.8	—	—	—	—	—	—	—
	30M1V/M1SB	67.9	67.9	—	—	—	—	—	—	—
	35M1W/M1TB	111	111	—	—	—	—	—	—	—
	35M1V/M1SB	77.6	77.6	—	—	—	—	—	—	—
RSX-M1	9M1	30.8	—	—	—	—	—	—	—	—
	9M1N	40.8	—	—	—	—	—	—	—	—
	9M1W	39	—	—	—	—	—	—	—	—
	9M1WN	50.7	—	—	—	—	—	—	—	—
	12M1	35	—	—	—	—	—	—	—	—
	12M1N	47.7	—	—	—	—	—	—	—	—
	12M1W	44.5	—	—	—	—	—	—	—	—
	12M1WN	59.5	—	—	—	—	—	—	—	—
	15M1	42.9	—	—	—	—	—	—	—	—
	15M1N	60.7	—	—	—	—	—	—	—	—
	15M1W	55.5	—	—	—	—	—	—	—	—
	15M1WN	74.5	—	—	—	—	—	—	—	—
RSR-M1	20M1V	66.5	—	—	—	—	—	—	—	—
	20M1N	86.3	—	—	—	—	—	—	—	—
HSR-M2	15M2A	56.6	56.6	—	—	—	—	—	—	—
	20M2A	74	74	—	—	—	—	—	—	—
	25M2A	83.1	83.1	—	—	—	—	—	—	—

Unit: mm

Model No.		L										
		UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH	JJHH	TTHH
SVR/ SVS NR-X/ NRS-X	25R/C	82.8	82.8	88	89.2	94.4	96.8[1]	102[1]	102.5[1]	107.7[1]	102.5[1]	107.7[1]
	25LR/LC	102	102	107.2	108.4	113.6	116[1]	121.2[1]	121.7[1]	126.9[1]	121.7[1]	126.9[1]
	25SLR/SLC	170.3	170.3	175.5	176.7	181.9	184.3	189.5	190	195.2	190	195.2
	30R/C	98	98	104.6	104.4	111	115.2[1]	121.8[1]	120.9[1]	127.5[1]	120.9[1]	127.5[1]
	30LR/LC	120.5	120.5	127.1	126.9	133.5	137.7[1]	144.3[1]	143.4[1]	150[1]	143.4[1]	150[1]
	30SLR/SLC	204.6	204.6	211.2	211	217.6	221.8	228.4	227.5	234.1	227.5	234.1
	35R/C/RH/CH	109.5	109.5	116.5	117.1	124.1	126.7[1]	133.7[1]	133.5[1]	140.5[1]	133.5[1]	140.5[1]
	35LR/LC/LRH/LCH	135	135	142	142.6	149.6	152.5[1]	159.2[1]	159[1]	166[1]	159[1]	166[1]
	35SLR/SLC	238.9	238.9	245.9	246.5	253.5	256.1	263.1	262.9	269.9	262.9	269.9
	45R/C/RH/CH	138.2	138.2	145.2	146.6	153.6	158.2[1]	165.2[1]	165.8[1]	172.8[1]	165.8[1]	172.8[1]
	45LR/LC/LRH/LCH	171	171	178	179.4	186.4	191[1]	198[1]	198.6[1]	205.6[1]	198.6[1]	205.6[1]
	45SLR/SLC	271.4	271.4	278.4	279.8	286.8	291.4	298.4	299	306	299	306
	55R/C/RH/CH	163.3	163.3	168.4	169.8	176.8	182.4[1]	189.4[1]	190[1]	197[1]	191.1[1]	198.1[1]
	55LR/LC/LRH/LCH	200.5	200.5	205.6	207	214	219.6[1]	226.6[1]	227.2[1]	234.2[1]	228.3[1]	235.3[1]
	55SLR/SLC	400.5	400.5	405.6	407	414	419.6	426.6	427.2	434.2	428.3	435.3
	65R/C	186	186	191.8	194.2	201.6	208.8[1]	216.2[1]	217.5[1]	224.9[1]	217.5[1]	224.9[1]
	65LR/LC	246	246	251.8	254.2	261.6	268.8[1]	276.2[1]	277.5[1]	284.9[1]	277.5[1]	284.9[1]
	65SLR/SLC	422.2	422.2	428	430.4	437.8	445	452.4	453.7	461.1	453.7	461.1
SRG	15X A/V	69.2	69.2	71.2	—	—	85.2	87.2	—	—	—	—
	20X A/V	86.2	86.2	88.2	89.6	91.6	105.2	107.2	107.6	109.6	—	—
	20X LA/LV	106.2	106.2	108.2	109.6	111.6	125.2	127.2	127.6	129.6	—	—
	25X C/R	95.1	95.1	100.1	100.1	105.1	114.9	119.9	117.3	122.3	—	—
	25X LC/LR	115.1	115.1	120.1	120.1	125.1	134.9	139.9	137.3	142.3	—	—
	30X C/R	111	111	118	116	123	130.8	137.8	133.2	140.2	135	142
	30X LC/LR	135	135	142	140	147	154.8	161.8	157.2	164.2	159	166
	35C/R	125	125	132.8	130.7	138.5	142.6[1]	150.4[1]	151[1]	158.8[1]	151[1]	158.8[1]
	35LC/LR	155	155	162.8	160.7	168.5	172.6[1]	180.4[1]	181[1]	188.8[1]	181[1]	188.8[1]
	35SLC/SLR	180.8	180.8	188.6	186.5	194.3	198.4[1]	206.2[1]	206.8[1]	214.6[1]	206.8[1]	214.6[1]
	45C/R	155	155	164.2	161.5	170.7	175.6[1]	184.8[1]	184.8[1]	194[1]	184.6[1]	193.8[1]
	45LC/LR	190	190	199.2	196.5	205.7	210.6[1]	219.8[1]	219.8[1]	229[1]	219.6[1]	228.8[1]
	45SLC/SLR	231.5	231.5	240.7	238	247.2	252.1[1]	261.3[1]	261.3[1]	270.5[1]	261.1[1]	270.3[1]
	55C/R	185	185	194.2	191.5	200.7	205.6[1]	214.8[1]	214.8[1]	224[1]	214.6[1]	223.8[1]
	55LC/LR	235	235	244.2	241.5	250.7	255.6[1]	264.8[1]	264.8[1]	274[1]	264.6[1]	273.8[1]
	55SLC/SLR	292	292	301.2	298.5	307.7	312.6[1]	321.8[1]	321.8[1]	331[1]	321.6[1]	330.8[1]
	65C/V	244.9	244.9	256.1	252.5	263.7	268.9[1]	280.1[1]	280.1[1]	291.3[1]	279.9[1]	291.1[1]
	65LC/LV	303	303	314.2	310.6	321.8	327[1]	338.2[1]	338.2[1]	349.4[1]	338[1]	349.2[1]
	65SLC/SLV	380	380	391.2	387.6	398.8	404[1]	415.2[1]	415.2[1]	426.4[1]	415[1]	426.2[1]
	85LC	350	350	361.2	361	372.2	—	—	—	—	—	—
	100LC	395	395	406.2	411	422.2	—	—	—	—	—	—

[1] Grease nipple cannot be installed.

Dimensions of Each Model with Options Attached

Unit: mm

Model No.		L										
		UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH	JJHH	TTHH
SRN	35C/R	125	125	132.8	131.4	139.2	148.6	156.4	151	158.8	—	—
	35LC/LR	155	155	162.8	161.4	169.2	178.6	186.4	181	188.8	—	—
	35SLC/SLR	180.8	180.8	188.6	186.5	194.3	204.4	212.2	206.8	214.6	—	—
	45C/R	155	155	164.2	162.2	171.4	182	191.2	185.2	194.4	—	—
	45LC/LR	190	190	199.2	197.2	206.4	217	226.2	220.2	229.4	—	—
	45SLC/SLR	231.5	231.5	240.7	238	247.2	258.5	267.7	261.7	270.9	—	—
	55C/R	185	185	194.2	192.2	201.4	212	221.2	215.2	224.4	—	—
	55LC/LR	235	235	244.2	242.2	251.4	262	271.2	265.2	274.4	—	—
	55SLC/SLR	292	292	301.2	298.5	307.7	319	328.2	322.2	331.4	—	—
	65C/R	244.9	244.9	256.1	252.5	263.7	277.3	288.5	280.5	291.7	—	—
	65LC/LR	303	303	314.2	311.4	322.6	335.4	346.6	338.6	349.8	—	—
	65SLC/SLR	380	380	391.2	387.6	398.8	412.4	423.6	415.6	426.8	—	—
SRW	70LR	190	190	199.2	197.2	206.4	217	226.2	220.2	229.4	—	—
	85LR	235	235	244.2	242.2	251.4	262	271.2	265.2	274.4	—	—
	100LR	303	303	314.2	311.4	322.6	335.4	346.6	338.6	349.8	—	—
	130LR	350	350	361.2	361	372.2	—	—	—	—	—	—
	150LR	395	395	406.2	411	422.2	—	—	—	—	—	—
HRX	25C/R	99.6	99.6	104.8	104.6	109.8	117.2	122.4	122.2	127.4	122.2	127.4
	25LC/LR	116.4	116.4	121.6	121.4	126.6	134	139.2	139	144.2	139	144.2
	30C/R	110.6	110.6	117.2	115.6	122.2	128.2	134.8	133.2	139.8	133.2	139.8
	30LC/LR	135.1	135.1	141.7	140.1	146.7	152.7	159.3	157.7	164.3	157.7	164.3
	35C/R	123.2	123.2	130.2	131.6	138.6	140.8	147.8	149.2	156.2	149.2	156.2
	35LC/LR	151.2	151.2	158.2	159.6	166.6	168.8	175.8	177.2	184.2	177.2	184.2
	45C/R	150.7	150.7	157.7	159.9	166.9	171.3	178.3	180.5	187.5	180.3	187.3
	45LC/LR	185.7	185.7	192.7	194.9	201.9	206.3	213.3	215.5	222.5	215.3	222.3
	55C/R	180.2	180.2	187.2	189.4	196.4	200.8	207.8	210	217	209.8	216.8
	55LC/LR	229.7	229.7	236.7	238.9	245.9	250.3	257.3	259.5	266.5	259.3	266.3
	65C/R	239.1	239.1	246.5	250.3	257.7	263.1	270.5	274.3	281.7	274.1	281.5
	65LC/LR	304.1	304.1	311.5	315.3	322.7	328.1	335.5	339.3	346.7	339.1	346.5

[1] The overall LM block length (L) of YY type (with side scraper) is also the same.

Notes: The standard overall length may include the dimension of the end seal depending on the model. If you are considering using a type without an end seal, contact THK for details.
It is recommended to use a protector with models SVR/SVS, NR-X/NRS-X, and SRG. Please contact THK regarding the dimensions for ZZHH and KKHH. See **A1-584** for details regarding the codes for the various options.

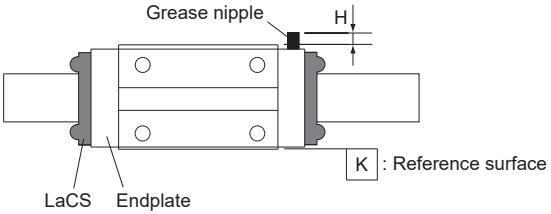
Model number coding

SHS25 LC 2 QZ KKHH C0 +1240L P Z T -II

Contamination protection accessory symbol[1]

[1] See **A1-584**.

Dimensional Increase with Grease Nipple (When LaCS is Attached)



Grease nipple mounting location
for models SHS, SSR, SVR/SVS, NR/NRS-X, HDR, SRG and HRX

Unit: mm

Model No.		Dimensional increase with grease nipple H	Nipple type
SHS	15C/LC	—	PB107
	15R/V/LV	4.7	PB107
	20C/LC	—	PB107
	20V/LV	4.5	PB107
	25C/LC	—	PB107
	25R/LR/V/LV	4.7	PB107
	30C/LC	—	A-M6F
	30R/LR/V/LV	7.4	A-M6F
	35C/LC	—	A-M6F
	35R/LR/V/LV	7.4	A-M6F
	45C/LC	—	A-M6F
	45R/LR/V/LV	7.7	A-M6F
	55C/LC	—	A-M6F
	55R/LR/V/LV	7.4	A-M6F
	65C/LC	—	A-M6F
	65V/LV	6.9	A-M6F
SSR	15XV/XW	4.4	PB107
	15XTB/XSB	—	PB107
	20XV/XW	4.6	PB107
	20XTB/XSB	—	PB107
	25XV/XW	4.5	PB107
	25XTB/XSB	—	PB107
	30XV/XW	5	PB1021B
	30XTB/XSB	—	PB1021B
	35XV/XW	5	PB1021B
	35XTB/XSB	—	PB1021B
SVR/SVS NR-X/ NRS-X	25R/LR/SLR	5.5	PB1021B
	30R/LR/SLR	5.5	PB1021B
	35R/LR/SLR/RH/LRH	9	A-M6F
	45R/LR/SLR/RH/LRH	9	A-M6F
	55R/LR/SLR/RH/LRH	9	A-M6F
	65R/LR/SLR	12	A-PT1/8

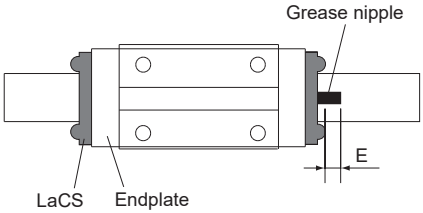
Options

Dimensions of Each Model with Options Attached

Unit: mm

Model No.		Dimensional increase with grease nipple H	Nipple type
HDR	15SC/C/LC	—	PB107
	15R/LR/SV/V/LV	4.4	PB107
	20SC/C/LC	—	PB107
	20SR/R/LR	4.3	PB107
	20US/UT	—	PB107
	20UV/UW	4.4	PB107
	25SC/C/LC	—	A-M6F
	25R/LR/SV/V/LV	7.1	A-M6F
	25US/UT	—	PB107
	25UV/UW	4.4	PB107
	30SC/C/LC	—	A-M6F
	30R/LR/SV/V/LV	7.1	A-M6F
	35SC/C/LC	—	A-M6F
	35R/LR/SV/V/LV	7.1	A-M6F
	45C/LC	—	A-M6F
	45R/LR/V/LV	7.1	A-M6F
	55C/LC	—	A-M6F
	55R/LR/V/LV	7.1	A-M6F
	65C/LC	—	A-M6F
	65R/LR	6.1	A-M6F
SRG	15XA	—	PB107
	15XV	4.5	PB107
	20XA/XLA	—	PB107
	20XV/XLV	4.4	PB107
	25XC/XLC	—	A-M6F
	25XR/XLR	8.4	A-M6F
	30XC/XLC	—	A-M6F
	30XR/XLR	8.4	A-M6F
	35C/LC/SLC	—	A-M6F
	35R/LR/SLR	7.2	A-M6F
	45C/LC/SLC	—	A-M6F
	45R/LR/SLR	7.2	A-M6F
	55C/LC/SLC	—	A-M6F
	55R/LR/SLR	7.2	A-M6F
	65C/LC/SLC	—	A-M6F
	65V/LV/SLV	6.2	A-M6F
HRX	25C/LC	—	A-M6F
	25R/LR	6.9	A-M6F
	30C/LC	—	A-M6F
	30R/LR	6.9	A-M6F
	35C/LC	—	A-M6F
	35R/LR	6.7	A-M6F
	45C/LC	—	A-M6F
	45R/LR	6.7	A-M6F
	55C/LC	—	A-M6F
	55R/LR	6.2	A-M6F
	65C/LC	—	A-M6F
	65R/LR	6.2	A-M6F

Note: The dimensional increase with a grease nipple when the side scraper and the protector are attached (SVR/SVS and SRG only) is also the same.



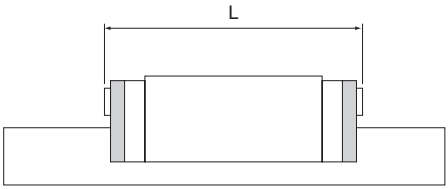
Grease nipple mounting location
for models SHW, SRS and HSR

Unit: mm

Model No.		Dimensional increase with grease nipple E	Nipple type
SHW	21CA/CR	4.2	PB1021B
	27CA/CR	10.7	B-M6F
	35CA/CR	10	B-M6F
	50CA/CR	21	B-PT1/8
SRS	25M	4	PB1021B
HSR	15R/YR	2.9	PB1021B
	15LC/LR	2.9	PB1021B
	20R/CA/CB/YR	9.4	B-M6F
	20LR/HA/HB	9.4	B-M6F
	25R/CA/CB/YR	9	B-M6F
	25LR/HA/HB	9	B-M6F
	30R/CA/CB/YR	9	B-M6F
	30LR/HA/HB	9	B-M6F
	35R/CA/CB/YR	8	B-M6F
	35LR/HA/HB	8	B-M6F

Notes: Contact THK if you desire a grease nipple mounting location other than the above.
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.
When desiring a grease nipple for Model SHW or SRS without a QZ Lubricator, indicate “with grease nipple” when placing an order. (Grease nipple will not be attached if not specified.)
Model HSR15 attached with ZZ or KK cannot have a grease nipple. Contact THK for details.

LM Block Length (Dimension L) with LiCS Attached



Unit: mm

Model No.		L	
		GG	PP
SSR	15XV/XSB	48.7	48.7
	15XW/XTB	65.3	65.3
	20XV/XSB	55.8	55.8
	20XW/XTB	74.6	74.6
	25XV/XSB	67.6	67.6
	25XW/XTB	90.6	90.6
	30XV/XSB	76.4	76.4
	30XW/XTB	106.7	106.7
	35XV/XSB	88.3	88.3
	35XW/XTB	121.7	121.7
SRG	15XA	77	77
	15XV	77	77

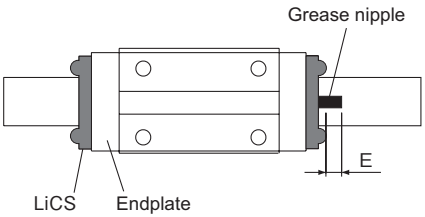
Model number coding

SSR20 XW 2 GG C1 +640L P T -II

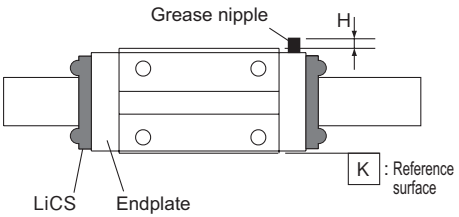
With Light-Resistance Contact Seal LiCS[1]

[1] See A1-553.

Dimensional Increase with Grease Nipple (When LiCS is Attached)



Model SSR
Location for mounting the grease nipple



Model SRG
Location for mounting the grease nipple

Unit: mm

Model No.		Dimensional increase with a grease nipple		Nipple type
		E	H	
SSR	15XV	2.9	—	PB1021B
	15XW/XTB	2.9	—	PB1021B
	20XV	9	—	B-M6F
	20XW/XTB	9	—	B-M6F
	25XV	9	—	B-M6F
	25XW/XTB	9	—	B-M6F
	30XV/XW	9	—	B-M6F
	30XTB/XSB	9	—	B-M6F
	35XV/XW	8	—	B-M6F
	35XTB/XSB	8	—	B-M6F
SRG	15XA	—	—[1]	PB107
	15XV	—	4.5	PB107

[1] Because this model features a flange, it projects beyond the block end surface.

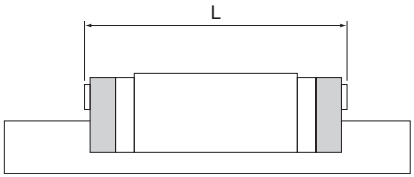
Model number coding

SSR20 XW 2 GG C1 +640L P T -Ⅱ

With Light-Resistance Contact Seal LiCS[1]

[1] See A1-553.

Overall Block Length with Fluorine Seals and Other Accessories Attached



Unit: mm

Model No.		L					
		F2	F4	FZ2	FZ4	FJ2	FJ4
		Fluorine seals	Fluorine seals (double)	Fluorine seals + metal scrapers	Fluorine seals (double) + metal scrapers	Fluorine seals + protectors	Fluorine seals (double) + protectors
SRG	35C/R	129	140.8	137.4	149.2	137.4	149.2
	35LC/LR	159	170.8	167.4	179.2	167.4	179.2
	35SLC/SLR	184.8	196.6	193.2	205	193.2	205
	45C/R	159	172.2	168.2	181.4	168	181.2
	45LC/LR	194	207.2	203.2	216.4	203	216.2
	45SLC/SLR	235.5	248.7	244.7	257.9	244.5	257.7
	55C/R	189	202.2	198.2	211.4	198	211.2
	55LC/LR	239	252.2	248.2	261.4	248	261.2
	55SLC/SLR	296	309.2	305.2	318.4	305	318.2
	65C/V	249.3	264.9	260.5	276.1	260.3	275.9
	65LC/LV	307.4	323	318.6	334.2	318.4	334
	65SLC/SLV	384.4	400	395.6	411.2	395.4	411

Model No.		L					
		QZF2	QZF4	QZFZ2	QZFZ4	QZFJ2	QZFJ4
		QZ + fluorine seals	QZ + fluorine seals (double)	QZ + fluorine seals + metal scrapers	QZ + fluorine seals (double) + metal scrapers	QZ + fluorine seals + protectors	QZ + fluorine seals (double) + protectors
SRG	35C/R	159	170.8	167.4	179.2	167.4	179.2
	35LC/LR	189	200.8	197.4	209.2	197.4	209.2
	35SLC/SLR	214.8	226.6	223.2	235	223.2	235
	45C/R	189	202.2	198.2	211.4	198	211.2
	45LC/LR	224	237.2	233.2	246.4	233	246.2
	45SLC/SLR	265.5	278.7	274.7	287.9	274.5	287.7
	55C/R	229	242.2	238.2	251.4	238	251.2
	55LC/LR	279	292.2	288.2	301.4	288	301.2
	55SLC/SLR	336	349.2	345.2	358.4	345	358.2
	65C/V	289.3	304.9	300.5	316.1	300.3	315.9
	65LC/LV	347.4	363	358.6	374.2	358.4	374
	65SLC/SLV	424.4	440	435.6	451.2	435.4	451

Maximum Seal Resistance

This shows the maximum resistance value of the seals per LM block with a lubricant applied.

Unit: N

Model No.		Seal symbol	Maximum seal resistance
SHS	15	SS	4.5
	20		7
	25		10.5
	30		17
	35		20.5
	45		30
	55		31.5
	65		43
SSR	15X	UU	2
	20X		2.6
	25X		3.5
	30X		4.9
	35X		6.3
SVR/SVS	25	SS	10
	30		14
	35		18
	45		22
	55		26
	65		31
SHW	12CA/CR	UU	1
	12HR		1
	14		1.2
	17		1.4
	21		4.9
	27		4.9
	35		9.8
	50		14.7
	12CA/CR	SS	1.4
	12HR		1.8
	14		1.8
	17		2.2
	21		6.9
	27		8.9
	35		15.8
	50		22.7

Unit: N

Model No.		Seal symbol	Maximum seal resistance
SRS	5M/5N	UU	0.06
	5WM/5WN		0.08
	7S	SS	0.14
	7M		0.16
	7N		0.19
	7WS		0.48
	7WM		0.52
	7WN		0.55
	9XS		0.15
	9XM		0.2
	9XN		0.25
	9WS		0.89
	9WM		0.95
	9WN		1
	12S		0.49
	12M		0.55
	12N		0.6
	12WS		1.21
	12WM		1.3
	12WN		1.35
	15S		0.92
	15M		1
	15N		1.1
	15WS		1.45
	15WM		1.55
	15WN		1.6
	20M		1.25
	25M		1.6
SCR	15	UU	2.5
	20		3
	25		5
	30		10
	35		12
	45		20
	65		30

Dimensions of Each Model with Options Attached

Unit: N

Model No.		Seal symbol	Maximum seal resistance
HSR	8X	UU	0.24
	10X		0.41
	12X		0.64
	15		2
	20		2.5
	25		3.9
	30		7.8
	35		11.8
	45		19.6
	55		19.6
	65		34.3
	85		34.3
SR	15	UU	2.5
	20		3.4
	25		4.4
	30		8.8
	35		11.8
	45		12.7
	55		15.7
	70		19.6
NR-X/ NRS-X	25	SS	10
	30		14
	35		18
	45		22
	55		26
	65		31
NR/NRS	75	UU	42
	85		42
	100		51
HRW	12	UU	0.2
	14		0.3
	17		2.9
	21		4.9
	27		4.9
	35		9.8
	50		14.7
	60		19.6
RSX	5	UU	0.04
	5W		0.05
	7		0.08
	7W		0.08
	9		0.1
	9W		0.1

Unit: N

Model No.		Seal symbol	Maximum seal resistance
RSX	12	UU	0.4
	12W		0.4
	15		0.8
	15W		0.8
	20		1
	25		1.3
RSR	14W	UU	1.2
HR	918	UU	0.5
	1123		0.7
	1530		1
	2042		2
	2555		2.9
	3065		3.4
	3575		3.9
	4085		4.4
	50105		5.9
	60125		9.8
GSR	15	UU	2.5
	20		3.1
	25		4.4
	30		6.3
	35		7.6
	25-R		4.4
	30-R		6.3
	35-R		7.6
CSR	15	UU	2
	20		2.5
	25		3.9
	30		7.8
	35		11.8
	45		19.6
MX	5	UU	0.06
	7W		0.4
JR	25	UU	3.9
	35		11.8
	45		19.6
	55		19.6
HCR	12	UU	1.2
	15		2
	25		3.9
	35		11.8
	45		19.6
	65		34.3

Unit: N

Model No.		Seal symbol	Maximum seal resistance
HMG	15	UU	3
	25		6
	35		8
	45		12
	65		40
NSR	20TBC	UU	4.9
	25TBC		4.9
	30TBC		6.9
	40TBC		9.8
	50TBC		14.7
	70TBC		24.5
HDR	15	SS	7.7
	20		10.4
	25		11.7
	30		15.5
	35		19.7
	45		23.7
	55		25.5
	65		30.3
HSR	15M1	UU	2
	20M1		2.5
	25M1		3.9
	30M1		7.8
	35M1		11.8
SR	15M1	UU	2.5
	20M1		3.4
	25M1		4.4
	30M1		8.8
	35M1		11.8
RSX-M1	9	UU	0.1
	9W		0.1
	12		0.4
	12W		0.4
	15		0.8
	15W		0.8
RSR	20M1	UU	1
HSR	15M2	UU	2
	20M2		2.5
	25M2		3.9

Unit: N

Model No.		Seal symbol	Maximum seal resistance
SRG	15X	SS	13
	20X		18
	25X		19
	30X		22
	35		30
	45		30
	55		34
	65		40
	85		47
	100		53
SRN	35	SS	30
	45		30
	55		35
	65		40
SRW	70	SS	32
	85		37
	100		43
	130		50
	150		57
HRX	25	SS	14
	30		15
	35		18
	45		23
	55		26
	65		32

Maximum Resistance for Laminated Contact Scraper LaCS

Unit: N

Model No.		Maximum resistance for LaCS
SHS	15	5.2
	20	6.5
	25	11.7
	30	18.2
	35	20.8
	45	26
	55	32.5
	65	39
SSR	15	5.9
	20	6.9
	25	8.1
	30	12.8
	35	15.1
SVR/SVS NR-X/NRS-X	25	8.1
	30	13.4
	35	15.5
	45	23.3
	55	28.6
	65	39.6
NR/NRS	85	52.7
NR	75	38
	100	65
SHW	12	2.6
	14	3.9
	17	3.9
	21	3.9
	27	6.5
	35	13
	50	19.5
SRS RSX	9	2.3
	9W	3.3
	12	3.5
	12W	4.2
	15	5.1
	15W	7.5
	20	5.2
	25	7.8
SCR	15	5.2
	20	6.5
	25	11.7
	30	18.2
	35	20.8
	45	26
	65	39

Unit: N

Model No.		Maximum resistance for LaCS
HSR	15	3.8
	20	5.6
	25	7.5
	30	14.9
	35	22.4
	45	32.1
	55	36.5
	65	43.8
	85	69.5
HDR	15	6.2
	20	7.9
	20U	6.1
	25	8.7
	25U	10.2
	30	11.9
	35	12.5
	45	25.9
	55	31.3
	65	32.7
SRG	15X	5.9
	20X	6.1
	25X	6.9
	30X	8.2
	35	9.1
	45	14.3
	55	18.2
	65	26
SRN	35	9.1
	45	14.3
	55	18.2
	65	22.1
SRW	70	32.8
	85	39.7
	100	58.3
HRX	25	6.3
	30	7.2
	35	13
	45	18
	55	25
	65	34

Notes: Each resistance value in the table only consists of that of Laminated Contact Scraper LaCS, and does not include sliding resistances of seals and other accessories.
For the maximum service speed of Laminated Contact Scraper LaCS, contact THK.
HH type (with LaCS) for models SVR/SVS and SRG is provided with the protector (see A1-551).
Contact THK if you want to use the protector with other options.

Maximum Resistance for Light-Resistance Contact Seal LiCS

Unit: N

Model No.		Maximum resistance for LiCS
SSR	15X	1
	20X	1.1
	25X	1.6
	30X	1.6
	35X	2
SRG	15X	0.7

Note: The value indicates the sliding resistance of two Light-Resistance Contact Scraper LiCS units per LM block and does not include the sliding resistances of the LM block and the side seals.

Maximum Seal Resistance of High Chemical Resistance Fluorine Seal FS

Unit: N

Model No.		Seal symbol	Maximum seal resistance
SRG	35	Model F2	30
	45		30
	55		34
	65		40

Note: This is the sliding resistance of two fluorine seals and one inner seal on one LM block and excludes the sliding resistance of the block.

Maximum Resistance for the Side Scraper

Unit: N

Model No.		Maximum resistance for the side scraper (KKHHYY/TTHHYY option)
SVR/ SVS NR-X/ NRS-X	25	4.4
	25L	5.2
	30	4.7
	30L	5.5
	35	4.6
	35L	5.5
	45	5.1
	45L	6.1
	55	5.3
	55L	6.3
	65	5.4
	65L	6.9

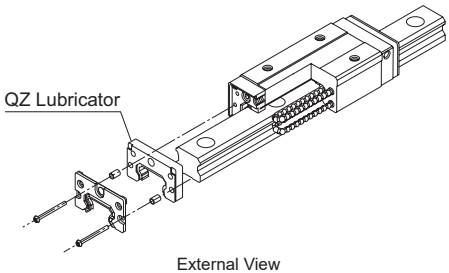
Unit: N

Model No.		Maximum resistance for the side scraper (DDHHYY option)
SRG	35	2.9
	35L	3.4
	35SL	3.9
	45	4.7
	45L	5.6
	45SL	6.8
	55	5.5
	55L	6.8
	55SL	8.3
	65	7.2
	65L	8.7
	65SL	10.9

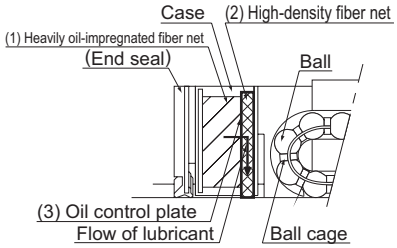
QZ Lubricator

●For the supported models, see the table of options by model number on A1-542.
●For the LM block dimension (L dimension) with a QZ Lubricator attached, see A1-578 to A1-583.
●For details regarding the QZ Lubricator, see A1-623.

The QZ Lubricator feeds the right amount of lubricant to the LM rail raceway. This allows an oil film to continuously be formed between the rolling element and the raceway, and drastically extends the lubrication and 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). The lubricant contained in the QZ Lubricator is primarily fed by capillary action, which is also used in devices such as felt-tip pens.



External View



Structural Drawing

Features

- Since it compensates for oil loss, the lubrication maintenance interval can be significantly extended.
- Because it feeds the appropriate amount of lubricant directly to the ball raceway, it is an environmentally-friendly lubrication system that does not contaminate the surrounding area.

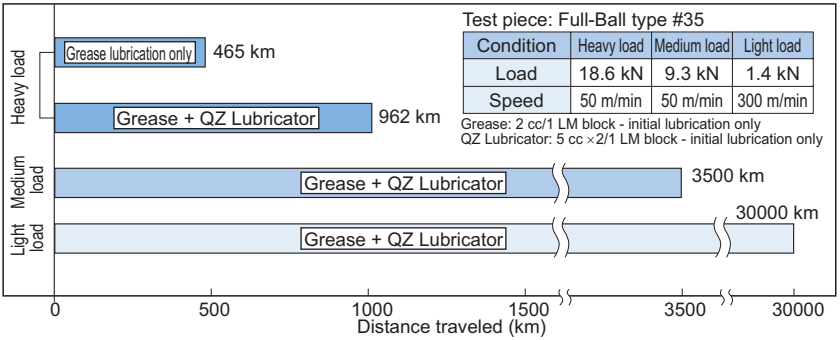
Symbol	Contamination protection accessories
QZUU	With end seal + QZ
QZSS	With end seal + side seal + inner seal[1] + QZ
QZDD	With double seals + side seal + inner seal[1] + QZ
QZZZ	With end seal + side seal + inner seal[1] + metal scraper + QZ
QZKK	With double seals + side seal + inner seal[1] + metal scraper + QZ
QZGG	With LiCS + QZ
QZPP	With LiCS + side seal + inner seal[1] + QZ
QZUUHH	With end seal + LaCS + QZ
QZSSHH	With end seal + side seal + inner seal[1] + LaCS + QZ
QZDDHH	With double seals + side seal + inner seal[1] + 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
QZJJHH[2]	With end seal + side seal + inner seal[1] + LaCS + QZ + protector (serving also as metal scraper)
QZTTHH[2]	With double seals + side seal + inner seal[1] + LaCS + QZ + protector (serving also as metal scraper)

[1] Some models are not equipped with inner seals (see A1-542).
[2] QZJJHH and QZTTHH are only available for models SVR/SVS, NR-X/NRS-X, SRG, and HRX.

Notes: For models SVR/SVS, NR-X/NRS-X, SRG, and HRX with HH specifications (with LaCS), a protector (A1-551) can be installed.
Contact THK if you want to use the protector with other options.
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.

● Significantly Extended Maintenance Interval

Attaching a QZ Lubricator helps extend the maintenance interval throughout the whole load range from the light load area to the heavy load area.



Test piece: Full-Ball type #35

Condition	Heavy load	Medium load	Light load
Load	18.6 kN	9.3 kN	1.4 kN
Speed	50 m/min	50 m/min	300 m/min

Grease: 2 cc/1 LM block - initial lubrication only
QZ Lubricator: 5 cc ×2/1 LM block - initial lubrication only

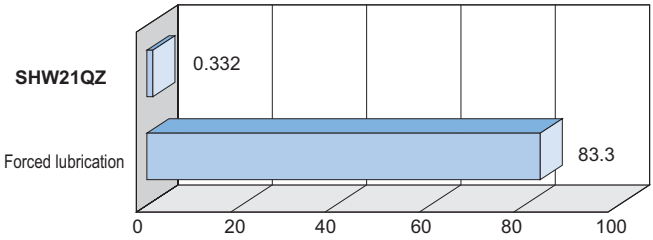
LM Guide Running Test without Replenishment of Lubricant

● Effective Use of Lubricant

Since the lubricator feeds the right amount of lubricant to the ball raceway, lubricant can be used efficiently.

Test speed: 300 m/min

Comparison of lubricant consumption after traveling 5,000 km



Amount of oil contained in QZ Lubricator
0.166 cm³/ 2 units
(attached to both ends of the LM block)
= 0.332 cm³

Compared

Forced lubrication
0.03 cm³/6 min× 16667 min
= 83.3 cm³

Lubricant consumption is 1/250 that of forced lubrication

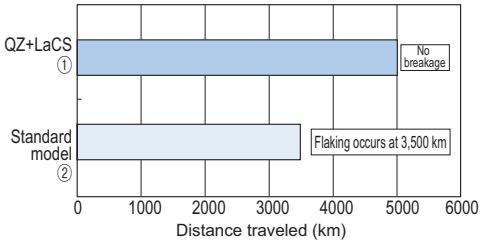
● Assists with Lubrication in Severe Environments

A 5,000 km durability test was conducted in severe environments (exposed to coolant and contaminants).

Test Conditions

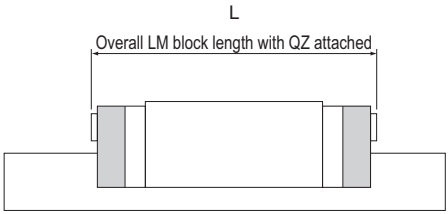
Model No.	① Caged Ball LM Guide #45	② Full-Ball type #45
Load	8 kN	6 kN
Speed	60 m/min	
Coolant	Immersed 48 h, dried 96 h	
Foreign material	Foundry dust (125 μm or less)	
Lubrication	AFA Grease + QZ	Super Multi 68 Oiling cycle: 0.1 cc/shot Periodically lubricated every 16 min

Test Results



Note: When using the LM System in a severe environment, use a combination of a QZ Lubricator and a Laminated Contact Scraper LaCS (see “Laminated Contact Scraper LaCS” on A1-548).

LM Block Dimension (L Dimension) with QZ Lubricator Attached



Unit: mm

Model No.		L								
		QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH
SHS	15C/V/R	84.4	84.4	89.8	86.8	92.2	100	105.4	101.2	106.6
	15LC/LV	99.4	99.4	104.8	101.8	107.2	115	120.4	116.2	121.6
	20C/V	99	99	105.4	103	109.4	115.4	121.8	117.8	124.2
	20LC/LV	118	118	124.4	122	128.4	134.4	140.8	136.8	143.2
	25C/V/R	114.4	114.4	121.6	120.4	127.6	132	139.2	134.4	141.6
	25LC/LV/LR	131.4	131.4	138.6	137.4	144.6	149	156.2	151.4	158.6
	30C/V/R	127.4	127.4	136	133.8	142.4	149.4	158	151.8	160.4
	30LC/LV/LR	152.4	152.4	161	158.8	167.4	174.4	183	176.8	185.4
	35C/V/R	145	145	154.8	152.4	162.2	168	177.8	170.4	180.2
	35LC/LV/LR	175	175	184.8	182.4	192.2	198	207.8	200.4	210.2
	45C/V/R	173	173	182.8	181.2	191	199	208.8	202.2	212
	45LC/LV/LR	207	207	216.8	215.2	225	233	242.8	236.2	246
	55C/V/R	205.4	205.4	216.6	214.2	225.4	232	243.2	235.2	246.4
	55LC/LV/LR	247.4	247.4	258.6	256.2	267.4	274	285.2	277.2	288.4
	65C/V	256.2	256.2	268.6	266.2	278.6	288	300.4	291.2	303.6
	65LC/LV	307.2	307.2	319.6	317.2	329.6	339	351.4	342.2	354.6
SSR	15XV/XSB	59.3	59.3	65.1	62.7	68.5	75.5	81.3	76.7	82.5
	15XW/XTB	75.9	75.9	81.7	79.3	85.1	92.1	97.9	93.3	99.1
	20XV/XSB	66.2	66.2	73.1	72.1	79	83.7	90.6	86.1	93
	20XW/XTB	85	85	91.9	90.9	97.8	102.5	109.4	104.9	111.8
	25XV/XSB	82.6	82.6	90	88.4	95.8	100	107.4	102.4	109.8
	25XW/XTB	105.6	105.6	113	111.4	118.8	123	130.4	125.4	132.8
	30XV/XSB	89.4	89.4	97.5	95.1	103.2	110.7	118.8	113.1	121.2
	30XW/XTB	119.7	119.7	127.8	125.4	133.5	141	149.1	143.4	151.5
	35XV/XSB	100.9	100.9	109.9	107.9	116.9	123.5	132.5	125.9	134.9
	35XW/XTB	134.3	134.3	143.3	141.3	150.3	156.9	165.9	159.3	168.3

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.

Unit: mm

Model No.		L								
		QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH
SHW	12CAM/CRM	47	47	—	—	—	58	—	—	—
	12HRM	60.4	60.4	—	—	—	71.4	—	—	—
	14CAM/CRM	55.5	55.5	—	—	—	70.7	—	—	—
	17CAM/CRM	63	63	66	65.4	68.4	78.2	81.2	79.4	82.4
	21CA/CR	75	75	80	78.6	83.6	91.6	96.6	93.2	98.2
	27CA/CR	92.8	92.8	98.6	97.2	103	109.4	115.2	111.8	117.6
	35CA/CR	127	127	134.4	132	139.4	149	156.4	151.4	158.8
	50CA/CR	161	161	169.2	167.4	175.6	186	194.2	188.4	196.6
SCR	15S	84.4	84.4	89.8	86.8	92.2	100.4	105.4	101.4	106.9
	20S	99	99	105.4	103	109.4	115.5	122	118	124.5
	20	118	118	124.4	122	128.4	134.5	141	137	143.5
	25	131.4	131.4	138.6	137.4	144.6	149	156.2	151.4	158.6
	30	152.4	152.4	161	158.8	167.4	174.4	183	176.8	185.4
	35	175	175	184.8	182.4	192.2	198	207.8	200.4	210.2
	45	207	207	216.8	215.2	225	233	242.8	236.2	246
	65	307.2	307.2	319.6	317.2	329.6	339	351.4	342.2	354.6
HSR	15C/R/YR	76.6	76.6	84.6	81.2	89.2	95.8	103.8	97	105
	15LC/LR	94.6	94.6	102.6	99.2	107.2	113.8	121.8	115	123
	20C/R/CA/CB/YR	93	93	101.2	98.8	107	110.4	118.6	112.8	121
	20LC/LR/HA/HB	109	109	117.2	114.8	123	126.4	134.6	128.8	137
	25C/R/CA/CB/YR	100.9	100.9	108.9	106.6	114.6	118.2	126.2	120.6	128.6
	25LC/LR/HA/HB	120	120	128	125.7	133.7	137.3	145.3	139.5	147.7
	30C/R/CA/CB/YR	115.8	115.8	123.8	121.5	129.5	137.1	145.1	139.5	147.5
	30LC/LR/HA/HB	138.4	138.4	146.4	144.1	152.1	159.7	167.7	162.1	170.1
	35C/R/CA/CB/YR	129	129	138.8	135.8	145.6	151.4	161.2	153.8	163.6
	35LC/LR/HA/HB	154.4	154.4	164.2	161.2	171	176.8	186.6	179.2	189
	45C/R/CA/CB/XYR/YR	168.5	168.5	178.3	176.7	186.5	197.4	207.2	200.6	210.4
	45LC/LR/HA/HB	200.3	200.3	210.1	208.5	218.3	229.2	239	232.4	242.2
	55C/R/CA/CB/XYR/YR	193.4	193.4	204.6	202.1	213.3	223.4	234.6	226.6	237.8
	55LC/LR/HA/HB	231.5	231.5	242.7	240.2	251.4	261.5	272.7	264.7	275.9
	65XC/XR/XCA/XCB/XYR	222.7	222.7	233.9	232.5	243.7	258.3	269.5	261.5	272.7
	65XLC/XLR/XHA/XHB	282.2	282.2	293.4	292	303.2	317.8	329	321	332.2

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.

Unit: mm

Model No.		L								
		QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH
HDR	15SC/SV	63	63	67.4	64.2	68.6	76	80.4	77.2	81.6
	15C/R/V	81.4	81.4	85.8	85.2	89.6	97	101.4	98.2	102.6
	15LC/LR/LV	94.9	94.9	99.3	98.7	103.1	110.5	114.9	111.7	116.1
	20SC/SR	77.3	77.3	82.5	79.7	84.9	90.3	95.5	92.7	97.9
	20C/R	94.9	94.9	100.1	100.7	105.9	111.3	116.5	113.7	118.9
	20LC/LR	110.7	110.7	115.9	116.5	121.7	127.1	132.3	129.5	134.7
	20UV/US	69	69	74.2	74.8	80	85.4	90.6	87.8	93
	20UW/UT	88.8	88.8	94	94.6	99.8	105.2	110.4	107.6	112.8
	25SC/SV	83.9	83.9	89.1	86.3	91.5	97.9	103.1	100.3	105.5
	25C/R/V	107.6	107.6	112.8	113.4	118.6	125	130.2	127.4	132.6
	25LC/LR/LV	124.5	124.5	129.7	130.3	135.5	141.9	147.1	144.3	149.5
	25UV/US	77	77	82.2	82.8	88	94.4	99.6	96.8	102
	25UW/UT	100.9	100.9	106.1	106.7	111.9	118.3	123.5	120.7	125.9
	30SC/SV	93.5	93.5	100.1	95.9	102.5	111.5	118.1	113.9	120.5
	30C/R/V	122.1	122.1	128.7	127.8	134.4	143.4	150	145.8	152.4
	30LC/LR/LV	144.1	144.1	150.7	149.8	156.4	165.4	172	167.8	174.4
	35SC/SV	104.2	104.2	111.2	106.6	113.6	122.2	129.2	124.6	131.6
	35C/R/V	136.5	136.5	143.5	142.2	149.2	157.8	164.8	160.2	167.2
	35LC/LR/LV	159.5	159.5	166.5	165.2	172.2	180.8	187.8	183.2	190.2
	45C/R/V	175.6	175.6	182.6	183.2	190.2	201.0	208.0	204.2	211.2
	45LC/LR/LV	207.3	207.3	214.3	214.9	221.9	232.7	239.7	235.9	242.9
	55C/R/V	209.2	209.2	216.2	216.8	223.8	234.6	241.6	237.8	244.8
	55LC/LR/LV	247.3	247.3	254.3	254.9	261.9	272.7	279.7	275.9	282.9
	65C/R	229.2	229.2	236.6	236.8	244.2	258.6	266.0	261.8	269.2
	65LC/LR	288.8	288.8	296.2	296.4	303.8	318.2	325.6	321.4	328.8

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.

Unit: mm

Model No.		L			
		QZUU	QZSS	QZUUHH	QZSSHH
SRS	7S	29	29	—	—
	7M	33.4	33.4	—	—
	7N	41	41	—	—
	7WS	32.5	32.5	—	—
	7WM	41	41	—	—
	7WN	50.9	50.9	—	—
	9XS	31.5	31.5	—	43.1
	9XM	40.8	40.8	—	52.4
	9XN	50.8	50.8	—	62.4
	9WS	36.5	36.5	—	48.1
	9WM	49	49	—	60.6
	9WN	60.7	60.7	—	72.3
	12S	35	35	—	46.6
	12M	44.4	44.4	—	56
	12N	57.1	57.1	—	69.1
	12WS	40.5	40.5	—	52.1
	12WM	54.5	54.5	—	66.1
	12WN	69.5	69.5	—	81.1
	15S	44	44	—	58.2
	15M	55	55	—	69.2
	15N	72.8	72.8	—	87
	15WS	53.5	53.5	—	67.7
	15WM	67.5	67.5	—	81.7
	15WN	86.5	86.5	—	100.9
	20M	66	66	—	81.2
	25M	97	97	—	112.6
RSX	7SM	29	—	—	—
	7M	33.4	—	—	—
	7NM	41	—	—	—
	7WSM	32.5	—	—	—
	7WM	41	—	—	—
	7WNM	50.9	—	—	—
	9SM	31.5	—	43.1	—
	9M	40.8	—	52.4	—
	9NM	50.8	—	62.4	—
	9WSM	36.5	—	48.1	—
	9WM	49	—	60.6	—
	9WNM	60.7	—	72.3	—
	12SM	35.6	—	45.6	—
	12M	45	—	55	—
	12NM	57.7	—	67.7	—
	12WSM	40.5	—	52.1	—
	12WM	54.5	—	66.1	—
	12WNM	69.5	—	81.1	—
	15SM	43.9	—	58.1	—
	15M	54.9	—	69.1	—
	15NM	72.7	—	86.9	—
	15WSM	53.5	—	67.7	—
	15WM	67.5	—	81.7	—
	15WNM	86.5	—	100.7	—
	20SM	54	—	69.2	—
	20M	66	—	81.2	—
	20NM	84	—	99.2	—
	25SM	74.5	—	92.7	—
	25M	97	—	115.2	—
	25NM	118	—	136.2	—

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.

Unit: mm

Model No.		L											
		QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH	QZJJHH	QZTTHH
SVS/ SVR NR-X/ NRS-X	25R/C	102.8	102.8	108	108.5	113.7	116.8[1]	122[1]	122.5[1]	127.7[1]	122.5[1]	127.7[1]
	25LR/LC	122	122	127.2	127.7	132.9	136[1]	141.2[1]	141.7[1]	146.9[1]	141.7[1]	146.9[1]
	25SLR/SLC	190.3	190.3	195.5	196	201.2	204.3	209.5	210	215.2	210	215.2
	30R/C	118	118	124.6	123.7	130.3	135.2[1]	141.8[1]	140.9[1]	147.5[1]	140.9[1]	147.5[1]
	30LR/LC	140.5	140.5	147.1	146.2	152.8	157.7[1]	164.3[1]	163.4[1]	170[1]	163.4[1]	170[1]
	30SLR/SLC	224.6	224.6	231.2	230.3	236.9	241.8	248.4	247.5	254.1	247.5	254.1
	35R/C/RH/CH	139.5	139.5	146.5	146.3	153.3	156.7[1]	163.7[1]	163.5[1]	170.5[1]	163.5[1]	170.5[1]
	35LR/LC/LRH/LCH	165	165	172	171.8	178.8	182.2[1]	189.2[1]	189[1]	196[1]	189[1]	196[1]
	35SLR/SLC	268.9	268.9	275.9	275.7	282.7	286.1	293.1	292.9	299.9	292.9	299.9
	45R/C/RH/CH	168.2	168.2	175.2	175.8	182.8	188.2[1]	195.2[1]	195.8[1]	202.8[1]	195.8[1]	202.8[1]
	45LR/LC/LRH/LCH	201	201	208	208.6	215.6	221[1]	228[1]	228.6[1]	235.6[1]	228.6[1]	235.6[1]
	45SLR/SLC	301.4	301.4	308.4	309	316	321.4	328.4	329	336	329	336
	55R/C/RH/CH	201.4	201.4	208.4	209	216	222.4[1]	229.4[1]	230[1]	237[1]	231.1[1]	238.1[1]
	55LR/LC/LRH/LCH	238.6	238.6	245.6	246.2	253.2	259.6[1]	266.6[1]	267.2[1]	274.2[1]	268.3[1]	275.3[1]
	55SLR/SLC	438.6	438.6	445.6	446.2	453.2	459.6	466.6	467.2	474.2	468.3	475.3
	65R/C	224.4	224.4	231.8	233.1	240.5	248.8[1]	256.2[1]	257.5[1]	264.9[1]	257.5[1]	264.9[1]
	65LR/LC	284.4	284.4	291.8	293.1	300.5	308.8[1]	316.2[1]	317.5[1]	324.9[1]	317.5[1]	324.9[1]
	65SLR/SLC	460.6	460.6	468	469.3	476.7	485	492.4	493.7	501.1	493.7	501.1
SRG	15X A/V	90.6	90.6	92.6	—	—	105.2	107.2	—	—	—	—
	20X A/V	107.6	107.6	109.6	111	113	125.2	127.2	127.6	129.6	—	—
	20X LA/LV	127.6	127.6	129.6	131	133	145.2	147.2	147.6	149.6	—	—
	25X C/R	125.1	125.1	130.1	130.1	135.1	144.9	151.3	147.3	153.7	—	—
	25X LC/LR	145.1	145.1	150.1	150.1	155.1	164.9	171.3	167.3	173.7	—	—
	30X C/R	141	141	148	146	153	160.8	169.2	164.6	171.6	165	172
	30X LC/LR	165	165	172	170	177	184.8	193.2	188.6	195.6	189	196
	35C/R	155	155	162.8	163.4	171.2	172.6[1]	180.4[1]	181[1]	188.8[1]	181[1]	188.8[1]
	35LC/LR	185	185	192.8	193.4	201.2	202.6[1]	210.4[1]	211[1]	218.8[1]	211[1]	218.8[1]
	35SLC/SLR	210.8	210.8	218.6	219.2	227	228.4[1]	236.2[1]	236.8[1]	244.6[1]	236.8[1]	244.6[1]
	45C/R	185	185	194.2	194.2	203.4	205.6[1]	214.8[1]	214.8[1]	224[1]	214.6[1]	223.8[1]
	45LC/LR	220	220	229.2	229.2	238.4	240.6[1]	249.8[1]	249.8[1]	259[1]	249.6[1]	258.8[1]
	45SLC/SLR	261.5	261.5	270.7	270.7	279.9	282.1[1]	291.3[1]	291.3[1]	300.5[1]	291.1[1]	300.3[1]
	55C/R	225	225	234.2	234.2	243.4	245.6[1]	254.8[1]	254.8[1]	264[1]	254.6[1]	263.8[1]
	55LC/LR	275	275	284.2	284.2	293.4	295.6[1]	304.8[1]	304.8[1]	314[1]	304.6[1]	313.8[1]
	55SLC/SLR	332	332	341.2	341.2	350.4	352.6[1]	361.8[1]	361.8[1]	371[1]	361.6[1]	370.8[1]
	65C/V	284.9	284.9	296.1	296.1	307.3	308.9[1]	320.1[1]	320.1[1]	331.3[1]	319.9[1]	331.1[1]
	65LC/LV	343	343	354.2	354.2	365.4	367[1]	378.2[1]	378.2[1]	389.4[1]	378[1]	389.2[1]
	65SLC/SLV	420	420	431.2	431.2	442.4	444[1]	455.2[1]	455.2[1]	466.4[1]	455[1]	466.2[1]

[1] The overall LM block length (L) of YY type (with side scraper) is also the same.

Notes: For models SVR/SVS, SRG, and HRX, we recommend attaching a protector. See **A1-584** for details regarding the codes for the various options

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.

Unit: mm

Model No.		L										
		QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH	QZJJHH	QZTTHH
SRN	35C/R	155	155	162.8	163.4	171.2	178.6	186.4	181	188.8	—	—
	35LC/LR	185	185	192.8	193.4	201.2	208.6	216.4	211	218.8	—	—
	35SLC/SLR	210.8	210.8	218.6	219.2	227	234.4	242.2	236.8	244.6	—	—
	45C/R	185	185	194.2	194.2	203.4	212	221.2	215.2	224.5	—	—
	45LC/LR	220	220	229.2	229.2	238.4	247	256.2	250.2	259.4	—	—
	45SLC/SLR	261.5	261.5	270.7	270.7	279.9	288.5	297.7	291.7	300.9	—	—
	55C/R	225	225	234.2	234.2	243.4	252	261.2	255.2	264.4	—	—
	55LC/LR	275	275	284.2	284.2	293.4	302	311.2	305.2	314.4	—	—
	55SLC/SLR	332	332	341.2	341.2	350.4	359	368.2	362.2	371.4	—	—
	65C/R	284.9	284.9	296.1	296.1	307.3	317.3	328.5	320.5	331.7	—	—
	65LC/LR	343	343	354.2	354.2	370.4	380.4	391.6	378.6	389.8	—	—
	65SLC/SLR	420	420	431.2	431.2	442.4	452.4	463.6	455.6	466.8	—	—
SRW	70	220	220	229.2	229.2	238.4	247	256.2	250.2	259.4	—	—
	85	275	275	284.2	284.2	293.4	302	311.2	305.2	314.4	—	—
	100	343	343	354.2	354.2	370.4	380.4	391.6	378.6	389.8	—	—
HRX	25C/R	129.6	129.6	134.8	134.6	139.8	147.2	152.4	152.2	157.4	152.2	157.4
	25LC/LR	146.4	146.4	151.6	151.4	156.6	164	169.2	169	174.2	169	174.2
	30C/R	140.6	140.6	147.2	145.6	152.2	158.2	164.8	163.2	169.8	163.2	169.8
	30LC/LR	165.1	165.1	171.7	170.1	176.7	182.7	189.3	187.7	194.3	187.7	194.3
	35C/R	153.2	153.2	160.2	161.6	168.6	170.8	177.8	179.2	186.2	179.2	186.2
	35LC/LR	181.2	181.2	188.2	189.6	196.6	198.8	205.8	207.2	214.2	207.2	214.2
	45C/R	180.7	180.7	187.7	189.9	196.9	201.3	208.3	210.5	217.5	210.3	217.3
	45LC/LR	215.7	215.7	222.7	224.9	231.9	236.3	243.3	245.5	252.5	245.3	252.3
	55C/R	220.2	220.2	227.2	229.4	236.4	240.8	247.8	250	257	249.8	256.8
	55LC/LR	269.7	269.7	276.7	278.9	285.9	290.3	297.3	299.5	306.5	299.3	306.3
	65C/R	279.1	279.1	286.5	290.3	297.7	303.1	310.5	314.3	321.7	314.1	321.5
	65LC/LR	344.1	344.1	351.5	355.3	362.7	368.1	375.5	379.3	386.7	379.1	386.5

[1] The overall LM block length (L) of YY type (with side scraper) is also the same.

Notes: For models SVR/SVS, SRG, and HRX, we recommend attaching a protector. See A1-584 for details regarding the codes for the various options
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.

Model number coding

SHS25 LC 2 QZ KKHH C0 +1240L P Z T -II

- QZ: With QZ Lubricator[1]
- KKHH: Contamination protection accessory symbol[2]

[1] See A1-575. [2] See A1-584.

Note: Grease nipples are not installed when there is a QZ Lubricator.

List of Parts Symbols

- For supported model numbers, see the corresponding table of options by model number on **A1-542**.
- For the overall block length (dimension L) of each model with seal options attached, see **A1-555** to **A1-563**.
- For the LM block dimension (L dimension) with a QZ Lubricator attached, see **A1-578** to **A1-582**.

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 seals + side seal + inner seal[1] + metal scraper

[1] Some models are not equipped with inner seals.(See **A1-542**)

Symbols for QZ Lubricator and Laminated Contract Scraper LaCS

Symbol	Configuration of options	Example
＊＊HH	(Seal or metal scraper) + LaCS	UUHH
＊＊HHYY	(Seal or metal scraper) + LaCS + side scraper	DDHHYY
QZ＊＊	With QZ + (seal or metal scraper)	QZZZ
QZ＊＊HH	With QZ + (seal or metal scraper) + LaCS	QZZZHH
QZ＊＊HHYY	With QZ + (seal or metal scraper) + LaCS + side scraper	QZKKHHYY

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

Symbols for Light-Resistance Contact Seal LiCS

Symbol	Configuration of options
GG	LiCS
PP	With LiCS + side seal + inner seal[1]
QZGG	With QZ + LiCS
QZPP	With QZ + LiCS + side seal + inner seal[1]

[1] Some models are not equipped with inner seals.(See **A1-542**)

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.

Symbols for High Chemical Resistance Fluorine Seal FS

Symbol	Configuration of options
F2	With fluorine seal + side seal + inner seal
FZ2	With fluorine seal + side seal + inner seal + metal scraper
FJ2	With fluorine seal + side seal + inner seal + protector
F4	With fluorine seals (double) + side seal + inner seal
FZ4	With fluorine seals (double) + side seal + inner seal + metal scraper
FJ4	With fluorine seals (double) + side seal + inner seal + protector
QZF2	With fluorine seal + side seal + inner seal + QZ
QZFZ2	With fluorine seal + side seal + inner seal + metal scraper + QZ
QZFJ2	With fluorine seal + side seal + inner seal + QZ + protector
QZF4	With fluorine seals (double) + side seal + inner seal + QZ
QZFZ4	With fluorine seals (double) + side seal + inner seal + metal scraper + QZ
QZFJ4	With fluorine seals (double) + side seal + inner seal + QZ + protector

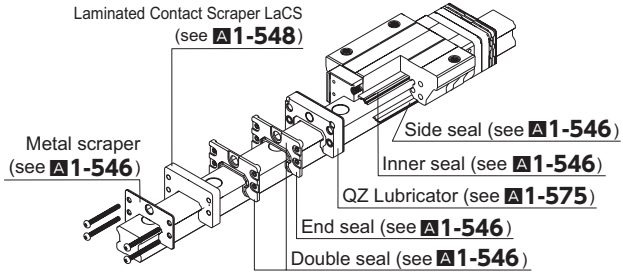
Symbols for Protector

Symbol	Configuration of options
JJHH	With end seal + side seal + inner seal[1] + LaCS + protector (serves also as a metal scraper)
TTHH	With double seals + side seal + inner seal[1] + LaCS + protector (serves also as a metal scraper)
JJHHYY	With end seal + side seal + inner seal[1] + LaCS + protector (also has a metal scraper function) + side scraper[1]
TTHHYY	With double seals + side seal + inner seal[1] + LaCS + protector (also has a metal scraper function) + side scraper[1]
QZJJHH	With QZ + end seal + side seal + inner seal[1] + LaCS + protector (serves also as a metal scraper)
QZTTHH	With QZ + double seals + side seal + inner seal[1] + LaCS + protector (serves also as a metal scraper)
QZJJHHYY	With QZ + end seal + side seal + inner seal[1] + LaCS + protector (also has a metal scraper function) + side scraper[1]
QZTTHHYY	With QZ + double seals + side seal + inner seal[1] + LaCS + protector (also has a metal scraper function) + side scraper[1]

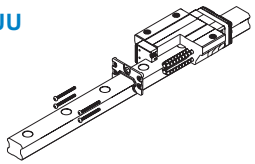
[1] Some models are not equipped with inner seals or side scrapers. (See A**1-542**)

Notes: For models SVR/SVS, NR/NRS, NR-X/NRS-X, SRG, and HRX with HH specifications (with LaCS), a protector (A**1-551**) can be installed. The protector also acts as a metal scraper.
Contact THK if you want to use the protector with other options.
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.

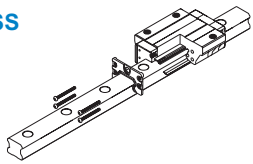
QZKKHH



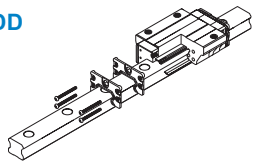
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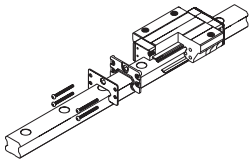
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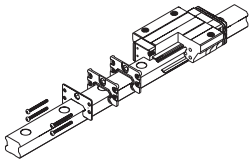
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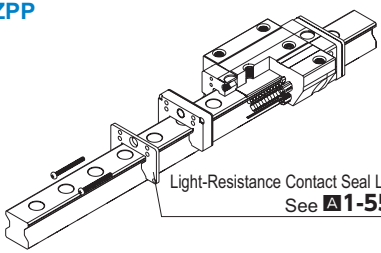
ZZ



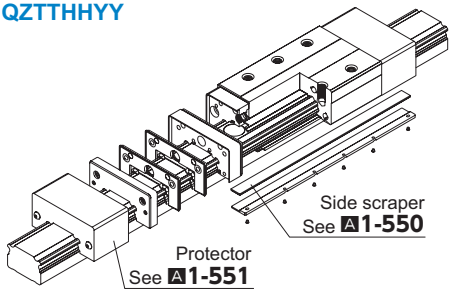
KK



QZPP



QZTTHHYY



SVR/SVS and SRG with the protector

Model number coding

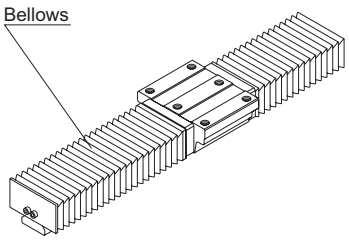
SVR45 LR 2 QZ TTHH C0 +1200L P T -II

- QZ: With QZ Lubricator
- TTHH: Symbol for contamination protection accessory

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.

Dedicated Bellows

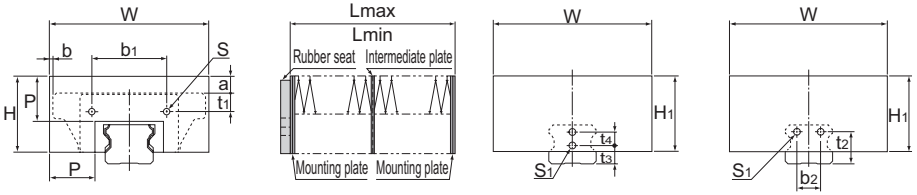
●For the supported models, see the table of options by model number on A1-542.
●For the dimensions of the dedicated bellows, see A1-588 to A1-600.

Item name	Schematic diagram/mounting location	Purpose/location of use
Dedicated bellows		Used in locations exposed to dust or cutting chips

Bellows

Dedicated Bellows JSH for Model SHS

The table below shows the dimensions of dedicated bellows JSH for model SHS. Specify the corresponding model number of the desired bellows from the table.



Models SHS15 to 30 Models SHS35 to 65

Unit: mm

Model No.		Main dimensions												Supported model numbers	
		W	H	H_1	P	b_1	t_1 C	t_1 V	t_1 R	b_2	t_2	t_3	t_4		
JSH	15	53	26	26	15	22.4	4	4	8	—	—	8	—	SHS	15
	20	60	30	30	17	27.6	7.5	7.5	—	—	—	8	6		20
	25	75	36	36	20	38	9.1	9.1	13.1	—	—	9	7		25
	30	80	38	38	20	44	11	11	14	—	—	11	8		30
	35	86	40.5	40.5	20	50	11	11	18	20	21.5	—	—		35
	45	97	46	46	20	64.6	13.5	13.5	23.5	26	26.5	—	—		45
	55	105	48	48	20	68	13	13	23	30	31.5	—	—		55
	65	126	63	63	25	80	18	18	—	34	45	—	—		65

Unit: mm

Supported model numbers		Main dimensions								A (Lmax/Lmin)
		Mounting bolt		a			b			
		S	S_1	C	V	R	C	V	R	
SHS	15	M2×10ℓ[1]	M4×8ℓ	5	5	1	3	9.5	9.5	5
	20	M2.6×10ℓ	M3×6ℓ	5	5	—	–1.5	8	—	6
	25	M3×12ℓ	M3×6ℓ	6	6	2	2.5	13.5	13.5	7
	30	M3×15ℓ	M3×6ℓ	3	3	0	–5	10	10	7
	35	M4×15ℓ	M4×8ℓ	0	0	–7	–7	8	8	7
	45	M4×15ℓ	M4×8ℓ	–5	–5	–15	–11.7	5.5	5.5	7
	55	M5×20ℓ	M5×10ℓ	–9	–9	–19	–17.5	2.5	2.5	7
	65	M6×25ℓ	M6×12ℓ	–8	–8	—	–22	0	—	9

[1] Use self-tapping screws as the mounting screws on the LM block side of the Model JSH15.

Notes: Please contact THK if you will be using the dedicated bellows in anything other than a horizontal orientation (i.e., vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.
When using the bellows, lubrication is possible through methods such as a side nipple.
When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JSH35 - 60/420

Model number of bellows for SHS35

Dimensions of the bellows (length when compressed / length when extended)

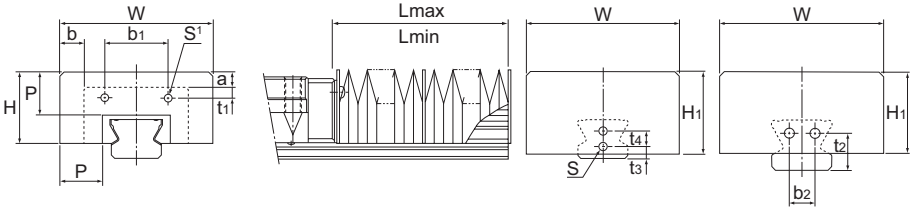
Note: The length of the bellows is calculated as follows.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate

Dedicated Bellows JSSR-X for Model SSR

The table below shows the dimensions of dedicated bellows JSSR-X for model SSR. Specify the corresponding model number of the desired bellows from the table.



Models SSR15X to 25X Models SSR30X and 35X

Unit: mm

Model No.		Main dimensions														A (Lmax/Lmin)	Supported model numbers	
		W	H	H1	P	b1	t1	b2	t2	t3	t4	Mounting bolt S1	a	b XW/XV	b XTB			
JSSR	15X	51	24	26	15	20.5	4.7	—	—	8	—	M3×5ℓ	5	8.5	–0.5	5	SSR	15X
	20X	58	26	30	15	25	4.2	—	—	6	6	M3×5ℓ	4	8	–0.5	5		20X
	25X	71	33	38	20	29	5	—	—	6	7	M3×5ℓ	7	11.5	–1	7		25X
	30X	76	37.5	37.5	20	35	9	12	17	—	—	M4×6ℓ	3	8	—	7		30X
	35X	84	39	39	20	44	7	14	20	—	—	M5×10ℓ	2	7	—	7		35X

[1] The length of the LM block mounting bolts may vary with optional specifications. Contact THK for details.

Notes: Please contact THK if you will be using the dedicated bellows in anything other than a horizontal orientation (i.e., vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.
When using the bellows, lubrication is possible through methods such as a side nipple.
When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.
Some optional specifications require a rubber seal for the mounting plate. Contact THK for details.

Model number coding

JSSR35X - 60/420

- JSSR35X: Model number of bellows for SSR35X
- 60/420: Dimensions of the bellows (length when compressed / length when extended)

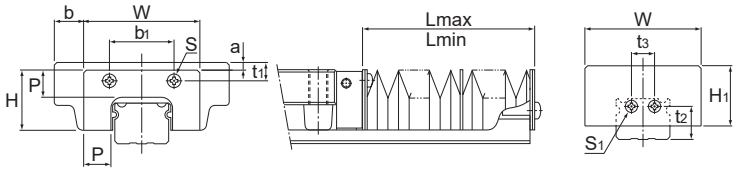
Note: The length of the bellows is calculated as follows.

$$L_{min} = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$L_{max} = L_{min} \cdot A$ A: Extension rate

Model JSV Simplified Bellows for Models SVR/SVS and NR-X/NRS-X

For models SVR/SVS, NR-X/NRS-X, simplified bellows are available. For greater contamination protection, attach a telescopic cover outside the bellows after the bellows are mounted as depicted in Fig. 1.



Unit: mm

Model No.		Main dimensions								Supported model numbers	
		W	H	H_1	P	b_1	t_1	t_2	t_3		
JSV	25	50	24.5	24.5	10	41.7	8.1	13	—	SVR/SVS, NR-X/NRS-X	25
	30	60	30	30	14	35	14.6	17	—		30
	35	70	34	34	15	42	4.8	20.5	—		35
	45	86	39.5	39.5	17	50.2	7.1	24	—		45
	55	100	48	48	20	54	9	29.5	18		55
	65	126	59	59	25	64	12	36.2	20		65

Unit: mm

Model No.		Main dimensions									A (Lmax/Lmin)
		Mounting bolt		a			b				
		S	S_1	C/R	RH	CH	C	R	RH	CH	
JSV	25	M3×10ℓ	M4×6ℓ	1	—	—	11	0	—	—	7
	30	M3×12ℓ	M4×6ℓ	1	—	—	15	0	—	—	9
	35	M4×10ℓ	M5×6ℓ	1	12	5	15	0	0	15	10
	45	M5×12ℓ	M5×6ℓ	1	19	9	17	0	0	17	10
	55	M4×12ℓ	M5×6ℓ	1	18	8	20	0	0	20	13
	65	M6×12ℓ	M6×8ℓ	1	—	—	22	0	—	—	13

Notes: Please contact THK if you will be using the simplified bellows in anything other than a horizontal orientation (i.e. vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.
When using the bellows, lubrication is possible through methods such as a side nipple.
When using the bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the bellows is required when ordering the LM Guide.

Model number coding

JSV45X - 85/850

- JSV45X: Dedicated Bellows for Models SVR/SVS and NR-X/NRS-X
- 85/850: Dimensions of the bellows (length when compressed / length when extended)

Note: The length of the bellows is calculated as follows.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate

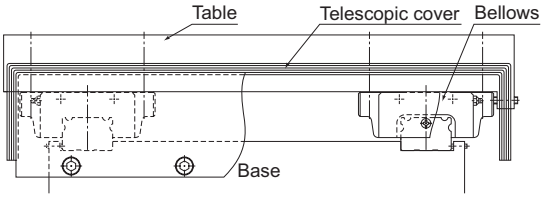
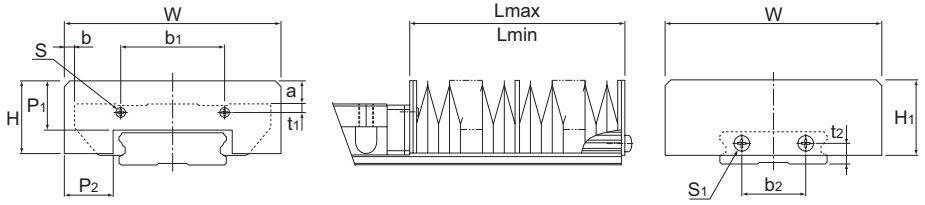


Fig. 1: Example of Mounting the Bellows

Dedicated Bellows JSHW for Model SHW

The table below shows the dimensions of dedicated bellows JSHW for model SHW. Specify the corresponding model number of the desired bellows from the table.



Unit: mm

Model No.		Main dimensions									Supported model numbers	
		W	H	H_1	P_1	P_2	b_1	t_1	b_2	t_2		
JSHW	17	68	22	23	15	15.4	39	2.6	18	6	SHW	17
	21	75	25	26	17	17	35.8	2.9	22	7		21
	27	85	33.5	33.5	20	20	25	3.5	20	10		27
	35	120	35	35	20	20	75	7.5	40	13		35
	50	164	42	42	20	20	89.4	14	50	16		50

Unit: mm

Model No.		Main dimensions					$\left(\frac{A}{\frac{Lmax}{Lmin}}\right)$
		Mounting bolt		a	b		
		S[1]	S_1		Model CA	Model CR	
JSHW	17	M2×4ℓ	M3×6ℓ	8	4	9	5
	21	M2×5ℓ	M3×6ℓ	8	3.5	10.5	6
	27	M2.6×6ℓ	M3×6ℓ	10	2.5	11.5	7
	35	M3×8ℓ	M3×6ℓ	6	0	10	7
	50	M4×12ℓ	M4×8ℓ	—	1	17	7

[1] Use self-tapping screws for the mounting bolts.

Notes: Please contact THK if you will be using the dedicated bellows in anything other than a horizontal orientation (i.e., vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.
For lubrication when using the dedicated bellows, contact THK.
When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JSHW21 - 60/360

- JSHW21: Model number of bellows for SHW21
- 60/360: Dimensions of the bellows (length when compressed / length when extended)

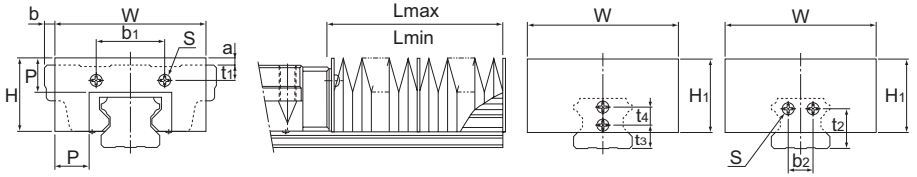
Note: The length of the bellows is calculated as follows.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate

Dedicated Bellows JH for Model HSR

The table below shows the dimensions of dedicated bellows JH for model HSR. Specify the corresponding model number of the desired bellows from the table.



Models HSR15 to 30 Models HSR35 to 85

Unit: mm

Model No.		Main dimensions																A (Lmax/Lmin)	Supported model numbers	
							t_1							a		b				
		W	H	H_1	P	b_1	A/B/C	R	b_2	t_2	t_3	t_4	Mounting bolt S	A/B/C	R	A/B/C	R			
JH	15	55	27	30	15	25	2.5	6.5	—	—	10	—	M4×8ℓ[1]	7.5	3.5	–4	–10.5	5	HSR	15
	20	66	32	35	17	34	5	5	—	—	6	8	M3×6ℓ	7	7	–1.5	–11	6		20
	25	78	38	38	20	30	7	11	—	—	10	8	M3×6ℓ	8.5	4.5	–4	–15	7		25
	30	84	42	42	20	40	8	11	—	—	11	10	M4×8ℓ	7	4	3	–12	7		30
	35	88	43	43	20	40	9	16	14	23	—	—	M4×8ℓ	4	—	6	–9	7		35
	45	100	51	51	20	58	10	20	20	29	—	—	M5×10ℓ	—	—	10	–7	7		45
	55	108	54	54	20	66	11	21	26	35	—	—	M5×10ℓ	—	—	16	–4	7		55
	65	132	68	68	20	80	19	19	32	42	—	—	M6×12ℓ	—	—	19	–3	7		65
	85	170	88	88	30	105	23	23	44	50	—	—	M6×12ℓ	—	—	22.5	–7	10		85

[1] For the Model JH15, mounting bolts are used only on the LM rail side, while the LM block side uses M2×5 (nominal) self-tapping screws.

Notes: Please contact THK if you will be using the dedicated bellows in anything other than a horizontal orientation (i.e., vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.
When using the bellows, lubrication is possible through methods such as using a side nipple.
However, a side nipple cannot be attached to HSR15 and HSR20, so please contact THK.
When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JH25 - 60/420

Model number of bellows for HSR25

Dimensions of the bellows (length when compressed / length when extended)

Note: The length of the bellows is calculated as follows.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

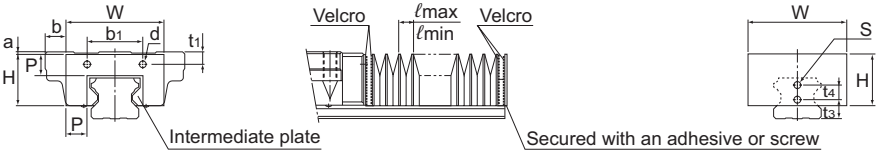
$Lmax = Lmin \cdot A$ A: Extension rate

Dedicated Bellows DH for Model HSR

For models HSR15, 20, and 25, bellows DH, which has the following features, is also available in addition to the dedicated bellows JH. Specify the corresponding model number of the desired bellows from the table.

● Features

(1) It has a width and height smaller than the conventional product so that no part of the bellows sticks out above the top face of the LM block. The extension rate is equal to or greater than that of the conventional type.
(2) It has an intermediate plate for each crest so that it will not easily lift and the bellows can be used when mounted vertically, to a wall, or diagonally.
(3) It is operable at high speeds, up to 120 m/min.
(4) Since Velcro can be used to install the bellows, a regular-size model can be cut to the desired length, or two or more regular-size bellows can be joined together.
(5) It can be installed using screws just as the Model JH. Please contact THK if you wish to use screws for installation.



Unit: mm

Model No.		Main dimensions																	Supported model numbers	
		W	H	P	b_1	t_1 C	t_1 R	t_3	t_4	d	s	a C	a R	b C	b R	ℓmax	ℓmin	Extension rate A		
DH	15X	35	19.5	8.5	25	2.5	6.5	10	—	ϕ2.5	ϕ5	0	4	6	–0.5	10	2.5	4	HSR	15
	20X	45	25	10	34	5	5	6	8	ϕ4	ϕ4	0	0	9	–0.5	13	2.5	5		20
	25X	52	29.5	12	30	7	11	10	8	ϕ3.5	ϕ3.5	0	4	9	–2	15	3	5		25

Notes: For lubrication when using the dedicated bellows, contact THK.
When using the bellows, lubrication is possible through methods such as using a side nipple. However, a side nipple cannot be attached to HSR15 and HSR20, so please contact THK.

Model number coding

DH20X - 50/250

Model number of bellows for HSR20

Dimensions of the bellows (length when compressed / length when extended)

Note: The length of the bellows is calculated as follows.

$$L_{min} = \frac{(S+2A)}{(A-1)}$$

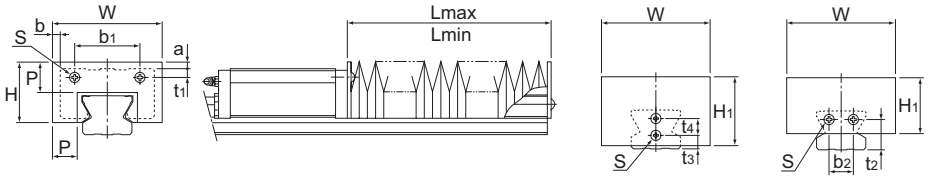
S: Stroke length (mm)

$L_{max} = (L_{min}-2)A$

A: Extension rate

Dedicated Bellows JS for Model SR

The table below shows the dimensions of dedicated bellows JS for model SR. Specify the corresponding model number of the desired bellows from the table.



Models SR15 to 25 Models SR30 to 70

Unit: mm

Model No.		Main dimensions														A (Lmax/Lmin)	Supported model numbers	
		W	H	H_1	P	b_1	t_1	b_2	t_2	t_3	t_4	Mounting bolt S	a	b W/V	b TB/SB			
JS	15	51	24	26	15	22	3.4	—	—	8	—	M3×6ℓ	5	8.5	–0.5	5	SR	15
	20	58	26	30	15	25	4.2	—	—	6	6	M3×6ℓ	4	8	–0.5	5		20
	25	71	33	38	20	29	5	—	—	6	7	M3×6ℓ	7	11.5	–1	7		25
	30	76	37.5	37.5	20	42	5	12	17	—	—	M4×8ℓ	3	8	–7	7		30
	35	84	39	39	20	44	6.5	14	20	—	—	M5×10ℓ	1.5	7	–8	7		35
	45	95	47.5	47.5	20	60	8	22	27	—	—	M5×10ℓ	–1.5	5	–12.5	7		45
	55	108	55.5	55.5	25	70	10	24	28	—	—	M6×12ℓ	–0.5	4	–16	9		55
	70	144	67	67	30	90	13	34	35	—	—	M6×12ℓ	–3	9	—	10		70

Notes: Please contact THK if you will be using the dedicated bellows in anything other than a horizontal orientation (i.e., vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.
For lubrication when using the dedicated bellows, contact THK.
When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JS55 - 60/540

Model number of bellows for SR55

Dimensions of the bellows (length when compressed / length when extended)

Note: The length of the bellows is calculated as follows.

$$L_{min} = \frac{S}{(A-1)}$$ S: Stroke length (mm)

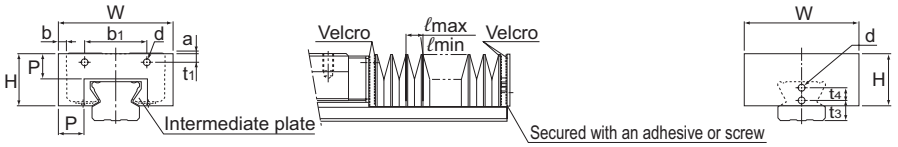
$L_{max} = L_{min} \cdot A$ A: Extension rate

Dedicated Bellows DS for Model SR

In addition to the dedicated Bellows JS, Bellows DS with the following features are available for Models SR15, 20, and 25. Please specify using the below model number.

● Features

(1) It has a width and height smaller than the conventional product so that no part of the bellows sticks out above the top face of the LM block. The extension rate is equal to or greater than that of the conventional type.
(2) It has an intermediate plate for each crest so that it will not easily lift and the bellows can be used when mounted vertically, to a wall, or diagonally.
(3) It is operable at high speeds, up to 120 m/min.
(4) Since Velcro can be used to install the bellows, a regular-size model can be cut to the desired length, or two or more regular-size bellows can be joined together.
(5) Can be installed using screws just as bellows JS.
In this case, a plate (thickness: 1.6 mm) must be placed between the bellows and the LM block. Please contact THK if you wish to use screws for installation.



Unit: mm

Model No.		Main dimensions																Supported model numbers	
										b				Extension rate		Factor		
		W	H	P	b_1	t_1	t_3	t_4	d	a	W/V	TB/SB	ℓmax	ℓmin	A	E	k		
DS	15	38	19	10	22	3.4	8	—	3.5	0	2	−7	13	2.5	5	2	1.3	SR	15
	20	49	22	10	25	4.2	6	6	4	0	3.5	−5	13	2.5	5	2	1.3		20
	25	56	26	12	29	5	6	7	4	0	4	−8.5	15	3	5	2	1.3		25

Notes: For lubrication when using the dedicated bellows, contact THK.
When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

DS20 - 50/250

Model number of bellows for SR20

Dimensions of the bellows (length when compressed / length when extended)

Note: The maximum length of the bellows itself is calculated as follows.
Lmax (Lmin) = ℓmax (ℓmin) ×200
Example of calculating bellows dimensions:
When the stroke of model SR20 is: ℓs=530 mm

$$Lmin = \frac{\ell s}{(A-1)} = \frac{530}{4} = 132.5 \fallingdotseq 135$$

$$Lmax = A \cdot Lmin = 5 \times 135 = 675$$

Number of required crests n

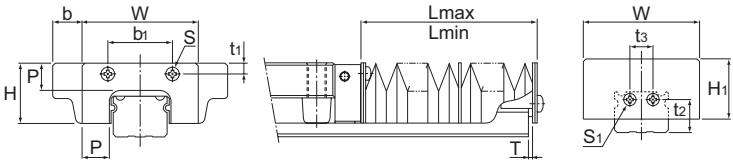
$$n = \frac{Lmax}{P \cdot k} = \frac{675}{10 \times 1.3} = 51.9 \fallingdotseq 52 \text{ crests}$$

$$Lmin = n \cdot \ell min + E = 52 \times 2.5 + 2 = 132$$

(E indicates the plate thickness of 2)
Therefore, the model number of the required bellows is DS20-132/675.

Simplified Bellows JN Dedicated for Models NR/NRS

For models NR/NRS, simplified bellows are available. For greater contamination protection, attach a telescopic cover outside the bellows after the bellows are mounted as depicted in Fig. 1.



Unit: mm

Model No.		Main dimensions												A (Lmax/Lmin)	Supported model numbers	
										Mounting bolt		b A,LA B,LB	T			
		W	H	H_1	P	b_1	t_1	t_2	t_3	S	S_1					
JN	75	145	64	64	30	80	10.5	34.2	26	M6×12ℓ	M6×5ℓ	25	3.2	20	NR/NRS	75
	85	156	70.5	70.5	30	110	15.5	39.5	28	M6×12ℓ	M6×5ℓ	39.5	3.2	20		85
	100	200	82	82	35	140	15	40	34	M8×16ℓ	M6×5ℓ	30	3.2	20		100

Notes: Please contact THK if you will be using the simplified bellows in anything other than a horizontal orientation (i.e. vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.
When using the bellows, lubrication is possible through methods such as a side nipple.
When using the bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the bellows is required when ordering the LM Guide.
The simplified bellows for Models NR-X/NRS-X uses the same simplified bellows Model JSV as Models SVR/SVS.

Model number coding

JN75 - 60/420

- JN75: Model number of bellows for NR/NRS
- 60/420: Dimensions of the bellows (length when compressed / length when extended)

Note: The length of the bellows is calculated as follows.

$$L_{min} = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$L_{max} = L_{min} \cdot A$ A: Extension rate

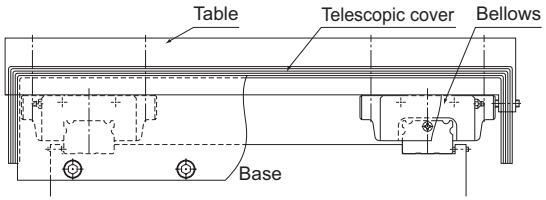
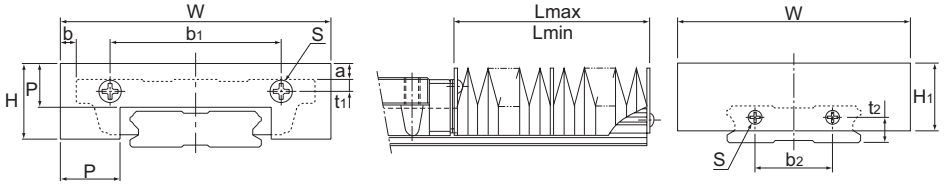


Fig. 1: Example of Mounting the Bellows

Dedicated Bellows JHRW for Model HRW

The table below shows the dimensions of dedicated bellows JHRW for model HRW. Specify the corresponding model number of the desired bellows from the table.



Unit: mm

Model No.		Main dimensions										b		A Lmax / Lmin	Supported model numbers	
		W	H	H_1	P	b_1	t_1	b_2	t_2	Mounting bolt S	a	Model CA	Model CR			
JHRW	17	68	22	23	15	43	3	18	6	M3×6ℓ[1]	8	4	9	5	HRW	17
	21	75	25	26	17	48	3	22	7	M3×6ℓ	8	3.5	10.5	6		21
	27	85	33.5	33.5	20	48	3	20	10	M3×6ℓ	10	2.5	11.5	7		27
	35	120	35	35	20	75	3.5	40	13	M3×6ℓ	6	0	10	7		35
	50	164	42	42	20	100	9	50	16	M4×8ℓ	–3	1	17	7		50

[1] For the Model JHRW17, mounting bolts are used only on the LM rail side, while the LM block side uses M2.5×8 (nominal) self-tapping screws.

Notes: Please contact THK if you will be using the dedicated bellows in anything other than a horizontal orientation (i.e., vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.
For lubrication when using the dedicated bellows, contact THK.
When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JHRW21 - 60/360

- JHRW21: Model number of bellows for HRW21
- 60/360: Dimensions of the bellows (length when compressed / length when extended)

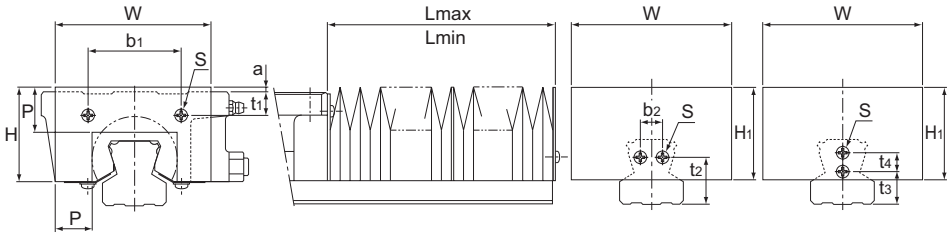
Note: The length of the bellows is calculated as follows.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate

Dedicated Bellows J for Model NSR-TBC

The table below shows the dimensions of dedicated bellows J for model NSR-TBC. Specify the corresponding model number of the desired bellows from the table.



Models NSR30 to 70TBC

Models NSR20 and 25TBC

Unit: mm

Model No.		Main dimensions												A (Lmax/Lmin)	Supported model numbers	
		W	H	H_1	P	b_1	t_1	b_2	t_2	t_3	t_4	Mounting bolt S	a			
J	20	65	39	43	20	26	8	—	—	9	8	M4×8ℓ	8	7	NSR	20TBC
	25	75	43	45	20	40	11	—	—	12	8	M4×8ℓ	3	7		25TBC
	30	85	46	46	20	50	12	12	25	—	—	M4×8ℓ	—	7		30TBC
	40	115	59	59	25	60	13	16	32	—	—	M5×10ℓ	—	9		40TBC
	50	115	66	66	25	75	11	20	32	—	—	M5×10ℓ	—	9		50TBC
	70	124	84	78	25	96	16	36	40	—	—	M6×12ℓ	—	9		70TBC

Notes: Please contact THK if you will be using the dedicated bellows in anything other than a horizontal orientation (i.e., vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.
When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

J50 - 60/540

- J50: Model number of bellows for NSR50TBC
- 60/540: Dimensions of the bellows (length when compressed / length when extended)

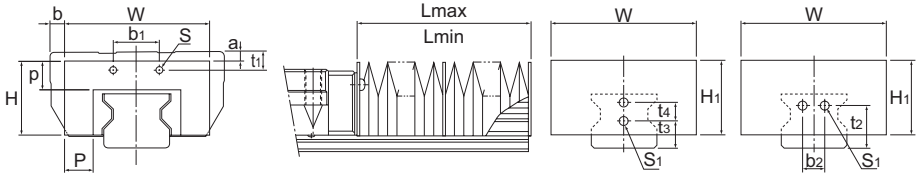
Note: The length of the bellows is calculated as follows.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate

Dedicated Bellows JSRG for Model SRG

The table below shows the dimensions of dedicated bellows JSRG for model SRG. Specify the corresponding model number of the desired bellows from the table.



Models SRG15X to 30X Models SRG35 to 100

Unit: mm

Model No.		Main dimensions																		Supported model numbers	
		W	H	H_1	P	p	b_1	t_1		b_2	t_2	t_3	t_4	Screw size S	Mounting bolt S_1	a		b		A Lmax/Lmin	
								A/C	R/V							A/C	R/V	A/C	R/V		
JSRG	15	55	27	27	14.2	12.7	28	10.3	10.3	—	—	10.6	—	M2	M4	−7	−7	4	10.5	5	SRG 15X
	20	66	32	32	17	15	38.5	9.6	9.6	—	—	7.4	8	M2	M3	-6.6	-6.6	1.5	11	6	20X
	25	78	38	38	23	18	27.6	3.9	7.9	—	—	10	8	M2	M3×6ℓ	−6.5	−2.5	4	15	6	25X
	30	84	42	42	22	19	37.4	10.4	13.4	—	—	11	10	M3	M4×8ℓ	−5	−2	3	12	7	30X
	35	88	42	42	22	15	35	5	12	13	23	—	—	M3	M4×4ℓ	0	7	6	−9	5	SRG 35
	45	100	51	51	20	20	32	7	17	15	29	—	—	M3	M5×4ℓ	0	10	10	−7	7	45
	55	108	57	57	20	20	36	10	20	25	35	—	—	M3	M5×4ℓ	3	13	16	−4	7	55
	65	132	75.5	75.5	28.5	25	46	9	9	28	42	—	—	M4	M6×5ℓ	3	3	19	−3	9	65
	85	168	91	91	35.5	30	120	15	—	30	55	—	—	M6	M6×8ℓ	3	—	23.5	—	9	85
	100	198	100	100	43	33	152	13.3	—	36	60	—	—	M6	M6×8ℓ	4	—	26	—	9	100

Notes: Please contact THK if you will be using the dedicated bellows in anything other than a horizontal orientation (i.e., vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.
When using the bellows, lubrication is possible through methods such as a side nipple.
When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.
In case of oil lubrication, be sure to let THK know the mounting orientation and the exact position in each LM block where the piping joint should be attached.
For the mounting orientation and the lubrication, see A1-12 and A24-2, respectively.

Model number coding

JSRG35 - 60/420

Model number of bellows for SRG35

Dimensions of the bellows (length when compressed / length when extended)

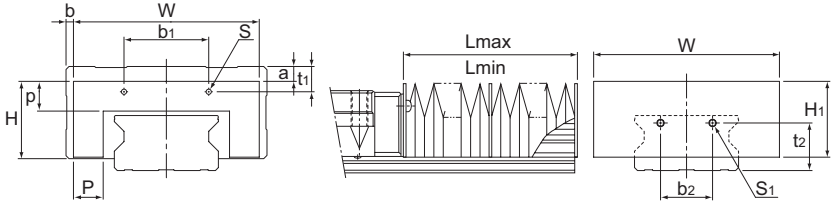
Note: The length of the bellows is calculated as follows.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate

Dedicated Bellows JSRW for Model SRW

The table below shows the dimensions of dedicated bellows JSRW for model SRW. Specify the corresponding model number of the desired bellows from the table.



Unit: mm

Model No.		Main dimensions													A (Lmax/Lmin)	Supported model numbers	
		W	H	H_1	P	p	b_1	t_1	b_2	t_2	Screw size S	Mounting bolt S_1	a	b			
JSRW	70	125	51	51	20	20	57	17	35	32	M3	M5×4L	10	5	7	SRW	70
	85	138	57	57	20	20	68	20	42	36	M3	M5×4L	13	13.5	7		85
	100	169	75.5	75.5	28.5	25	83	19	50	46	M4	M6×5L	13	15.5	9		100
	130	220	96	96	36.5	35	165	35	60	55	M6	M6×8L	18	20	9		130
	150	260	114	114	49	47	200	43.3	70	60	M6	M6×8L	20	20	9		150

Notes: When using the bellows, lubrication is possible through methods such as a side nipple.
Please contact THK if you will be using the dedicated bellows in anything other than a horizontal orientation (i.e., vertical, wall-mounted, or inverted), or if you require heat-resistant specifications.

Model number coding

JSRW70 - 60/420

- JSRW70: Model number of bellows for SRW70
- 60/420: Dimensions of the bellows (length when compressed / length when extended)

Note: The length of the bellows is calculated as follows.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate