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	LaCS	Side Scraper	End seal + Protector	Double seals + Protector	
		Symbol	UU	—	—	SS	DD	ZZ	KK	HH	YY	JJ	TT	
Caged Ball	SHS	15 to 65	○	○	○	○★	○	○	○	○	—	—	—	
	SSR	15 to 35	○★	○	—	○	○	○	○	○	—	—	—	
	SVR	25 to 65	○	○	○	○	○	○	○	○	○	○	○	
	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	8,10,12	○	—	—	—	—	—	—	—	—	—	—	
		15,20,25	○	○	—	○★	○	○★6	○★6	○	—	—	—	
		30,35	○	○	—★6	○★	○	○	○	○	—	—	—	
		45,55,65	○	○	—★6	○★	○	○	○	—	—	—	—	
		85	○	○	—★6	○★	○	○	○	○	—	—	—	
		100,120,150	○	○	—	○★	—	—	—	—	—	—	—	
	SR	15 to 25	○	○	—	○	○	○★7	○★7	—	—	—	—	
		30 to 70	○	○	—	○	○	○	○	—	—	—	—	
		85 to 150	○	○	—	○	—	—	—	—	—	—	—	
	NR	25 to 65,100	○	○	○	○	○★8	○★8	○★8	○★8	—	—	—	
		75,85	○	○	○	○	○	○	○	○	—	—	—	
	NRS	25 to 65,100	○	○	○	○	○★9	○★9	○★9	○★9	—	—	—	
		75,85	○	○	○	○	○	○	○	○	—	—	—	
	HRW	12,14	○★	○	—	○	—	—	—	—	—	—	—	
		17,21	○★	—	—	—	○	○	○	—	—	—	—	
		27 to 60	○★	○	—	○	○	○	○	—	—	—	—	

*1 Model SHS : Dedicated cap GC --- not applicable to only model SHS15
*2 Model SSR : Dedicated cap GC --- not applicable to model SSR15, Stainless steel LM Guides --- applicable to XV, XW
*3 Model SHW : GG, PP --- applicable to only model SHW21, Dedicated cap GC --- applicable to SHW35, 50
*4 Model SRS : Dedicated cap C --- applicable to models SRS9W, 12, 15, 20, 25
*5 Model SCR : Dedicated cap GC --- not applicable to only model SCR15
*6 Model HSR : ZZ, KK --- grease nipple cannot be attached to model HSR15,
GG --- applicable to model HSR25, Steel tape SP --- applicable to models HSR15 to 100, Dedicated cap C --- applicable to models HSR12 to 100,
Dedicated cap GC --- applicable to models HSR20 to 100,
Dedicated LM cover --- applicable to models HSR25 to 55,
Inner seal --- applicable to models HSR30 to 85
*7 Model SR : ZZ, KK --- grease nipple cannot be attached to models SR15, 20.
Dedicated cap C --- applicable to models SR15 to 85, dedicated cap GC --- applicable to models SR20 to 85,
Stainless steel LM Guides --- applicable to models SR15 to 35
*8 Model NR : DD,ZZ,KK and HH --- side nipple required for model NR100, Plate cover SV --- applicable to models NR35 to 75,
Dedicated cap C and GC --- not applicable to only model NR75

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- resis-tance end seal	Low resistance end seal + side seal	LiCS	LiCS + Side seal (+ Inner seal)	Plate Cover SV	Steel tape SP	Dedicated cap C	Dedicated cap GC	Dedi-cated bellows	Dedicat-ed LM Cover	Tapped-hole LM Rail Type	QZ Lubrica-tor	End plate with/without side nipple	AP-HC, AP-C, AP-CF	Stainless Steel LM Guide
	LL	RR	GG	PP	Z	Z	—	—	—	TPH (dedicated for HSR)	K	QZ	—	F	M
	—	—	○	○	—	○	○	△★1	○	—	○	○	○	○	—
	—	—	○	○	—	○	○	△★2	○	—	○	○	○	○	△★2
	—	—	—	—	—	—	○	○	○	—	—	○	○	○	—
	—	—	—	—	—	—	○	○	○	—	—	○	○	○	—
	—	—	—	—	—	—	○	—	—	—	—	○	—	○	○
	—	—	—	—	—	—	○	—	○	—	—	○	—	○	○
	—	—	△★3	△★3	—	—	○	△★3	○	—	—	○	—	○	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	○
	—	—	—	—	—	—	—	—	—	—	—	○	—	—	○
	—	—	—	—	—	—	△★4	—	—	—	—	○	—	—	○
	—	—	—	—	—	—	○	△★5	—	—	○	○	○	○	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	△★6	—	—	—	—	—	—	○	○
	○	○	△★6	—	—	○	○	△★6	○	△★6	○	○	—	○	○
	○	○	—	—	—	○	○	○	○	○	○	○	—	○	○
	○	○	—	—	—	○	○	○	○	△★6	○	○	—	○	—
	—	—	—	—	—	○	○	○	○	—	—	○	—	○	—
	—	—	—	—	—	△★6	△★6	△★6	—	—	—	—	—	○	—
	○	○	—	—	—	○	○	△★7	○	—	○	—	—	○	○
	—	—	—	—	—	○	○	○	○	—	○	—	—	○	△★7
	—	—	—	—	—	—	△★7	△★7	—	—	—	—	—	○	—
	—	—	—	—	△★8	○	○	○	○	—	—	○	○	○	—
	—	—	—	—	△★8	○	△★8	△★8	○	—	—	—	○	○	—
	—	—	—	—	△★9	○	○	○	○	—	—	○	○	○	—
	—	—	—	—	△★9	○	△★9	△★9	○	—	—	—	○	○	—
	—	—	—	—	—	—	△★10	—	—	—	—	—	—	○	○
	—	—	—	—	—	—	○	—	○	—	—	—	—	○	○
	—	—	—	—	—	—	○	△★10	△★10	—	—	—	—	○	△★10

*9 Model NRS : DD,ZZ,KK and HH --- side nipple required for model NRS100, Plate cover SV --- applicable to models NRS35 to 75, Dedicated cap C and GC --- not applicable to only model NRS75

*10 Model HRW: Dedicated cap C --- applicable to models HRW14 to 60, Dedicated cap GC --- applicable to models HRW35, 50, 60, Dedicated bellows --- applicable to models HRW17 to 50, Stainless steel LM Guides --- applicable to models HRW12 to 35

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	LaCS	Side Scraper	End seal + Protector	Double seals + Protector	
		Symbol	UU	—	—	SS	DD	ZZ	KK	HH	YY	JJ	TT	
Full-ball	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	○	○	—	○	○	○★15	○★15	—	—	—	—	
		30 to 45	○	○	○	○	○	○	○	—	—	—	—	
	MX	5,7	○	—	—	—	—	—	—	—	—	—	—	
	JR	25 to 55	○	○	—	○	○	○	○	—	—	—	—	
	HCR	12	○	—	—	—	—	—	—	—	—	—	—	
		15 to 65	○	○	—	○	○	○★16	○★16	—	—	—	—	
	HMG	15 to 65	○	—	—	—	—	—	—	—	—	—	—	
	NSR	20TBC to 30TBC	○	○	—	○	—	—	—	—	—	—	—	
		40TBC to 70TBC	○	○	○	○	—	—	—	—	—	—	—	
	HSR-M1	15M1	○	○	—	○	—	—	—	—	—	—	—	
		20M1 to 30M1	○	○	—	○	—	—	—	—	—	—	—	
		35M1	○	○	—	○	—	—	—	—	—	—	—	
	SR-M1	15 to 35	○	○	—	○	—	—	—	—	—	—	—	
	RSR-M1	9,12W,15W	○	—	—	—	—	—	—	—	—	—	—	
		9W,12,15,20	○	—	—	—	—	—	—	—	—	—	—	
	HSR-M2	15 to 25	○	○	—	○	—	—	—	—	—	—	—	
Caged Roller	SRG	15	○	○	○	○	○	—	—	—	—	—	—	
		20,25,35	○	○	○	○	○	○	○	○	—	—	—	
		30,45,55,65	○	○	○	○	○	○	○	○	—	—	—	
		85,100	○	○	○	○	○★18	—	—	—	—	—	—	
	SRN	35 to 65	○	○	○	○	○	○	○	○	—	—	—	
	SRW	70 to 100	○	○	○	○	○	○	○	○	—	—	—	
		130,150	○	○	○	○	○	○	○	—	—	—	—	

*11 Model RSR : Dedicated cap C --- applicable to model RSR14W
*12 Model HR : Dedicated cap C --- applicable to models HR1123 to 50105, Dedicated cap GC --- applicable to models HR2042 to 50105
*13 Model GSR : Dedicated cap GC --- applicable to models GSR20 to 35
*14 Model GSR-R : AP-HC treatment of rack rail is not applicable
*15 Model CSR : ZZ, KK --- grease nipple cannot be attached to models CSR15.Dedicated cap model GC --- applicable to models CSR20,25.

Options

Table of Supported Options by Models

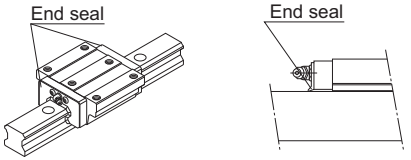
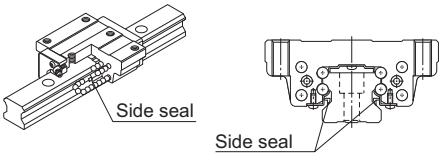
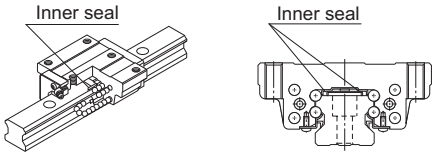
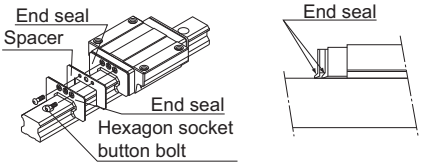
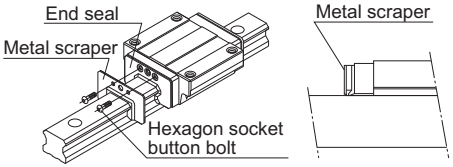
Symbols in the table ○: Applicable △: Applicable depending on model (see note)
★: Recommended by THK (standard stock item)

												Lubrication		Corrosion Prevention	
	Low- resis-tance end seal	Low resistance end seal + side seal	LiCS	LiCS + Side seal (+ Inner seal)	Plate Cover SV	Steel tape SP	Dedicated cap C	Dedicated cap GC	Dedi-cated bellows	Dedicat-ed LM Cover	Tapped-hole LM Rail Type	QZ Lubrica-tor	End plate with/without side nipple	AP-HC, AP-C, AP-CF	Stainless Steel LM Guide
	LL	RR	GG	PP	Z	Z	—	—	—	TPH (dedicated for HSR)	K	QZ	—	F	M
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	○
	—	—	—	—	—	—	△★11	—	—	—	—	—	—	○	○
	—	—	—	—	—	—	△★12	△★12	—	—	—	—	—	○	○
	—	—	—	—	—	—	△★12	△★12	—	—	—	—	—	○	—
	—	—	—	—	—	—	○	△★13	—	—	—	—	—	○	—
	—	—	—	—	—	—	○	○	—	—	—	—	—	△★14	—
	○	○	—	—	—	—	○	△★15	—	—	○	—	—	○	—
	○	○	—	—	—	—	○	○	—	—	○	—	—	○	—
	—	—	—	—	—	—	—	—	—	—	○	—	—	○	○
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	—
	○	○	—	—	—	—	—	—	—	—	—	—	—	○	—
	—	—	—	—	—	—	○	△★17	—	—	—	—	—	○	—
	—	—	—	—	—	—	○	○	○	—	—	—	—	○	—
	—	—	—	—	—	—	○	○	○	—	—	—	—	○	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	
	—	—	—	—	—	—	○	—	—	—	—	—	—	○	
	—	—	—	—	—	—	○	—	—	—	—	—	—	○	
	—	—	—	—	—	—	○	—	—	—	—	—	—	○	
	—	—	—	—	—	—	—	—	—	—	—	—	—	○	
	—	—	—	—	—	—	○	—	—	—	—	—	—	○	
	—	—	○	○	—	—	○	—	○	—	—	○	○	○	—
	—	—	○	○	△★18	—	○	○	○	—	—	○	○	○	—
	—	—	—	—	△★18	—	○	○	○	—	—	○	○	○	—
	—	—	—	—	○	—	○	○	○	—	—	○	○	○	—
	—	—	—	—	○	—	○	○	—	—	—	○	○	○	—
	—	—	—	—	○	—	○	○	○	—	—	○	○	○	—
	—	—	—	—	○	—	○	○	○	—	—	○	○	○	—

*16 Model HCR : ZZ, KK --- grease nipple cannot be attached to model HCR15.
*17 Model HMG : Dedicated cap GC --- applicable to model HMG25
*18 Model SRG : DD --- side nipple required for model SRG100.
Plate cover SV --- applicable to models SRG25, 35 to 100

Seal and Metal scraper

- For the supported models, see the table of options by model number on A1-456.
- For the LM block dimension (dimension L) with seal attached, see A1-467 to A1-474.
- For the maximum seal resistance, see A1-480 to A1-482.

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 severely exposed to dust or cutting chips
Double Seals		Used in locations exposed to much dust or many cutting chips
Metal Scraper (Non-contact)		Used in locations where welding spatter may adhere to the LM rail

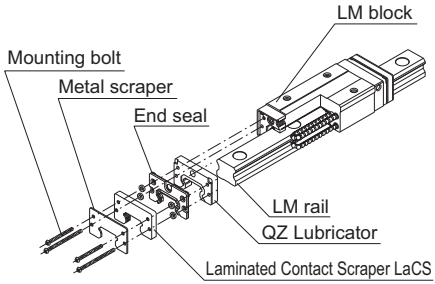
Symbol	Contamination Protection Accessories
UU	With end seal
SS	With end seal + side seal + inner seal*
DD	With double seals + side seal + inner seal*
ZZ	With end seal + side seal + inner seal* + metal scraper
KK	With double seals + side seal + inner seal* + metal scraper

* Some models are not equipped with inner seals.(See A1-456)

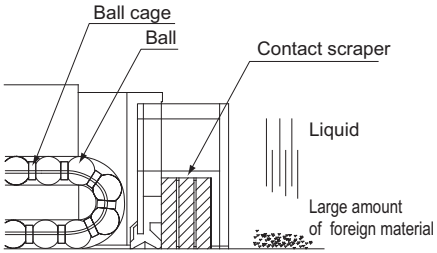
Laminated Contact Scraper LaCS

●For the supported models, see the table of options by model number on A1-456.
●For the LM block dimension (dimension L) with LaCS attached, see A1-467 to A1-474.
●For the resistance of LaCS, see A1-483.
●For notes regarding how to handle the LaCS, refer to A1-529.

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



Appearance Drawing



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
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 A1-456)

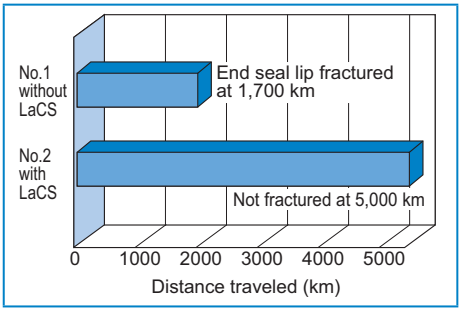
*2 JJHH and TTHH are available only for models SVR/SVS.
Note) HH type (with LaCS) of models SVR/SVS is provided with the protector (see A1-465).
Contact THK if you want to use the Protector with other options.

● Test under an Environment with a Water-soluble Coolant

[Test conditions] Test environment: water-soluble coolant

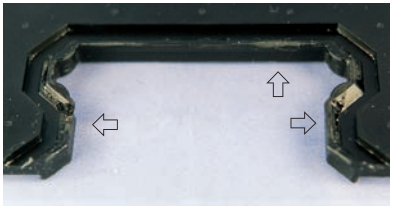
Item		Description
Tested model	No.1	SHS45R1SS+3000L (end seal only)
	No.2	SHS45R1SSHH+3000L (end seal and LaCS)
Maximum speed		200m/min
Environmental conditions		Coolant sprayed: 5 time per day

[Test result]



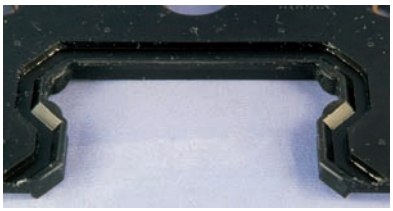
Magnified view of the end seal lip

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 under an Environment with Minute Foreign Matter

[Test conditions] 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		60m/min, 1G
External load		9.6kN
Foreign material conditions		Type: FCD450#115 (particle diameter: 125 μm or less)
		Sprayed amount: 1g/1hour (total sprayed amount: 120 g)

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

Large amount of foreign matter has entered the raceway

[Test result] Amount of foreign material entering the raceway

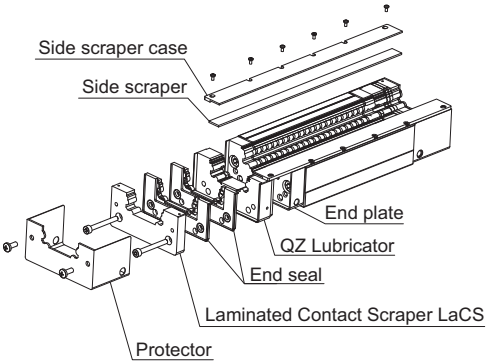
Seal configuration		Amount of foreign material entering the raceway g
Double-seal configuration (2 end seals superposed with each other)	Tested model 1	0.3
	Tested model 2	0.3
	Tested model 3	0.3
LaCS	Tested model 1	0
	Tested model 2	0
	Tested model 3	0

No. 2 Traveled 100 km (LaCS only)

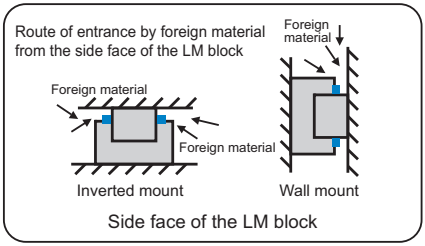
No foreign matter entering the raceway observed

Side Scraper

- For the supported models: models SVR/SVS
- For the resistance of side scraper, see A1-484.
- For the LM block dimension (dimension L) with side scraper attached, see A1-467.
- For notes regarding how to handle the side scraper, see A1-529.

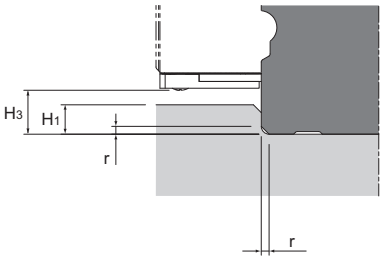


Outline view
(Ex: in case of QZTTHHYY type)



[Features]

- Minimizes foreign material entering from the side of the LM Guide in a harsh environment.
- Demonstrates a dust protection effect in inverted or wall mount.



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

The shoulder height of the mounting surface and the corner radius after the side scraper is mounted

Unit: mm

Model No.	Corner radius r(max)	Shoulder height of the LM rail H_1	H_3
25	0.5	2	2.7
30	1	3.5	4.2
35	1	5.5	6.2
45	1	8	8.8
55	1.5	10.5	11.2
65	1.5	11	12.1

Note) Note that the side scraper is not sold alone.

Model number coding

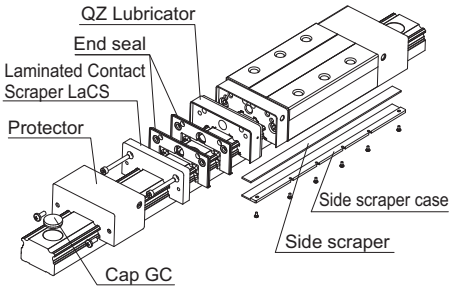
SVR45 LR 1 QZ JJHH YY C1 +1200L

YY: With side scraper*

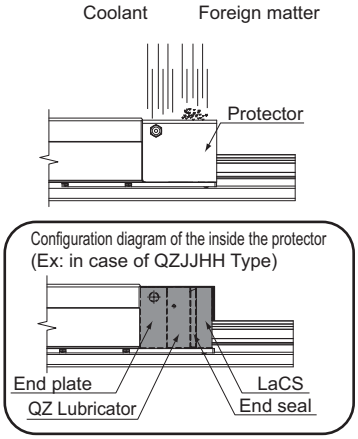
* The side scraper can accommodate various options of dust control accessories and lubrication accessories. For details, contact THK.

Protector

- For the supported models: models SVR/SVS
- HH type (with LaCS) of models SVR/SVS is provided with the protector.
- For the LM block dimension (dimension L) with protector attached, see A1-467.

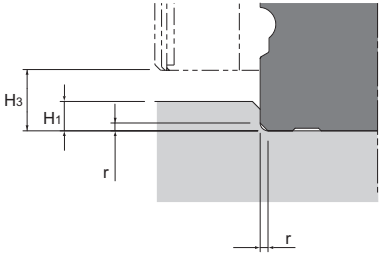


Outline view
(Ex: in case of QZTTHHYY type)



[Features]

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

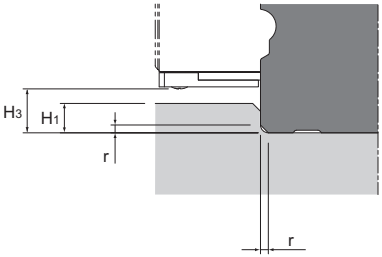


Side view of the LM block after the protector is mounted

The shoulder height of the mounting surface and the corner radius after the protector 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



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

The shoulder height of the mounting surface and the corner radius after the protector and side scraper are mounted

Unit: mm

Model No.	Corner radius r(max)	Shoulder height of the LM rail H_1	H_3
25	0.5	2	2.7
30	1	3.5	4.2
35	1	5.5	6.2
45	1	8	8.8
55	1.5	10.5	11.2
65	1.5	11	12.1

Note) 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 A1-456.
- For the LM block dimension (dimension L) with LiCS attached, see A1-478.
- For the resistance of LiCS, see A1-484.
- For notes regarding how to handle the LiCS, see A1-530.

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.

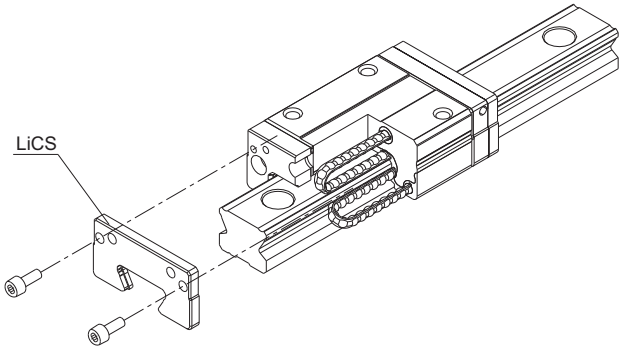


Fig.1 Structural Drawing of SSR + LiCS

[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 drag resistance. It is optimal for applications where low drag resistance is required, such as semiconductor-related devices, inspection devices and OA equipment all of which are used in favorable environments.

- 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 property, achieves low drag resistance.

Model number coding

SSR20 XW 2 GG C1 +600L P -II

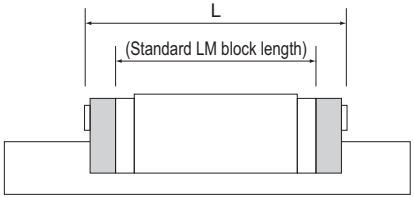
- SSR20: LM Guide model number
- XW: Type of LM block
- 2: No. of LM blocks used on the same rail
- GG: With LiCS seal on both ends
- C1: Radial clearance symbol — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +600L: LM rail length (in mm)
- P: Accuracy symbol — Normal grade (No Symbol) / High accuracy grade (H), Precision grade (P) / Super precision grade (SP), Ultra precision grade (UP)
- -II: Symbol for No. of rails used on the same plane

Symbol	Contamination Protection Accessories
GG	LiCS
PP	With LiCS + side seal + inner seal*

* Some models are not equipped with inner seals.(See A1-456)

Dimensions of Each Model with an Option Attached

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



Unit: mm

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

Note) 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.

Unit: mm

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

Note) 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.

Dimensions of Each Model with an Option Attached

Unit: mm

Model No.		Standard overall length	L								
			UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
HSR	8RM	24	24	—	—	—	—	—	—	—	—
	10RM	31	31	—	—	—	—	—	—	—	—
	12RM	45	45	—	—	—	—	—	—	—	—
	15A/B/R/YR	56.6	56.6	56.6	61.8	58.2*	63.4*	76	81.2	77.2	82.4
	20A/B/R/CA/CB/YR	74	74	74	80.6	76.6	83.2	92	98.6	95.2	101.8
	20LA/LB/LR/HA/HB	90	90	90	96.6	92.6	99.2	108	114.6	111.2	117.8
	25A/B/R/CA/CB/YR	83.1	83.1	83.1	90.7	86.7	94.3	101	108.6	105.3	112.9
	25LA/LB/LR/HA/HB	102.2	102.2	102.2	109.8	105.8	113.4	120.1	127.7	124.4	132
	30A/B/R/CA/CB/YR	98	98	98	105.6	101.6	109.2	119.9	127.5	124.2	131.8
	30LA/LB/LR/HA/HB	120.6	120.6	120.6	128.2	124.2	131.8	142.5	150.1	146.8	154.4
	35A/B/R/CA/CB/YR	109.4	109.4	109.4	117	113	120.6	132.4	140	135.6	143.2
	35LA/LB/LR/HA/HB	134.8	134.8	134.8	142.4	138.4	146	157.8	165.4	161	168.6
	45A/B/R/CA/CB/YR	139	139	139	146.2	144.2	151.4	168.6	175.8	171.8	178.8
	45LA/LB/LR/HA/HB	170.8	170.8	170.8	178	176	183.2	200.4	207.6	203.6	210.6
	55A/B/R/CA/CB/YR	163	163	163	170.2	168.2	175.4	193.2	200.4	196.4	203.6
	55LA/LB/LR/HA/HB	201.1	201.1	201.1	208.3	206.3	213.5	231.3	238.5	234.5	241.7
	65A/B/R/CA/CB/YR	186	186	186	193.2	191.2	198.4	223	229	225	232.2
	65LA/LB/LR/HA/HB	245.5	245.5	245.5	252.7	250.7	257.9	282.5	288.5	284.5	291.7
	85A/B/R/CA/CB/YR	245.6	245.6	245.6	252.8	252.4	259.6	278.8	286	283.4	290.6
	85LA/LB/LR/HA/HB	303	303	303	310.2	309.8	317	336.2	343.4	340.8	348
	100HA/HB/HR	334	334	334	—	—	—	—	—	—	—
	120HA/HB/HR	365	365	365	—	—	—	—	—	—	—
	150HA/HB/HR	396	396	396	—	—	—	—	—	—	—
SR	15W/TB	57	57	57	62.2	58.4*	63.6*	—	—	—	—
	15V/SB	40.4	40.4	40.4	45.6	41.8*	47*	—	—	—	—
	20W/TB	66.2	66.2	66.2	72.8	70.6*	77.2*	—	—	—	—
	20V/SB	47.3	47.3	47.3	53.9	51.7*	58.3*	—	—	—	—
	25WY/TBY	83	83	83	90.6	87.4	95	—	—	—	—
	25VY/SBY	59.2	59.2	59.2	66.8	63.6	71.2	—	—	—	—
	30W/TB	96.8	96.8	96.8	104.4	99.4	107	—	—	—	—
	30V/SB	67.9	67.9	67.9	75.5	70.5	78.1	—	—	—	—
	35W/TB	111	111	111	118.6	113.6	121.2	—	—	—	—
	35V/SB	77.6	77.6	77.6	85.2	80.2	87.8	—	—	—	—
	45W/TB	126	126	126	134.6	129.4	138	—	—	—	—
	55W/TB	156	156	156	164.6	159.4	168	—	—	—	—
	70T	194.6	194.6	194.6	201.8	200.8	208	—	—	—	—
	85T	180	180	180	—	—	—	—	—	—	—
	100T	200	200	200	—	—	—	—	—	—	—
	120T	235	235	235	—	—	—	—	—	—	—
	150T	280	280	280	—	—	—	—	—	—	—

* A grease nipple cannot be attached. Contact THK for details.

Note) 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.

Unit: mm

Model No.		Standard overall length	L								
			UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
NR/NRS	25XR/XA/XB	82.8	82.8	82.8	90.4	89.2	96.8	100.1	107.7	102.5	110.1
	25XLR/XLA/XLB	102	102	102	109.6	108.4	116	119.3	126.9	121.7	129.3
	30R/A/B	98	98	98	107	104.4	113.4	119.3	128.3	121.7	130.7
	30LR/LA/LB	120.5	120.5	120.5	129.5	126.9	135.9	141.8	150.8	144.2	153.2
	35R/A/B	109.5	109.5	109.5	119.7	117.1	127.3	131.1	141.3	133.5	143.7
	35LR/LA/LB	135	135	135	145.2	142.6	152.8	156.6	166.8	159	169.2
	45R/A/B	139	139	139	149.2	147.4	157.6	164.4	174.6	167.6	177.8
	45LR/LA/LB	171	171	171	181.2	179.4	189.6	196.4	206.6	199.6	209.8
	55R/A/B	162.8	162.8	162.8	173	171.4	181.6	188.1	198.3	191.3	201.5
	55LR/LA/LB	200	200	200	210.2	208.6	218.8	225.3	235.5	228.5	238.7
	65R/A/B	185.6	185.6	185.6	196.2	194.2	204.8	214.9	225.5	218.1	228.7
	65LR/LA/LB	245.6	245.6	245.6	256.2	254.2	264.8	274.9	285.5	278.1	288.7
	75R/A/B	218	218	218	229	226.6	237.6	—	—	—	—
	75LR/LA/LB	274	274	274	285	282.6	293.6	—	—	—	—
	85R/A/B	246.7	246.7	246.7	257.7	256.1	267.1	—	—	—	—
	85LR/LA/LB	302.8	302.8	302.8	313.8	312.2	323.2	—	—	—	—
	100R/A/B	286.2	286.2	286.2	297.8	295.6	307.2	—	—	—	—
	100LR/LA/LB	326.2	326.2	326.2	337.8	335.6	347.2	—	—	—	—
HRW	12LRM	37	37	37	—	—	—	—	—	—	—
	14LRM	45.5	45.5	45.5	—	—	—	—	—	—	—
	17CA/CR	50.8	50.8	—	54	53.6	58.6	—	—	—	—
	21CA/CR	58.8	58.8	—	64.2	62.8	69	—	—	—	—
	27CA/CR	72.8	72.8	72.8	79	75.6	81.8	—	—	—	—
	35CA/CR	106.6	106.6	106.6	113.8	112	119.2	—	—	—	—
	50CA/CR	140.5	140.5	140.5	147.7	143.3	150.5	—	—	—	—
	60CA	158.9	158.9	158.9	169.7	165.1	175.9	—	—	—	—
RSR/RSR-W	2M	—	—	—	—	—	—	—	—	—	—
	2N	—	—	—	—	—	—	—	—	—	—
	3M	—	—	—	—	—	—	—	—	—	—
	3N	—	—	—	—	—	—	—	—	—	—
	3WM	14.9	14.9	—	—	—	—	—	—	—	—
	3WN	19.9	19.9	—	—	—	—	—	—	—	—
	14WVM	50	50	—	—	—	—	—	—	—	—

Note) 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.

Dimensions of Each Model with an Option Attached

Unit: mm

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

* A grease nipple cannot be attached. Contact THK for details.

Note) 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.

Unit: mm

Model No.		Standard overall length	L								
			UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
HCR	12A+60/100R	44.6	44.6	—	—	—	—	—	—	—	—
	15A+60/150R	54.5	54.5	54.5	59.7	—	—	—	—	—	—
	15A+60/300R	55.5	55.5	55.5	60.7	57.1*	62.3*	—	—	—	—
	15A+60/400R	55.8	55.8	55.8	61	57.3*	62.5*	—	—	—	—
	25A+60/500R	81.6	81.6	81.6	89.2	85.5	93.1	—	—	—	—
	25A+60/750R	82.3	82.3	82.3	89.9	86	93.6	—	—	—	—
	25A+60/1000R	82.5	82.5	82.5	90.1	86.2	93.8	—	—	—	—
	35A+60/600R	107.2	107.2	107.2	114.8	111.2	118.8	—	—	—	—
	35A+60/800R	107.5	107.5	107.5	115.1	111.5	119.1	—	—	—	—
	35A+60/1000R	108.2	108.2	108.2	115.8	112	119.6	—	—	—	—
	35A+60/1300R	108.5	108.5	108.5	116.1	112.3	119.8	—	—	—	—
	45A+60/800R	136.7	136.7	136.7	143.9	142.1	149.2	—	—	—	—
	45A+60/1000R	137.3	137.3	137.3	144.5	142.7	149.9	—	—	—	—
	45A+60/1200R	137.3	137.3	137.3	144.5	142.7	149.9	—	—	—	—
	45A+60/1600R	138	138	138	145.2	143.3	150.5	—	—	—	—
	65A+60/1000R	193.8	193.8	193.8	201	199.4	206.6	—	—	—	—
	65A+60/1500R	195.4	195.4	195.4	202.6	200.8	208	—	—	—	—
	65A+60/2000R	195.9	195.9	195.9	203.1	201.3	208.5	—	—	—	—
	65A+60/2500R	196.5	196.5	196.5	203.7	201.8	209	—	—	—	—
	65A+60/3000R	196.5	196.5	196.5	203.7	201.8	209	—	—	—	—
HMG	15A	48	48	—	—	—	—	—	—	—	—
	25A	62.2	62.2	—	—	—	—	—	—	—	—
	35A	80.6	80.6	—	—	—	—	—	—	—	—
	45A	107.6	107.6	—	—	—	—	—	—	—	—
	65A	144.4	144.4	—	—	—	—	—	—	—	—
NSR-TBC	20TBC	67	67	—	—	—	—	—	—	—	—
	25TBC	78	78	—	—	—	—	—	—	—	—
	30TBC	90	90	—	—	—	—	—	—	—	—
	40TBC	110	110	110	—	—	—	—	—	—	—
	50TBC	123	123	123	—	—	—	—	—	—	—
	70TBC	150	150	150	—	—	—	—	—	—	—
HSR-M1	15M1A/M1B/M1R/M1YR	59.6	59.6	59.6	—	—	—	—	—	—	—
	20M1A/M1B/M1R/M1YR	76	76	76	—	—	—	—	—	—	—
	20M1LA/M1LB/M1LR	92	92	92	—	—	—	—	—	—	—
	25M1A/M1B/M1R/M1YR	83.9	83.9	83.9	—	—	—	—	—	—	—
	25M1LA/M1LB/M1LR	103	103	103	—	—	—	—	—	—	—
	30M1A/M1B/M1R/M1YR	98.8	98.8	98.8	—	—	—	—	—	—	—
	30M1LA/M1LB/M1LR	121.4	121.4	121.4	—	—	—	—	—	—	—
	35M1A/M1B/M1R/M1YR	112	112	112	—	—	—	—	—	—	—
	35M1LA/M1LB/M1LR	137.4	137.4	137.4	—	—	—	—	—	—	—
SR-M1	15M1W/M1TB	57	57	57	—	—	—	—	—	—	—
	15M1V/M1SB	40.4	40.4	40.4	—	—	—	—	—	—	—
	20M1W/M1TB	66.2	66.2	66.2	—	—	—	—	—	—	—
	20M1V/M1SB	47.3	47.3	47.3	—	—	—	—	—	—	—
	25M1W/M1TB	83	83	83	—	—	—	—	—	—	—
	25M1V/M1SB	59.2	59.2	59.2	—	—	—	—	—	—	—

*A grease nipple cannot be attached. Contact THK for details.

Note) 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.

Dimensions of Each Model with an Option Attached

Unit: mm

Model No.		Standard overall length	L								
			UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
SR-M1	30M1W/M1TB	96.8	96.8	96.8	—	—	—	—	—	—	—
	30M1V/M1SB	67.9	67.9	67.9	—	—	—	—	—	—	—
	35M1W/M1TB	111	111	111	—	—	—	—	—	—	—
	35M1V/M1SB	77.6	77.6	77.6	—	—	—	—	—	—	—
RSR- M1	9M1K	30.8	30.8	—	—	—	—	—	—	—	—
	9M1N	41	41	—	—	—	—	—	—	—	—
	9M1WV	39	39	—	—	—	—	—	—	—	—
	9M1WN	50.7	50.7	—	—	—	—	—	—	—	—
	12M1V	35	35	—	—	—	—	—	—	—	—
	12M1N	47.7	47.7	—	—	—	—	—	—	—	—
	12M1WV	44.5	44.5	—	—	—	—	—	—	—	—
	12M1WN	59.5	59.5	—	—	—	—	—	—	—	—
	15M1V	43	43	—	—	—	—	—	—	—	—
	15M1N	61	61	—	—	—	—	—	—	—	—
	15M1WV	55.5	55.5	—	—	—	—	—	—	—	—
	15M1WN	74.5	74.5	—	—	—	—	—	—	—	—
	20M1V	66.5	66.5	—	—	—	—	—	—	—	—
	20M1N	86.3	86.3	—	—	—	—	—	—	—	—
HSR- M2	15M2A	56.6	56.6	56.6	—	—	—	—	—	—	—
	20M2A	74	74	74	—	—	—	—	—	—	—
	25M2A	83.1	83.1	83.1	—	—	—	—	—	—	—
SRG	15A/V	69.2	69.2	69.2	71.2	—	—	—	—	—	—
	20A/V	86.2	86.2	86.2	88.2	89.6	91.6	105.2	107.2	107.6	109.6
	20LA/LV	106.2	106.2	106.2	108.2	109.6	111.6	125.2	127.2	127.6	129.6
	25C/R	95.5	95.5	95.5	100.5	100.5	105.5	115.3	120.3	117.7	122.7
	25LC/LR	115.1	115.1	115.1	120.1	120.1	125.1	134.9	139.9	137.3	142.3
	30C/R	111	111	111	118	116	123	130.8	137.8	133.2	140.2
	30LC/LR	135	135	135	142	140	147	154.8	161.8	157.2	164.2
	35C/R	125	125	125	132.8	131.4	139.2	148.6	156.4	151	158.8
	35LC/LR	155	155	155	162.8	161.4	169.2	178.6	186.4	181	188.8
	45C/R	155	155	155	164.2	162.2	171.4	182	191.2	185.2	194.4
	45LC/LR	190	190	190	199.2	197.2	206.4	217	226.2	220.2	229.4
	55C/R	185	185	185	194.2	192.2	201.4	212	221.2	215.2	224.4
	55LC/LR	235	235	235	244.2	242.2	251.4	262	271.2	265.2	274.4
	65LC/LV	303	303	303	314.2	311.4	322.6	335.4	346.6	338.6	349.8
	85LC	350	350	350	361.2	361	372.2	—	—	—	—
	100LC	395	395	395	406.2	411	422.2	—	—	—	—
SRN	35C/R	125	125	125	132.8	131.4	139.2	148.6	156.4	151	158.8
	35LC/LR	155	155	155	162.8	161.4	169.2	178.6	186.4	181	188.8
	45C/R	155	155	155	164.2	162.2	171.4	182	191.2	185.2	194.4
	45LC/LR	190	190	190	199.2	197.2	206.4	217	226.2	220.2	229.4
	55C/R	185	185	185	194.2	192.2	201.4	212	221.2	215.2	224.4
	55LC/LR	235	235	235	244.2	242.2	251.4	262	271.2	265.2	274.4
	65LC/LR	303	303	303	314.2	311.4	322.6	335.4	346.6	338.6	349.8
SRW	70LR	190	190	190	199.2	197.2	206.4	217	226.2	220.2	229.4
	85LR	235	235	235	244.2	242.2	251.4	262	271.2	265.2	274.4
	100LR	303	303	303	314.2	311.4	322.6	335.4	346.6	338.6	349.8
	130LR	350	350	350	361.2	361	372.2	—	—	—	—
	150LR	395	395	395	406.2	411	422.2	—	—	—	—

Note) 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.

Unit: mm

Model No.		Standard overall length	L								
			UU	SS	DD	ZZ	KK	SSHH	DDHH	JJHH	TTHH
SVR/SVS	25R/C	82.8	82.8	82.8	88	88.5	93.7	96.8*	102.0*	102.5*	107.7*
	25LR/LC	102	102	102	107.2	107.7	112.9	116.0*	121.2*	121.7*	126.9*
	30R/C	98	98	98	104.6	103.7	110.3	115.2*	121.8*	120.9*	127.5*
	30LR/LC	120.5	120.5	120.5	127.1	126.2	132.8	137.7*	144.3*	143.4*	150.0*
	35R/C/RH/CH	109.5	109.5	109.5	116.5	116.3	123.3	126.7*	133.7*	133.5*	140.5*
	35LR/LC/LRH/LCH	135	135	135	142	141.8	148.8	152.2*	159.2*	159.0*	166.0*
	45R/C/RH/CH	138.2	138.2	138.2	145.2	145.8	152.8	158.2*	165.2*	165.8*	172.8*
	45LR/LC/LRH/LCH	171	171	171	178	178.6	185.6	191.0*	198.0*	198.6*	205.6*
	55R/C/RH/CH	163.3	163.3	163.3	168.4	169.0	176.0	182.4*	189.4*	191.1*	198.1*
	55LR/LC/LRH/LCH	200.5	200.5	200.5	205.6	206.2	213.2	219.6*	226.6*	228.3*	235.3*
	65R/C	186	186	186	191.8	193.1	200.5	208.8*	216.2*	217.5*	224.9*
	65LR/LC	246	246	246	251.8	253.1	260.5	268.8*	276.2*	277.5*	284.9*

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

Note1) 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.

Note2) For models SVR/SVS, we recommend attaching a protector. For the dimensions of ZZHH and KKHH, contact THK. For details of the symbols of options, see **A1-492**.

Model number coding

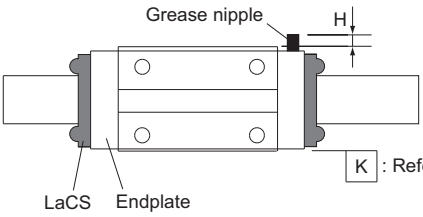
SHS25 LC 2 QZ KKHH C0 +1200L P Z T -II

- SHS25: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator (*1)
- KKHH: Contamination protection accessory symbol (*2)
- C0: Radial clearance symbol (*3)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*4)
  - Normal grade (No Symbol)
  - High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- Z: With steel tape
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*5)

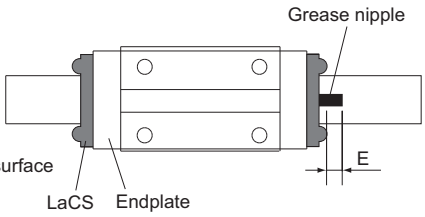
(*1) See **A1-485**. (*2) See **A1-492**. (*3) See **A1-70**. (*4) See **A1-75**. (*5) See **A1-13**.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

Incremental Dimension with Grease Nipple (When LaCS is Attached)



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



Grease nipple mounting location
for models SHW, SRS and HSR

Unit: mm

Model No.		Incremental dimension 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	15XVY/XWY	4.4	PB107
	15XTBY	—	PB107
	20XV/XW	4.6	PB107
	20XTB	—	PB107
	25XVY/XWY	4.5	PB107
	25XTBY	—	PB107
	30XW	5	PB1021B
	35XW	5	PB1021B
SVR/SVS*	25R/LR	5.5	PB1021B
	30R/LR	5.5	PB1021B
	35R/LR/RH/LRH	9	A-M6F
	45R/LR/RH/LRH	9	A-M6F
	55R/LR/RH/LRH	9	A-M6F
	65R/LR	12	A-PT1/8

Unit: mm

Model No.		Incremental dimension with grease nipple H	Nipple type
NR/NRS	25A/B/LA/LB	—	PB1021B
	25R/LR	4.8	PB1021B
	30A/B/LA/LB	—	PB1021B
	30R/LR	4.5	PB1021B
	35A/B/LA/LB	—	A-M6F
	35R/LR	7.4	A-M6F
	45A/B/LA/LB	—	A-M6F
	45R/LR	7.4	A-M6F
	55A/B/LA/LB	—	A-M6F
	55R/LR	6.9	A-M6F
	65A/B/LA/LB	—	A-PT1/8
	65R/LR	15.3	A-PT1/8
SRG	35LC	—	A-M6F
	35LR	7.2	A-M6F
	45LC	—	A-M6F
	45LR	7.2	A-M6F
	55LC	—	A-M6F
	55LR	7.2	A-M6F
	65LC	—	A-M6F
	65LR	6.2	A-M6F

∗ The incremental dimension of the grease nipple when the side scraper and the protector are attached (SVR/SVS only) is also the same.

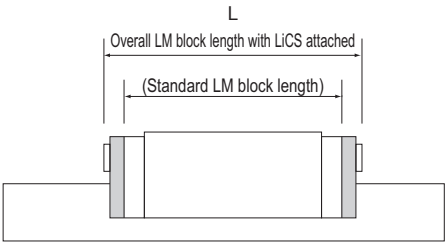
Dimensions of Each Model with an Option Attached

Unit: mm

Model No.		Incremental dimension 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	25	4	PB1021B
HSR	15A/B/R/YR	2.9	PB1021B
	20A/B/R/CA/CB/YR	9.4	B-M6F
	20LA/LB/LR/HA/HB	9.4	B-M6F
	25A/B/R/CA/CB/YR	9	B-M6F
	25LA/LB/LR/HA/HB	9	B-M6F
	30A/B/R/CA/CB/YR	9	B-M6F
	30LA/LB/LR/HA/HB	9	B-M6F
	35A/B/R/CA/CB/YR	8	B-M6F
	35LA/LB/LR/HA/HB	8	B-M6F

Note1) When desiring the mounting location for the grease nipple other than the above, contact THK.
Note2) Those models equipped with QZ Lubricator cannot have a grease nipple. When desiring both QZ Lubricator and a grease nipple, contact THK.
Note3) When desiring a grease nipple for model SHW or SRS without QZ Lubricator, indicate “with grease nipple” when placing an order. (If not, a grease nipple will not be attached.)
Note4) Model HSR15 attached with ZZ or KK cannot have a grease nipple. Contact THK for details.

LM Block Dimension (Dimension L) with LiCS Attached



Unit: mm

Model No.			L	
		Standard overall length	GG	PP
SSR	15XVY	40.3	48.7	48.7
	15XWY/XTBY	56.9	65.3	65.3
	20XV	47.7	55.8	55.8
	20XW/XTB	66.5	74.6	74.6
	25XVY	60	67.6	67.6
	25XWY/XTBY	83	90.6	90.6
	30XW	97	106.7	106.7
	35XW	110.9	121.7	121.7
SRG	15A	67	77	77
	15V	67	77	77

Model number coding

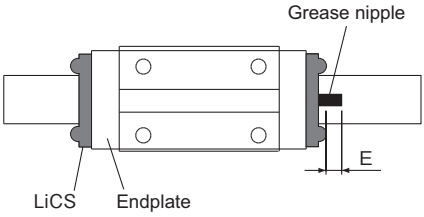
SSR20 XW 2 GG C1 +600L P T -II

- SSR20: Model number
- XW: Type of LM block
- 2: No. of LM blocks used on the same rail
- GG: With LiCS (*1)
- C1: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +600L: LM rail length (in mm)
- P: Accuracy symbol (*3) — 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 (*4)

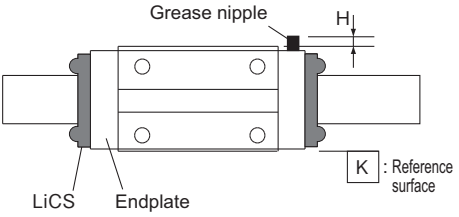
(*1) See A1-466 (*2) See A1-70 (*3) See A1-75 (*4) See A1-13

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

Incremental Dimension 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.		Incremental dimension with grease nipple		Nipple type
		E	H	
SSR	15XVY	2.9	—	PB1021B
	15XWY/XTBY	2.9	—	PB1021B
	20XV	9	—	B-M6F
	20XW/XTB	9	—	B-M6F
	25XVY	9	—	B-M6F
	25XWY/XTBY	9	—	B-M6F
	30XW	9	—	B-M6F
	35XW	8	—	B-M6F
SRG	15A	—	—*	PB107
	15V	—	4.5	PB107

* Because this model features a flange, it projects beyond the block end surface.

Model number coding

SSR20 XW 2 GG C1 +600L H -II

- SSR20: Model number
- XW: Type of LM block
- 2: No. of LM blocks used on the same rail
- GG: With LiCS (*1)
- C1: Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- +600L: LM rail length (in mm)
- H: Accuracy symbol (*3)
  Normal grade (No Symbol)
  High accuracy grade (H)/Precision grade (P)
  Super precision grade (SP)/Ultra precision grade (UP)
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See A1-466 (*2) See A1-70 (*3) See A1-75 (*4) See A1-13

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

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		7.0
	25		10.5
	30		17.0
	35		20.5
	45		30.0
	55		31.5
	65		43.0
SSR	15X	UU	2.0
	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	1.0
	12HR		1.0
	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 an Option Attached

Unit: N

Model No.		Seal symbol	Maximum Seal Resistance
HSR	8	UU	0.5
	10		0.8
	12		1.2
	15		2.0
	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/NRS	25X	UU	15
	30		17
	35		23
	45		24
	55		29
	65		42
	75		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

Unit: N

Model No.		Seal symbol	Maximum Seal Resistance
RSR	14W	UU	1.2
HR	918	UU	0.5
	1123		0.7
	1530		1.0
	2042		2.0
	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	2.0
	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		2.0
	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
HSR	15M1	UU	2.0
	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
RSR	9M1	UU	0.1
	12M1		0.4
	15M1		0.8
	20M1		1.0
	9M1W		0.8
	12M1W		1.1
	15M1W		1.3
HSR	15M2	UU	2.0
	20M2		2.5
	25M2		3.9
SRG	15	SS	13
	20		18
	25		19
	30		22
	35		30
	45		30
	55		34
	65		40
	85		47
	100		53

Unit: N

Model No.		Seal symbol	Maximum Seal Resistance
SRN	35	SS	30
	45		30
	55		35
	65		40
SRW	70	SS	32
	85		37
	100		43
	130		50
	150		57

Maximum resistance for 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	26.0
	55	32.5
	65	39.0
SSR	15	5.9
	20	6.9
	25	8.1
	30	12.8
	35	15.1
SVR/SVS NR/NRS	25	8.1
	30	13.4
	35	15.5
	45	23.3
	55	28.6
	65	39.6
	85	52.7
SHW	12	2.6
	14	3.9
	17	3.9
	21	3.9
	27	6.5
	35	13.0
	50	19.5
SRS	9	2.3
	9W	3.3
	12	3.5
	12W	4.2

Unit: N

Model No.		Maximum resistance for LaCS
SRS	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	26.0
	65	39.0
HSR	15	3.8
	20	5.6
	25	7.5
	30	14.9
	35	22.4
SRG	20	6.1
	25	6.9
	30	8.2
	35	9.1
	45	14.3
	55	18.2
	65	26.0
SRN	35	9.1
	45	14.3
	55	18.2
	65	22.1
SRW	70	32.8
	85	39.7
	100	58.3

Note1) Each resistance value in the table only consists of that of LaCS, and does not include sliding resistances of seals and other accessories.
Note2) For the maximum service speed of LaCS, contact THK.
Note3) HH type (with LaCS) of models SVR/SVS is provided with the protector (see A1-465). Contact THK if you want to use the Protector with other options.

Maximum resistance for LiCS

Unit: N

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

Note) The value indicates the sliding resistance of two LiCS units per LM block and does not include the sliding resistances of the LM block and the side seals.

Maximum resistance for the side scraper

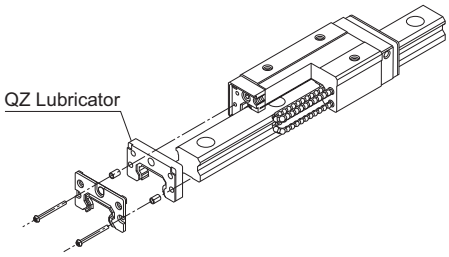
Unit: N

Model No.		Maximum Resistance for the side scraper (KKHHYY/TTHHYY Option)
SVR/ SVS	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

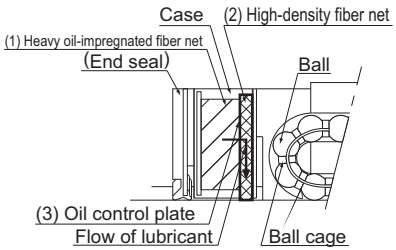
QZ Lubricator

●For the supported models, see the table of options by model number on A1-456.
●For the LM block dimension with QZ attached, see A1-488 to A1-491.
●For notes regarding how to handle the QZ, see A1-529.

QZ Lubricator feeds the right amount of lubricant to the raceway on the LM rail. 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 QZ Lubricator consists of three major components: (1) a heavy oil-impregnated fiber net (function to store lubricant), (2) a high-density fiber net (function to apply lubricant to the raceway) and (3) an oil-control plate (function to adjust oil flow). The lubricant contained in QZ Lubricator is fed by the capillary phenomenon, which is used also in felt pens and many other products, as the fundamental principle.



Appearance Drawing



Structural Drawing

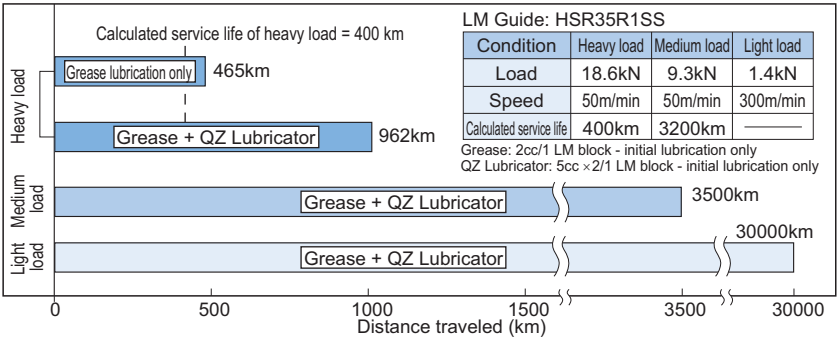
[Features]
- Since it supplements an oil loss, the lubrication maintenance interval can be significantly extended.
- Eco-friendly lubrication system that does not contaminate the surrounding area since it feeds the right amount of lubricant to the ball raceway.

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
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 A1-456)
*2 QZJJHH and QZTTHH are available only for models SVR/SVS.
Note) HH type (with LaCS) of models SVR/SVS is provided with the protector (see A1-465).
Contact THK if you want to use the Protector with other options.

● Significantly Extended Maintenance Interval

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



LM Guide: HSR35R1SS

Condition	Heavy load	Medium load	Light load
Load	18.6kN	9.3kN	1.4kN
Speed	50m/min	50m/min	300m/min
Calculated service life	400km	3200km	———

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

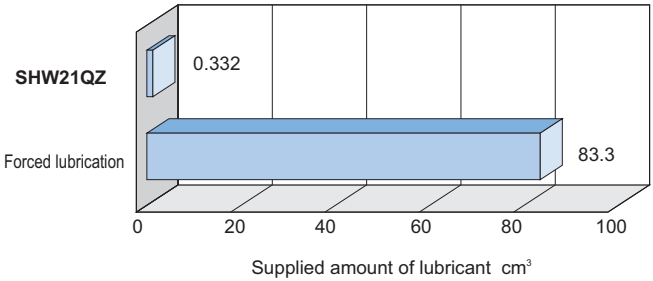
LM Guide Running Test without Replenishment of Lubricant

● Effective Use of Lubricant

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

[Test conditions] speed: 300 m/min

Comparison of lubricant consumption after traveling 5,000 km



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

Compared

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

Lubricant consumption is 1/250 less than forced lubrication.

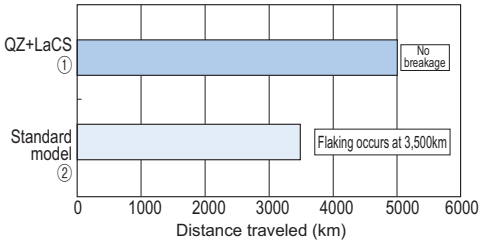
● Effective in Helping Lubrication under Severe Environments

A 5,000 km durability test was conducted under severe environments (containing coolant and contaminated environment).

[Test conditions]

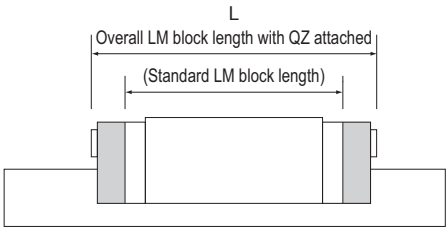
Model No.	① Caged Ball LM Guide #45	② Full-ball LM Guide #45
Load	8kN	6kN
Speed	60m/min	
Coolant	Immersed 48 hrs, dried 96 hrs	
Foreign material	Foundry dust (125 μm or less)	
Lubrication	AFA Grease + QZ	Super Multi 68 Oiling cycle: 0.1cc/shot Periodically lubricated every 16 min

[Test result]



* When using the LM system under severe environment, use QZ Lubricator and Laminated Contact Scraper LaCS (see "Laminated Contact Scraper LaCS" on **A1-462**) in combination.

LM Block Dimension (Dimension L) with QZ Attached



Unit: mm

Model No.		Standard overall length	L								
			QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH
SHS	15C/V/R	64.4	84.4	84.4	89.8	86.8	92.2	100	105.4	101.2	106.6
	15LC/LV	79.4	99.4	99.4	104.8	101.8	107.2	115	120.4	116.2	121.6
	20C/V	79	99	99	105.4	103	109.4	115.4	121.8	117.8	124.2
	20LC/LV	98	118	118	124.4	122	128.4	134.4	140.8	136.8	143.2
	25C/V/R	92	114.4	114.4	121.6	120.4	127.6	132	139.2	134.4	141.6
	25LC/LV/LR	109	131.4	131.4	138.6	137.4	144.6	149	156.2	151.4	158.6
	30C/V/R	106	127.4	127.4	136	133.8	142.4	149.4	158	151.8	160.4
	30LC/LV/LR	131	152.4	152.4	161	158.8	167.4	174.4	183	176.8	185.4
	35C/V/R	122	145	145	154.8	152.4	162.2	168	177.8	170.4	180.2
	35LC/LV/LR	152	175	175	184.8	182.4	192.2	198	207.8	200.4	210.2
	45C/V/R	140	173	173	182.8	181.2	191	199	208.8	202.2	212
	45LC/LV/LR	174	207	207	216.8	215.2	225	233	242.8	236.2	246
	55C/V/R	171	205.4	205.4	216.6	214.2	225.4	232	243.2	235.2	246.4
	55LC/LV/LR	213	247.4	247.4	258.6	256.2	267.4	274	285.2	277.2	288.4
	65C/V	221	256.2	256.2	268.6	266.2	278.6	288	300.4	291.2	303.6
	65LC/LV	272	307.2	307.2	319.6	317.2	329.6	339	351.4	342.2	354.6
SSR	15XVY	40.3	59.3	59.3	65.1	62.7	68.5	75.5	81.3	76.7	82.5
	15XWY/XTBY	56.9	75.9	75.9	81.7	79.3	85.1	92.1	97.9	93.3	99.1
	20XV	47.7	66.2	66.2	73.1	72.1	79	83.7	90.6	86.1	93
	20XW/XTB	66.5	85	85	91.9	90.9	97.8	102.5	109.4	104.9	111.8
	25XVY	60	82.6	82.6	90	88.4	95.8	100	107.4	102.4	109.8
	25XWY/XTBY	83	105.6	105.6	113	111.4	118.8	123	130.4	125.4	132.8
	30XW	97	119.7	119.7	127.8	125.4	133.5	141	149.1	143.4	151.5
	35XW	110.9	134.3	134.3	143.3	141.3	150.3	156.9	165.9	159.3	168.3
SHW	12CAM/CRM	37	47	47	—	—	—	58	—	—	—
	12HRM	50.4	60.4	60.4	—	—	—	71.4	—	—	—
	14CAM/CRM	45.5	55.5	55.5	—	—	—	70.7	—	—	—
	17CAM/CRM	51	63	63	66	65.4	68.4	78.2	81.2	79.4	82.4
	21CA/CR	59	75	75	80	78.6	83.6	91.6	96.6	93.2	98.2
	27CA/CR	72.8	92.8	92.8	98.6	97.2	103	109.4	115.2	111.8	117.6
	35CA/CR	107	127	127	134.4	132	139.4	149	156.4	151.4	158.8
	50CA/CR	141	161	161	169.2	167.4	175.6	186	194.2	188.4	196.6

Unit: mm

Model No.		Standard overall length	L								
			QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH
SRS	7S	19	29	29	—	—	—	—	—	—	—
	7M	23.4	33.4	33.4	—	—	—	—	—	—	—
	7N	31	41	41	—	—	—	—	—	—	—
	7WS	22.5	32.5	32.5	—	—	—	—	—	—	—
	7WM	31	41	41	—	—	—	—	—	—	—
	7WN	40.9	50.9	50.9	—	—	—	—	—	—	—
	9XS	21.5	31.5	31.5	—	—	—	43.1	—	—	—
	9XM	30.8	40.8	40.8	—	—	—	52.4	—	—	—
	9XN	40.8	50.8	50.8	—	—	—	62.4	—	—	—
	9WS	26.5	36.5	36.5	—	—	—	48.1	—	—	—
	9WM	39	49	49	—	—	—	60.6	—	—	—
	9WN	50.7	60.7	60.7	—	—	—	72.3	—	—	—
	12S	25	35	35	—	—	—	46.6	—	—	—
	12M	34.4	44.4	44.4	—	—	—	56	—	—	—
	12N	47.1	57.1	57.1	—	—	—	69.1	—	—	—
	12WS	30.5	40.5	40.5	—	—	—	52.1	—	—	—
	12WM	44.5	54.5	54.5	—	—	—	66.1	—	—	—
	12WN	59.5	69.5	69.5	—	—	—	81.1	—	—	—
	15S	32	44	44	—	—	—	58.2	—	—	—
	15M	43	55	55	—	—	—	69.2	—	—	—
	15N	60.8	72.8	72.8	—	—	—	87	—	—	—
	15WS	41.5	53.5	53.5	—	—	—	67.7	—	—	—
	15WM	55.5	67.5	67.5	—	—	—	81.7	—	—	—
	15WN	74.5	86.5	86.5	—	—	—	100.9	—	—	—
	20M	50	66	66	—	—	—	81.2	—	—	—
	25M	77	97	97	—	—	—	112.6	—	—	—
SCR	15S	64.4	84.4	84.4	89.8	86.8	92.2	100.4	105.4	101.4	106.9
	20S	79	99	99	105.4	103	109.4	115.5	122	118	124.5
	20	98	118	118	124.4	122	128.4	134.5	141	137	143.5
	25	109	131.4	131.4	138.6	137.4	144.6	149	156.2	151.4	158.6
	30	131	152.4	152.4	161	158.8	167.4	174.4	183	176.8	185.4
	35	152	175	175	184.8	182.4	192.2	198	207.8	200.4	210.2
	45	174	207	207	216.8	215.2	225	233	242.8	236.2	246
	65	272	307.2	307.2	319.6	317.2	329.6	339	351.4	342.2	354.6

Unit: mm

Model No.		Standard overall length	L								
			QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH
HSR	15A/B/R/YR	56.6	79.6	79.6	87.6	84.2	92.2	98.8	106.8	100	108
	20A/B/R/CA/CB/YR	74	96.2	96.2	104.4	102	110.2	113.6	121.8	116	124.2
	20LA/LB/LR/HA/HB	90	112.2	112.2	120.4	118	126.2	129.6	137.8	132	140.2
	25A/B/R/CA/CB/YR	83.1	104.1	104.1	112.1	109.8	117.8	121.4	129.4	123.8	131.8
	25LA/LB/LR/HA/HB	102.2	123.2	123.2	131.2	128.9	136.9	140.5	148.5	142.9	150.9
	30A/B/R/CA/CB/YR	98	119	119	127	124.7	132.7	140.3	148.3	142.7	150.7
	30LA/LB/LR/HA/HB	120.6	141.6	141.6	149.6	147.3	155.3	162.9	170.9	165.3	173.3
	35A/B/R/CA/CB/YR	109.4	132.2	132.2	142	139	148.8	154.6	164.4	157	166.8
	35LA/LB/LR/HA/HB	134.8	157.6	157.6	167.4	164.4	174.2	180	189.8	182.4	192.2
	45A/B/R/CA/CB/YR	139	174.8	174.8	181.6	176.6	186.4	201.2	211	204.4	214.2
	45LA/LB/LR/HA/HB	170.8	206.6	206.6	213.4	208.4	218.2	233	242.8	236.2	246
	55A/B/R/CA/CB/YR	163	197.2	197.2	208.4	202	213.2	227.2	238.4	230.4	241.6
	55LA/LB/LR/HA/HB	201.1	235.3	235.3	246.5	240.1	251.3	265.3	276.5	268.5	279.7
	65A/B/R/CA/CB/YR	186	221.4	221.4	233.8	226.6	239	257	269.4	260.2	272.6
	65LA/LB/LR/HA/HB	245.5	280.9	280.9	293.3	286.1	298.5	316.5	328.9	319.7	332.1
NR/ NRS	25XR/XA/XB	82.8	105.2	105.2	112.8	110.9	118.5	122.5	130.1	124.9	132.5
	25XLR/XLA/XLB	102	124.4	124.4	132	130.1	137.7	141.7	149.3	144.1	151.7
	30R/A/B	98	120.4	120.4	129.4	126.1	135.1	141.7	150.7	144.1	153.1
	30LR/LA/LB	120.5	142.9	142.9	151.9	148.6	157.6	164.2	173.2	166.6	175.6
	35R/A/B	109.5	142.7	142.7	152.9	149.5	159.7	164.3	174.5	166.7	176.9
	35LR/LA/LB	135	168.2	168.2	178.4	175	185.2	189.8	200	192.2	202.4
	45R/A/B	139	172.2	172.2	182.4	179.8	190	197.6	207.8	200.8	211
	45LR/LA/LB	171	204.2	204.2	214.4	211.8	222	229.6	239.8	232.8	243
	55R/A/B	162.8	204.8	204.8	215	213.5	223.7	231.3	241.5	234.5	244.7
	55LR/LA/LB	200	242	242	252.2	250.7	260.9	268.5	278.7	271.7	281.9
	65R/A/B	185.6	227.6	227.6	238.2	236.3	246.9	258.1	268.7	261.3	271.9
	65LR/LA/LB	245.6	287.6	287.6	298.2	296.3	306.9	318.1	328.7	321.3	331.9
SRG	15A/V	69.2	90.6	90.6	92.6	—	—	—	—	—	—
	20A/V	86.2	107.6	107.6	109.6	111	113	125.2	127.2	127.6	129.6
	20LA/LV	106.2	127.6	127.6	129.6	131	133	145.2	147.2	147.6	149.6
	25C/R	95.5	125.5	125.5	130.5	130.5	135.5	145.3	151.7	147.7	154.1
	25LC/LR	115.1	145.1	145.1	150.1	150.1	155.1	164.9	171.3	167.3	173.7
	30C/R	111	141	141	148	146	153	160.8	169.2	164.6	171.6
	30LC/LR	135	165	165	172	170	177	184.8	193.2	188.6	195.6
	35C/R	125	155	155	162.8	163.4	171.2	178.6	186.4	181	188.8
	35LC/LR	155	185	185	192.8	193.4	201.2	208.6	216.4	211	218.8
	45C/R	155	185	185	194.2	194.2	203.4	212	221.2	215.2	224.4
	45LC/LR	190	220	220	229.2	229.2	238.4	247	256.2	250.2	259.4
	55C/R	185	225	225	234.2	234.2	243.4	252	261.2	255.2	264.4
	55LC/LR	235	275	275	284.2	284.2	293.4	302	311.2	305.2	314.4
	65LC/LV	303	343	343	354.2	354.2	370.4	380.4	391.6	378.6	389.8
SRN	35C/R	125	155	155	162.8	163.4	171.2	178.6	186.4	181	188.8
	35LC/LR	155	185	185	192.8	193.4	201.2	208.6	216.4	211	218.8
	45C/R	155	185	185	194.2	194.2	203.4	212	221.2	215.2	224.5
	45LC/LR	190	220	220	229.2	229.2	238.4	247	256.2	250.2	259.4
	55C/R	185	225	225	234.2	234.2	243.4	252	261.2	255.2	264.4
	55LC/LR	235	275	275	284.2	284.2	293.4	302	311.2	305.2	314.4
	65LC/LR	303	343	343	354.2	354.2	370.4	380.4	391.6	378.6	389.8
SRW	70	190	220	220	229.2	229.2	238.4	247	256.2	250.2	259.4
	85	235	275	275	284.2	284.2	293.4	302	311.2	305.2	314.4
	100	303	343	343	354.2	354.2	370.4	380.4	391.6	378.6	389.8

Unit: mm

Model No.		Standard overall length	L								
			QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZJJHH	QZTTHH
SVR/SVS	25R/C	82.8	102.8	102.8	108	108.5	113.7	116.8	122.0	122.5*	127.7*
	25LR/LC	102	122	122	127.2	127.7	132.9	136.0	141.2	141.7*	146.9*
	30R/C	98	118	118	124.6	123.7	130.3	135.2	141.8	140.9*	147.5*
	30LR/LC	120.5	140.5	140.5	147.1	146.2	152.8	157.7	164.3	163.4*	170.0*
	35R/C/RH/CH	109.5	139.5	139.5	146.5	146.3	153.3	156.7	163.7	163.5*	170.5*
	35LR/LC/LRH/LCH	135	165	165	172	171.8	178.8	182.2	189.2	189.0*	196.0*
	45R/C/RH/CH	138.2	168.2	168.2	175.2	175.8	182.8	188.2	195.2	195.8*	202.8*
	45LR/LC/LRH/LCH	171	201	201	208	208.6	215.6	221.0	228.0	228.6*	235.6*
	55R/C/RH/CH	163.3	201.4	201.4	208.4	209.0	216.0	222.4	229.4	231.1*	238.1*
	55LR/LC/LRH/LCH	200.5	238.6	238.6	245.6	246.2	253.2	259.6	266.6	268.3*	275.3*
	65R/C	186	224.4	224.4	231.8	233.1	240.5	248.8	256.2	257.5*	264.9*
	65LR/LC	246	284.4	284.4	291.8	293.1	300.5	308.8	316.2	317.5*	324.9*

* The overall LM block length (L) of YY type (with side scraper) is also the same.
Note) For models SVR/SVS, we recommend attaching a protector. For the dimensions of QZZZHH and QZKKHH, contact THK. For details of the symbols of options, see A1-492.

Model number coding

SHS25 LC 2 QZ KKHH C0 +1200L P Z T -II

- SHS25: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator (*1)
- KKHH: Contamination protection accessory symbol (*2)
- C0: Radial clearance symbol (*3)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*4)
  - Normal grade (No Symbol)
  - High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- Z: With steel tape
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See A1-485. (*2) See A1-492. (*3) See A1-70. (*4) See A1-75. (*5) See A1-13.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

List of Parts Symbols

● For supported model numbers, see the correspondence table of options by model number on **A1-456**.

● For the overall block length (dimension L) of each model with seal options attached, see **A1-467** to **A1-474**.

●For the overall block length (dimension L) with the QZ option attached, see **A1-488** to **A1-491**.

[Symbols for Seals and Metal Scraper]

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

* Some models are not equipped with inner seals.(See **A1-456**)

[Symbols for QZ Lubricator and Laminated Contract Scraper LaCS]

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

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

[Symbols for Light-Resistance Contact Seal LiCS]

Symbol	Configuration of options
GG	LiCS
PP	With LiCS + side seal + inner seal*
QZGG	With QZ + LiCS
QZPP	With QZ + LiCS + side seal + inner seal*

* Some models are not equipped with inner seals.(See **A1-456**)

[Symbols for Protector]

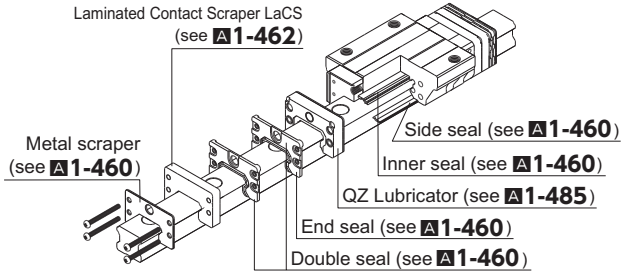
* Supported models: SVR/SVS

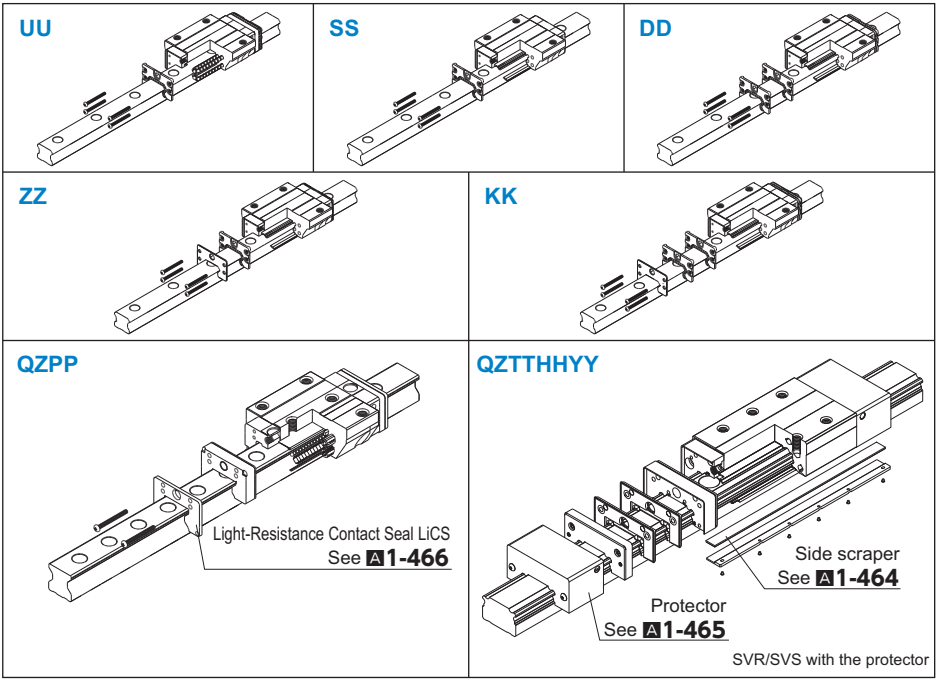
Symbol	Configuration of options
JJHH	With End seal + side seal + inner seal* + LaCS + protector (also has a metal scraper function)
TTHH	With Double seals + side seal + inner seal* + LaCS + protector (also has a metal scraper function)
JJHHYY	With End seal + side seal + inner seal* + LaCS + protector (also has a metal scraper function) + side scraper
TTHHYY	With Double seals + side seal + inner seal* + LaCS + protector (also has a metal scraper function) + side scraper
QZJJHH	With QZ + end seal + side seal + inner seal* + LaCS + protector (also has a metal scraper function)
QZTTHH	With QZ + double seals + side seal + inner seal* + LaCS + protector (also has a metal scraper function)
QZJJHHYY	With QZ + end seal + side seal + inner seal* + LaCS + protector (also has a metal scraper function) + side scraper
QZTTHHYY	With QZ + double seals + side seal + inner seal* + LaCS + protector (also has a metal scraper function) + side scraper

* Some models are not equipped with inner seals.(See A**1-456**)

Note) HH type (with LaCS) of models SVR/SVS is provided with the protector (see A**1-465**).Protector also serves as metal scraper. Contact THK if you want to use the Protector with other options.

QZZZHH





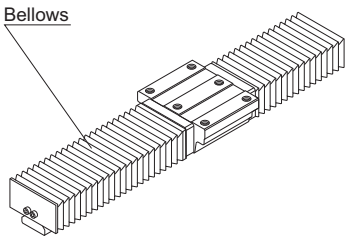
Model number coding

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

- SVR45: Model No.
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- TTHH: Symbol for dust-proof accessory
- C0: Radial clearance symbol Normal (No symbol)/ Light preload (C1) Medium preload (C0)
- +1200L: LM rail length (in mm)
- 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

Dedicated Bellows

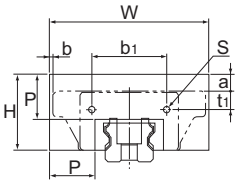
●For the supported models, see the table of options by model number on A1-456.
●For the dedicated bellows dimensions, see A1-496 to A1-507.

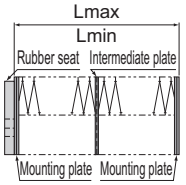
Item name	Schematic diagram / mounting location	Purpose/location of use
Dedicated Bellows		Used in locations exposed to dust or cutting chips

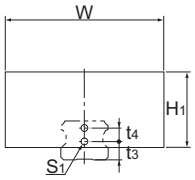
Bellows

[Dedicated Bellows JSH for Model SHS]

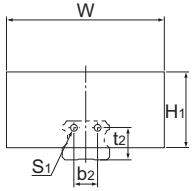
The table below shows the dimensions of dedicated bellows JSH for model SHS. Specify the corresponding model number of the desired bellows from the table.







Models SHS15 to 30



Models SHS35 to 65

Unit: mm

Model No.		Main dimensions												Supported model numbers	
		W	H	H1	P	b1	t1 C	t1 V	t1 R	b2	t2	t3	t4		
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		Other dimensions								A (Lmax/Lmin)
		Mounting bolt		a			b			
		S	S1	C	V	R	C	V	R	
SHS	15	*M2×8ℓ	M4×8ℓ	5	5	1	3	9.5	9.5	5
	20	M2.6×8ℓ	M3×6ℓ	5	5	—	–1.5	8	—	6
	25	M3×8ℓ	M3×6ℓ	6	6	2	2.5	13.5	13.5	7
	30	M3×10ℓ	M3×6ℓ	3	3	0	–5	10	10	7
	35	M4×10ℓ	M4×8ℓ	0	0	–7	–7	8	8	7
	45	M4×12ℓ	M4×8ℓ	–5	–5	–15	–11.7	5.5	5.5	7
	55	M5×12ℓ	M5×10ℓ	–9	–9	–19	–17.5	2.5	2.5	7
	65	M6×14ℓ	M6×12ℓ	–8	–8	—	–22	0	—	9

* Use self-tapping screws as the mounting screws on the LM block side of the JSH15.

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.

Note2) For lubrication when using the dedicated bellows, contact THK.

Note3) 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)

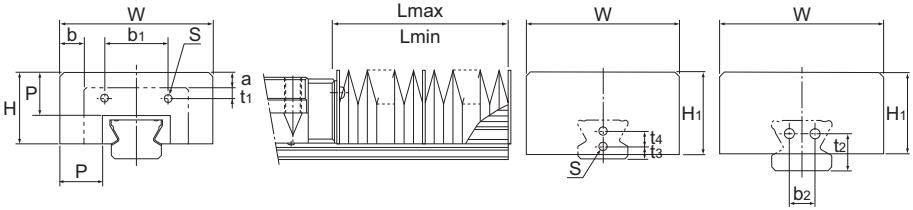
Note) The length of the bellows is calculated as follow.

$$Lmin = \frac{S}{(A-1)}$$ 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	H_1	P	b_1	t_1	b_2	t_2	t_3	t_4	Mounting bolt S	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

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) 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

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 follow.

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

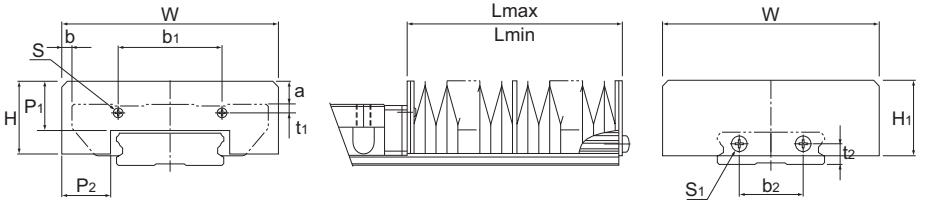
$Lmax = Lmin \cdot A$ A: Extension rate

[Dedicated Bellows JSV for Models SVR and SVS]

For models SVR/SVS, a simplified bellows JSV is available. For details, contact THK.

[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.		Other dimensions					$\left(\frac{A\ \text{Lmax}}{\text{Lmin}}\right)$
		Mounting bolt		a	b		
		*S	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

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) For the mounting bolts marked with "*", use tapping screws.
Note4) 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

Model number of bellows for SHW21

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

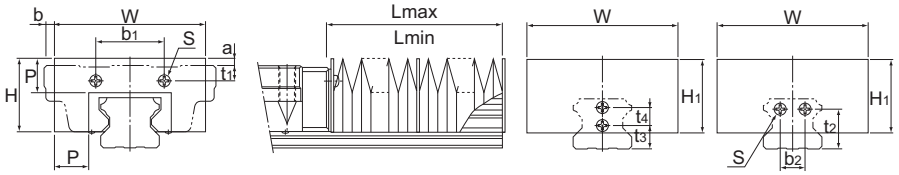
Note) The length of the bellows is calculated as follow.

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

$\text{Lmax} = \text{Lmin} \cdot A$ 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	
		W	H	H_1	P	b_1	t_1 A/B	t_1 R	b_2	t_2	t_3	t_4	Mounting bolt S	a A/B	a R	b A/B	b R			
JH	15	55	27	30	15	25	2.5	6.5	—	—	10	—	*M4×8ℓ	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

Note1) For model JH15's location marked with "*", mounting bolts are used only on the LM rail side while the LM block side uses M2 x 5 (nominal) tapping screws.
Note2) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note3) For lubrication when using the dedicated bellows, contact THK.
Note4) 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 follow.

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

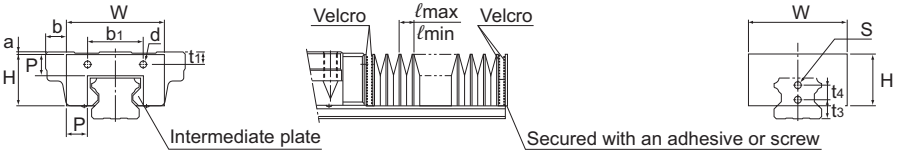
$Lmax = Lmin \cdot A$ A: Extension rate

[Dedicated Bellows DH for Model HSR]

For models HSR15, 20 and 25, bellows DH, which has the following features, is also available other than the dedicated bellows JH. Specify the corresponding model number of the desired bellows from the table.

● Features

(1) Has a width and height smaller than the conventional product so that any part of the bellows does not stick out of the top face of the LM block. The extension rate is equal to or greater than that of the conventional type.
(2) Has an intermediate plate for each crest so that it will not easily lift and the bellows can be used with vertical mount, wall mount and slant mount.
(3) Operable at high speed, at up to 120 m/min.
(4) Since a Velcro tape 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 taped together.
(5) Can be installed using screws just as bellows JH.
In this case, a plate (thickness: 1.6 mm) must be placed between the bellows and the LM bock. Contact THK for details.



Unit: mm

Model No.		Main dimensions																			Supported model numbers	
						t_1						a		b				Extension rate		Factor		
		W	H	P	b_1	A/B	R	t_3	t_4	d	s	A/B	R	A/B	R	ℓmax	ℓmin	A	E	k		
DH	15	35	19.5	8.5	25	2.5	6.5	10	—	ϕ2.5	ϕ5	0	4	6	–0.5	10	2.5	4	2	1.2	HSR	15
	20	45	25	10	34	5	5	6	8	ϕ4	ϕ4	0	0	9	–0.5	13	2.5	5	2	1.3		20
	25	52	29.5	12	30	7	11	10	8	ϕ3.5	ϕ3.5	0	4	9	–2	15	3	5	2	1.3		25

Note1) For lubrication when using the dedicated bellows, contact THK.
Note2) 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

DH20 - 50/250

- DH20: Model number of bellows for HSR20
- 50/250: 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 (ℓmim) ×200
Example of calculating bellows dimensions:
When the stroke of model HSR20 is: ℓs=530mm

$$Lmin = \frac{\ell s}{(A-1)} = \frac{530}{4} = 132.5 \fallingdotseq 135$$

$$Lmax = A \cdot Lmin = 5 \times 135 = 675$$

Number of required crests n

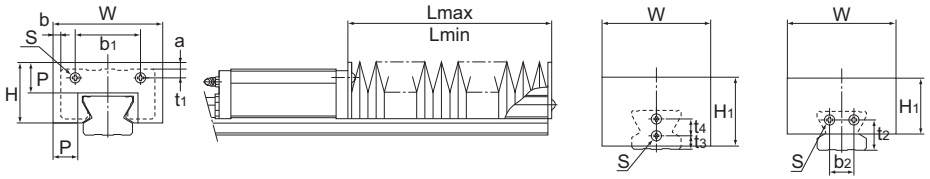
$$n = \frac{Lmax}{P \cdot k} = \frac{675}{10 \times 1.3} = 51.9 \fallingdotseq 52 \text{ crests}$$

$$Lmin = n \cdot \ell min + E = 52 \times 2.5 + 2 = 132$$

(E indicates the plate thickness of 2)
Therefore, the model number of the required bellows is DH20-132/675.

[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

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) 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 follow.

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

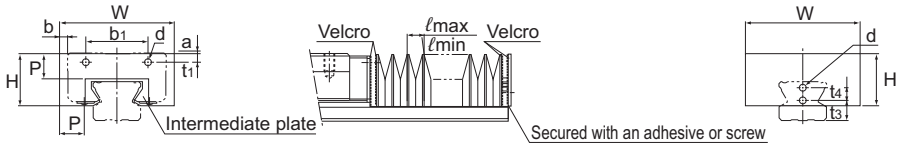
$Lmax = Lmin \cdot A$ A: Extension rate

[Dedicated Bellows DS for Model SR]

For models SR15, 20 and 25, bellows DS, which has the following features, is also available other than the dedicated bellows JS. Specify the corresponding model number of the desired bellows from the table.

● Features

(1) Has a width and height smaller than the conventional product so that any part of the bellows does not stick out of the top face of the LM block. The extension rate is equal to or greater than that of the conventional type.
(2) Has an intermediate plate for each crest so that it will not easily lift and the bellows can be used with vertical mount, wall mount and slant mount.
(3) Operable at high speed, at up to 120 m/min.
(4) Since a Velcro tape 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 taped together.
(5) Can be installed using screws just as the conventional type.
In this case, a plate (thickness: 1.6 mm) must be placed between the bellows and the LM bock. Contact THK for details.



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	7	2	13	2.5	5	2	1.3	SR	15
	20	49	22	10	25	4.2	6	6	4	0	5	3.5	13	2.5	5	2	1.3		20
	25	56	26	12	29	5	6	7	4	0	8.5	4	15	3	5	2	1.3		25

Note1) For lubrication when using the dedicated bellows, contact THK.
Note2) 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=530mm

$$Lmin = \frac{\ell s}{(A-1)} = \frac{530}{4} = 132.5 \fallingdotseq 135$$

$Lmax = A \cdot Lmin = 5 \times 135 = 675$

Number of required crests n

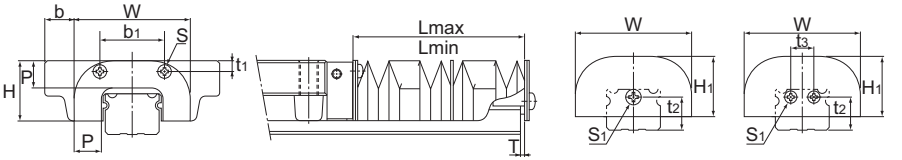
$$n = \frac{Lmax}{P \cdot k} = \frac{675}{10 \times 1.3} = 51.9 \fallingdotseq 52 \text{ crests}$$

$Lmin = n \cdot \ell min + E = 52 \times 2.5 + 2 = 132$

(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, bellows are available.Fig.1 To gain a higher contamination protection effect, attach a telescopic cover outside the bellows after the bellows are mounted.



Models NR/NRS 25X to 45 Models NR/NRS 55 to 100

Unit: mm

Model No.		Main dimensions											T	A Lmax/Lmin	Supported model numbers	
		W	H	H1	P	b1	t1	t2	t3	Mounting bolt S	Mounting bolt S1	b A,LA B,LB				
JN	25	48	25.5	25.5	10	26.6	4.6	13	—	M3×5ℓ	M4×4ℓ	11	1.5	7	NR/NRS	25X
	30	60	31	31	14	34	5.5	17	—	M4×8ℓ	M4×4ℓ	15	1.5	9		30
	35	70	35	35	15	36	6	20.5	—	M4×8ℓ	M5×4ℓ	15	2	10		35
	45	86	40.5	40.5	17	47	6.5	24	—	M5×10ℓ	M5×4ℓ	17	2	10		45
	55	100	49	49	20	54	10	29.5	18	M5×10ℓ	M5×4ℓ	20	2	13		55
	65	126	57.5	57.5	20	64	13.5	36.2	20	M6×12ℓ	M6×5ℓ	22	3.2	13		65
	75	145	64	64	30	80	10.5	34.2	26	M6×12ℓ	M6×5ℓ	25	3.2	20		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	30	140	15	40	34	M8×16ℓ	M6×5ℓ	30	3.2	20		100

Note1) When desiring to use the bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the bellows, contact THK.
Note3) 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

JN25 - 60/420

Model number of bellows for NR/NRS25X

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

Note) The length of the bellows is calculated as follow.

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

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

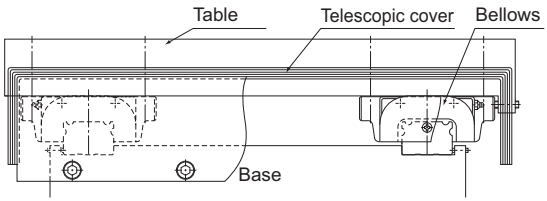
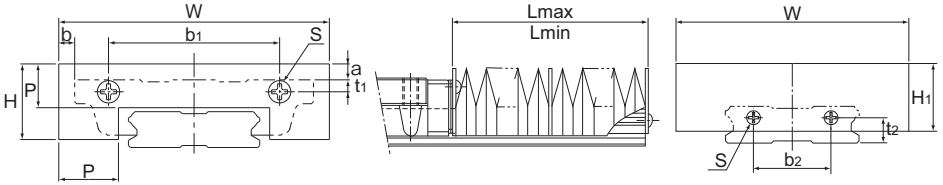


Fig.1 Example of Mounting the Bellows

[Dedicated Bellows 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	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

Note1) For model JHRW17's location marked with "*", mounting bolts are used only on the LM rail side while the LM block side uses M2.5 x 8 (nominal) tapping screws.
Note2) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note3) For lubrication when using the dedicated bellows, contact THK.
Note4) 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)

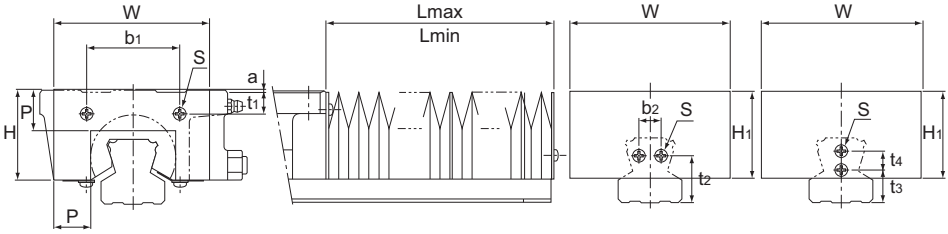
Note) The length of the bellows is calculated as follow.

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

$L_{max} = L_{min} \cdot A$ 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

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) 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 follow.

$$Lmin = \frac{S}{(A-1)}$$

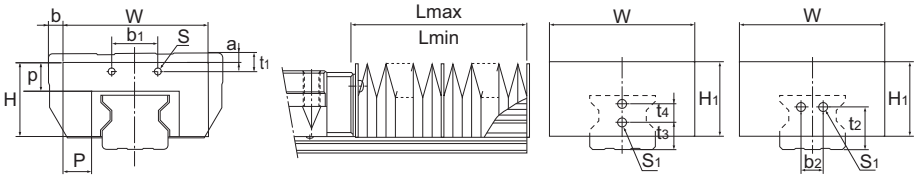
S: Stroke length (mm)

$Lmax = Lmin \cdot A$

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 SRG15 and 30 Models SRG35 to 100

Unit: mm

Model No.		Main dimensions																		A (Lmax/Lmin)	Supported model numbers	
								t_1						Screw size S	Mounting bolt S_1	a		b				
		W	H	H_1	P	p	b_1	A/C	R/V	b_2	t_2	t_3	t_4			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	15
	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		20
	25	78	38	38	23	18	27.6	3.9	7.9	—	—	10	8	M2	M3×6ℓ	–6.5	–2.5	4	15	6		25
	30	84	42	42	22	19	37.4	10.4	13.4	—	—	11	10	M3	M4×8ℓ	–5	–2	3	12	7		30
	35	88	42	42	22	15	35	5	12	13	23	—	—	M3	M4×4ℓ	0	7	6	–9	5		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

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) 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.
Note4) 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)

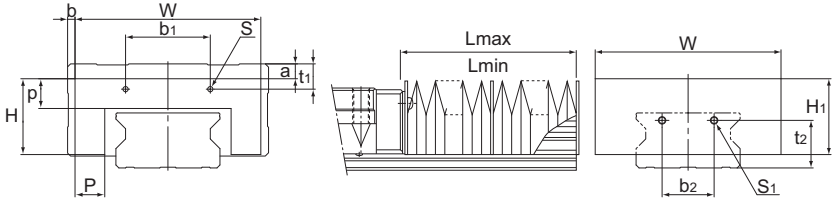
Note) The length of the bellows is calculated as follow.

$$Lmin = \frac{S}{(A-1)}$$ 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

Note1) For lubrication when using the dedicated bellows, contact THK.
Note2) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.

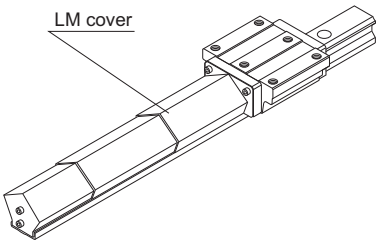
Model number coding

JSRW70 - 60/420

- JSRW70: Model number of bellows for SRW70
- 60/420: Dimensions of the bellows (length when compressed / length when extended)

Dedicated LM Cover

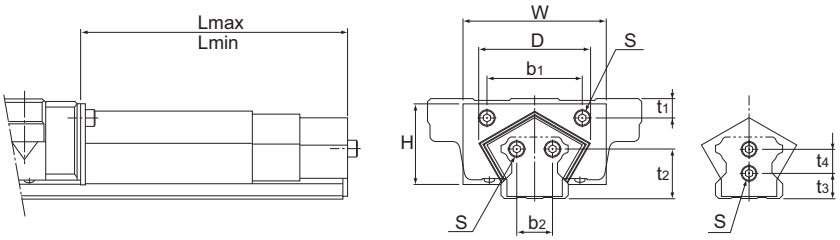
●For the supported models, see the table of options by model number on A1-456.
●For the dedicated LM cover dimensions, see A1-509.

Item name	Schematic diagram / mounting location	Purpose/location of use
Dedicated LM Cover		Used in locations exposed to dust or cutting chips Used in locations where high temperature foreign material such as flying spatter

LM Cover

[Dedicated LM Cover TPH for Model HSR]

The tables below show the dimensions of dedicated LM cover TPH for model HSR. Specify the corresponding model number of the desired bellows from the table.



Models HSR25 and 30

Unit: mm

Model No.		Main dimensions										Supported model numbers	
		W	D (max)	H	b_1	t_1	b_2	t_2	t_3	t_4	Mounting bolt S		
TPH	25	55	42	28	30	7	—	—	10	8	M3×6ℓ	HSR	25
	30	60	48	34	40	8	—	—	11	10	M4×8ℓ		30
	35	70	55	38	40	9	14	23	—	—	M4×8ℓ		35
	45	90	75	48	58	10	20	29	—	—	M5×10ℓ		45
	55	100	88	55	66	11	26	35	—	—	M5×10ℓ		55

Unit: mm

Model No.		Stage	L		Stroke
			min	max	
TPH	25	3	200	530	330
		3	150	380	230
		3	100	230	130
	30	3	250	680	430
		3	200	530	330
		3	150	380	230
	35	3	300	830	530
		3	250	680	430
		3	200	530	330
		3	150	380	230

Unit: mm

Model No.		Stage	L		Stroke
			min	max	
TPH	45	3	350	980	630
		3	300	830	530
		3	250	680	430
		3	200	530	330
	55	4	400	1460	1060
		4	350	1330	980
		4	300	1060	760
		4	250	860	610

Note1) For lubrication when using the dedicated LM cover, contact THK.
Note2) When using the dedicated LM cover, 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

TPH55 - 400/1460

- TPH55: Model number of LM cover for HSR55
- 400: Lmin (cover length when compressed)
- 1460: Lmax (cover length when extended)

Cap C

If any of the LM rail mounting holes of an LM Guide is filled with cutting chips or foreign material, they may enter the LM block structure. Entrance of such foreign material can be prevented by covering each LM rail mounting hole with the dedicated cap.
Since the dedicated cap C for LM rail mounting holes uses a special synthetic resin with high oil resistance and high wear resistance, it is highly durable.
To attach the dedicated cap to the mounting hole, place a flat metal piece like one shown in Fig.1 on the cap and gradually hammer in the cap until it is on the same level as the top face of the LM rail. When attaching the dedicated cap C for LM rail mounting holes, do not remove any of the LM blocks from the LM rail.

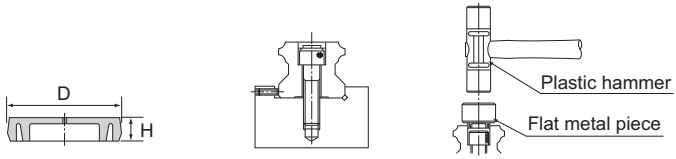


Fig.1 Cap C

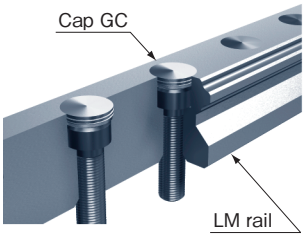
Table1 List of Model Numbers Supported for the Dedicated Cap C for LM Rail Mounting Holes

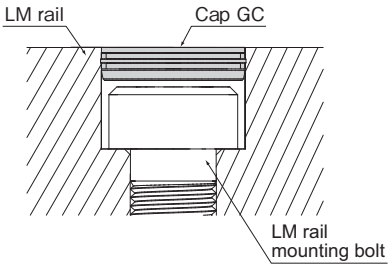
Model No.	Bolt used	Main dimensions (mm)		Supported model number													
		D	H	SSR	SR	SVR SVS	NR NRS	SHS HSR SCR CSR HCR	HMG	SHW HRW	SRG SRN	SRW	GSR	HR	SRS RSR	SRS-W RSR-W	NSR-TBC
C3	M3	6.3	1.2	—	15	—	—	12	—	—	—	—	—	1123 1530	12 15	9	—
C4	M4	7.8	1.0	15Y	—	—	—	15	15	12, 14, 17, 21, 27	15	—	15	—	—	14	—
C5	M5	9.8	2.4	20	20	25	25X	20	—	—	20	—	20	2042	20	—	20
C6	M6	11.4	2.7	25Y 30	25Y 30	30	30	25	25	35	25	—	25	—	25	—	25 30
C8	M8	14.4	3.7	35	35	35	35	30 35	35	50	30 35	—	30	2555 3065	—	—	40
C10	M10	18.0	3.7	—	45	—	—	—	—	60	—	70	35	3575	—	—	50
C12	M12	20.5	4.7	—	55	45	45	45	45	—	45	85	—	4085	—	—	70
C14	M14	23.5	5.7	—	—	55	55	55	—	—	55	100	—	—	—	—	—
C16	M16	26.5	5.7	—	70 85	65	65	65	65	—	65	130	—	50105	—	—	—
C20	M20	32.3	5.7	—	—	—	75	—	—	—	—	—	—	—	—	—	—
C22	M22	35.5	5.7	—	—	—	85	85	—	—	85	150	—	—	—	—	—
C24	M24	39.5	7.7	—	—	—	100	100	—	—	100	—	—	—	—	—	—

Note) The dedicated cap for the LM rail mounting hole can be made of other materials (e.g., metal). Contact THK for details.

Cap GC

●For notes regarding how to handle the GC cap, see A1-530.



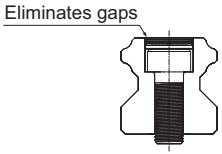


GC caps are metal caps designed to cover the mounting holes in LM rails (in compliance with RoHS directives).
In harsh environments, preventing any influx of coolant or foreign material from the top face of the LM rail, coupled with the use of seals, will dramatically improve the contamination protection performance for the LM guide.

[Features]

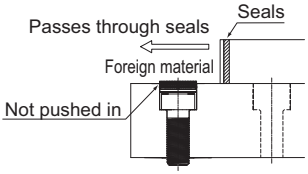
- **Eliminating gaps around the mounting holes (countersunk holes)**

The GC caps press into the mounting holes (countersunk holes) so that there are no gaps.



- **Provides long-term sealing due to its excellent abrasion resistance**

If a countermeasure such as a seal passes along the rail when there is foreign matter on the upper surface of the LM rail, it generates force pushing the GC cap in from above. In this situation, the cap does not get pushed inwards as it is easily strong enough to stay in place.



- **GC caps are highly effective in a range of different environments.**

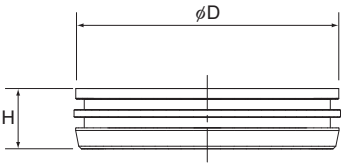
Service environment			LM Guide		Example of Using the Spring Pad
			Standard C cap fitted	GC cap fitted	
Poor environment	Foreign matter concentration: Low	Metal powder, sputtering	○	◎	Welding machines, robots
		Wood shavings, coolant (Environments that strip away oils)	○	◎	Woodworking machinery, washers
		Metal powder + coolant	○	◎	Lathes, machining centers
	Foreign matter concentration: High	Metal powder, sputtering	△	◎	Welding machines, robots
		Wood shavings, coolant (Environments that strip away oils)	△	◎	Woodworking machinery, washers
		Metal powder + coolant	△	◎	Lathes, machining centers

◎:Particularly effective ○:Effective △:Not particularly effective

[Dimensions, applicable model number]

● Specification Table

Unit: mm



Model No.	Outer diameter D	Thickness H
GC5	9.86	2.5
GC6	11.36	2.5
GC8	14.36	3.5
GC10	17.86	3.5
GC12	20.36	4.6
GC14	23.36	5.0
GC16	26.36	5.0
GC22	35.36	5.0
GC24	39.36	5.0

● Supported model numbers

GC caps are suitable for various different model numbers.

Model No.	LM rail mounting bolt	LM Guide model number											
		SSR	SR	SVR SVS	NR NRS	SHS HSR HCR	SCR CSR	SHW HRW	SRG SRN	SRW	GSR	HR	NSR-TBC
GC5	M5	20	20	25	25X	20	20	—	20	—	20	2042	20
GC6	M6	25Y 30	25Y 30	30	30	25	25	35	25	—	25	—	25 30
GC8	M8	35	35	35	35	30 35	30 35	50	30 35	—	30	2555 3065	40
GC10	M10	—	45	—	—	—	—	60	—	70	35	3575	50
GC12	M12	—	55	45	45	45	45	—	45	85	—	4085	70
GC14	M14	—	—	55	55	55	—	—	55	100	—	—	—
GC16	M16	—	70 85	65	65	65	65	—	65	130	—	50105	—
GC22	M22	—	—	—	85	85	—	—	85	150	—	—	—
GC24	M24	—	120	—	100	100	—	—	100	—	—	—	—

Model number coding

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

- SVR45: Model No.
- 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
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- -II: Symbol for No. of rails used on the same plane
- GC: With GC cap

Note1) LM guides with GC caps are special rails.
Note2) They cannot be mounted on stainless steel LM rails or LM rails that have undergone surface treatment.
Note3) If this product will be used in special environments, such as in a vacuum or at very low or high temperatures, contact THK.
Note4) GC caps are not sold individually. They are sold as a set with LM guides.
Note5) The openings of LM rail mounting holes are not chamfered. Take care not to injure your hands while working.
Note6) After fitting GC caps, the upper surface of the LM rail must be flattened and cleaned (wiped).
Note7) If you wish to fit GC caps for a single rail, use the sample model number configuration shown below.

(Example) SVR45LR2QZTTHHC0+1200LPGC — With GC cap
* Add the symbol (GC) to the end of the model number.

● **Mounting method**

The procedure for inserting a GC cap into a mounting hole consists of using a flat aligning fitting to gradually punch the cap into the hole until it is level with the upper surface of the LM rail, as shown in the figure. Fit GC caps without removing the LM rail from the LM block.

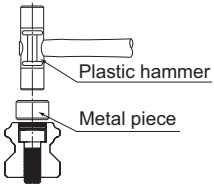
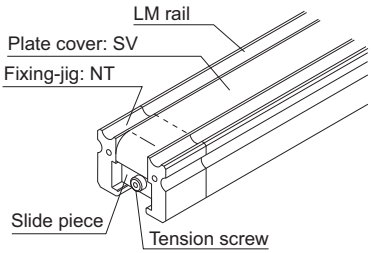
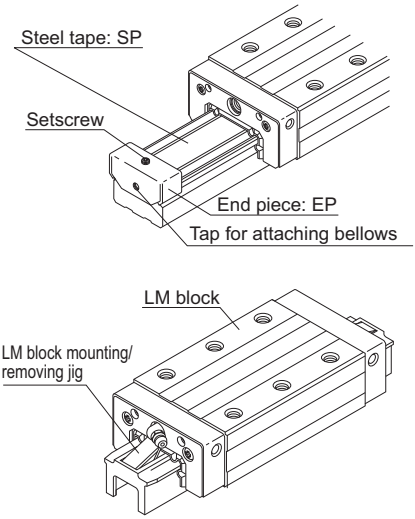


Plate Cover SV Steel Tape SP

●For the supported models, see the table of options by model number on A1-456.

Item name	Schematic diagram / mounting location	Purpose/location of use
Plate Cover SV		For the LM Guide, steel tapes are available as a means of contamination protection for machine tools. By covering the LM rail mounting holes with an ultra-thin stainless steel (SUS304) plate, the plate cover SV drastically increases sealability, thus to prevent the penetration of a coolant or cutting chips from the top face of the LM rail. For the mounting method, see **A1-515**. Note) When mounting the plate cover, the LM rail needs to be machined. Indicate that the plate cover is required when ordering the LM Guide.
Steel Tape SP		For the LM Guide, steel tapes are available as a means of contamination protection for machine tools. By covering the LM rail mounting holes with an ultra-thin stainless steel (SUS304) plate, the steel tape SP drastically increases sealability, thus to prevent the penetration of a coolant or cutting chips from the top face of the LM rail. (When mounting the steel tape, end piece EP can be used as a means to secure the cover.) For the mounting method, see **A1-516**. Note) When mounting the steel tape, the LM rail needs to be machined. Indicate that the steel tape is required when ordering the LM Guide.

[Mounting Procedure for Plate Cover SV]

(1) Attach slide pieces to the plate cover.
Place the slide pieces on the plate cover with their chamfered sides facing outward, hold the plate cover with the slide pieces and the securing plates, and then secure them with countersunk screws.

(2) Use an LM block mounting/removing jig to remove the LM block from the LM rail, and then mount the fixing-jigs onto the LM rail.

(3) Temporarily secure either slide piece.
Insert either slide piece into one of the fixing-jigs, then attach the slide piece to the LM rail's end face using the tension adjustment bolt and gently secure the bolt until the bolt head is inside the fixing-jig.

(4) Temporarily secure the other slide piece.
Temporarily secure the other slide piece in the same manner as above.

(5) Apply tension to the plate cover.
Apply tension to the plate cover by evenly securing the tension adjustment bolts on both ends of the LM rail. Make sure there is only a small difference between the H and H' dimensions in Fig.5. If the difference is too large, there may be no interference left on either end.

(6) Mount the LM block on the LM rail.
Identity the reference surface of the LM rail and the LM block, then insert the LM rail into the LM block using the LM block mounting / removing jig.

Note1) When removing or the mounting the LM block, use much care not to let the balls fall off.
Note2) The plate cover is an ultra-thin stainless steel (SUS304) plate. When handing it, use much care not to bend it.
Note3) The plate cover is available for models NR/NRS35 to 100.

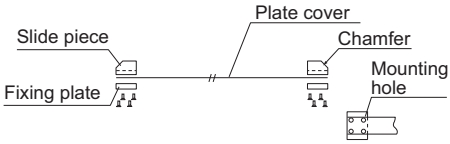


Fig.1

Fig.2

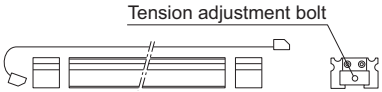


Fig.3

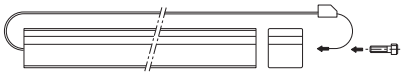


Fig.4

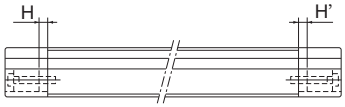


Fig.5

[Mounting Procedure for Steel Tape SP]

(1) Use an LM block mounting/removing jig to remove the LM block from the LM rail.
(2) Thoroughly degrease and clean the top face of the LM rail, to which the steel tape is to be adhered. For degreasing, use an adequately volatile detergent (e.g., industrial alcohol).
(3) Carefully adhere the steel tape from the end with care not to let it bend or sag, while gradually peeling the release paper from the steel tape.
(4) Have the steel tape settle on the rail by rubbing the tape. The adhesive strength increases with time. The adhering tape can be peeled off by pulling its end upward.
(5) Mount the LM block onto the LM rail using the LM block mounting/removing jig.
(6) Attach the end pieces on both ends of the LM rail and further secure the steel tape. When securing the end pieces, fasten only the setscrew on the top face of each end piece.
(The tap on the end face of the end piece is used for mounting bellows.)

Note1) The setscrew on the side face is used to lightly secure the bent steel tape. Be sure to stop fastening the screw as soon as it hits the end face, and do not force the screw further.
Note2) Since the steel tape is a thin steel plate, mishandling it may cause an accident such as cutting your finger. When handling it, take an effective safety measure such as wearing rubber gloves.

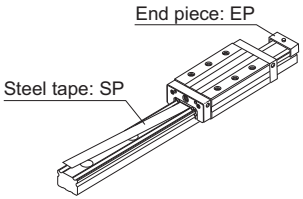


Fig.6

Fig.7

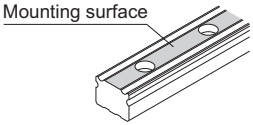


Fig.8

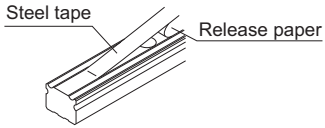


Fig.9

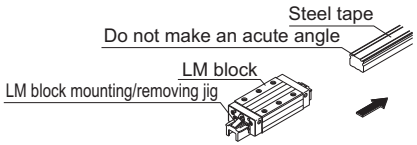


Fig.10

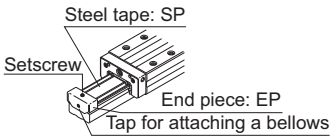


Fig.11

Lubrication Adapter

An oil lubricant-only lubrication adapter is available for models NR/NRS.
Even if the LM Guide is installed in an orientation where oil lubrication is difficult, such as wall mount and inversed mount, the adapter is capable of feeding a constant quantity of lubricant to the four raceways.

[Features]

The dedicated lubrication adapter for models NR-NRS is built in with a constant quantity distributor. Therefore, the adapter can accurately feed a constant quantity of lubricant to each raceway regardless of the mounting orientation.
The adapter is economical since it is capable of constantly feeding the optimum amount of lubricant and helping eliminate the supply of surplus lubricant.
To provide pipe arrangement, simply connect an intermittent lubrication pump widely used for ordinary machine tools to the greasing holes (M8) on the front and the side of the lubrication adapter.

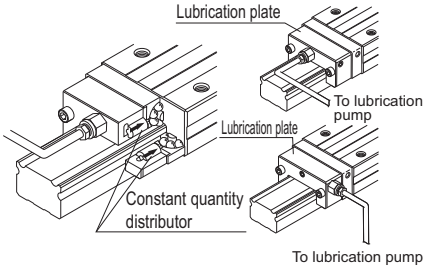


Fig.1 Structural Drawing

[Specifications]

Viscosity range of lubricant used	32 to 64 mm²/s recommended
Discharge	0.03×4, 0.06×4cc/1shot
Diameter of pipe connected	ϕ4, ϕ6
Material	Aluminum alloy

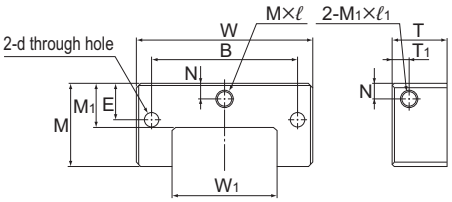


Fig.2

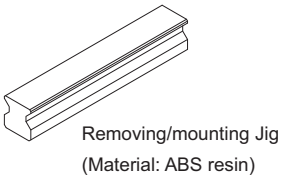
Table1 Dimension Table for Lubrication Adapter

Unit: mm

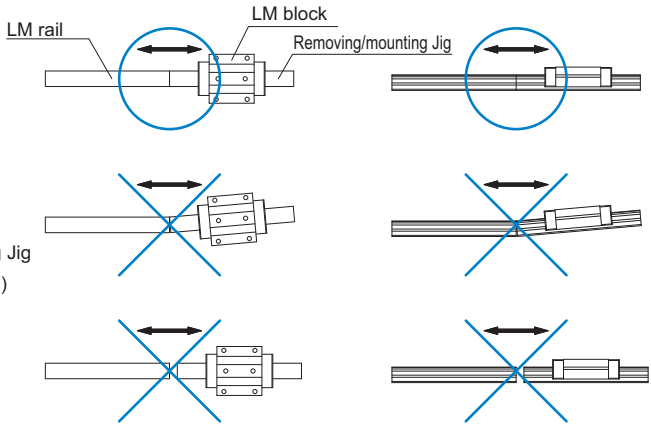
Model No.	Main dimensions												Quantity per shot (cc/shot)
	Width W	Height M	T	W_1	M_1	B	E	N	T_1	d	M×ℓ	M_1×ℓ_1	
A30N	56	29	25	29	14.5	46	14	5	5.3	3.5	M8×8	M8×8	0.03×4
A35N	66	33	25	35	17	54	16.5	6	5.3	4.5	M8×8	M8×8	
A45N	81	38	25	48	20	67	16.5	7	7.8	6.6	M8×8	M8×8	
A55N	94	45.5	25	56	22	76	20.5	7	7.8	6.6	M8×8	M8×8	0.06×4
A65N	119	55.5	25	67	26.3	92	25.5	11.5	7.8	9	M8×8	M8×8	
A85N	147	68.5	25	92	34	114	32	15.5	7.8	9	M8×8	M8×8	

Removing/mounting Jig

When assembling the guide, do not remove the LM block from the LM rail whenever possible. If it is inevitable to remove the LM block due to the plate cover type or the assembly procedure, be sure to use the removing/mounting jig.
Mounting the LM block without using the removing/mounting jig may cause rolling elements to fall from the LM block due to contamination by foreign material, damage to internal components or slight inclination. Mounting the LM block with some of the rolling elements missing may also cause damage to the LM block at an early stage.
When using the removing/mounting jig, do not incline the jig and match the ends of both LM rails.
The removing/mounting jig may not be available, depending on model. If this is the case, use a spare LM rail. Contact THK for details.
If any of the rolling elements falls from the LM block, contact THK instead of using the product.
Note that the removing/mounting jig is not included in the LM Guide package as standard. When desiring to use it, contact THK.



Removing/mounting Jig
(Material: ABS resin)



End Piece EP

For those models whose balls may fall if the LM rail is pulled out of the LM block, an end piece is attached to the product to prevent the LM block from being removed from the LM rail.
For models that can use the end piece, see the table below.
If removing the end piece when using the LM Guide, be sure that the LM block will not overshoot.
The end piece can also be used as a fixing jig for a steel tape, and is available also for the LM rail of models SSR, SR and HSR.

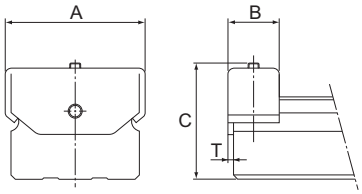


Fig.1 End Piece EP for Models NR/NRS

Table1 Dimension Table for End Piece EP for Models NR/NRS
Unit: mm

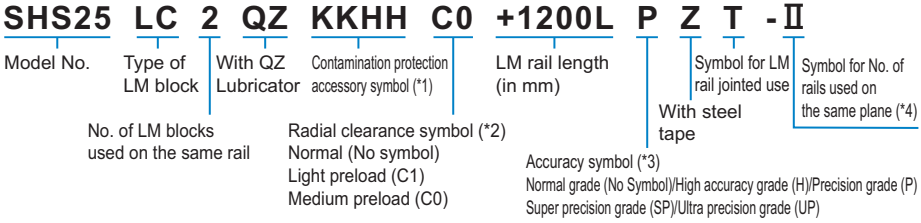
Model No.	A	B	C	T
NR/NRS 25X	26	14	25	1.5
NR/NRS 30	31	14	31	1.5
NR/NRS 35	38	16	32.5	2
NR/NRS 45	49	18	41	2
NR/NRS 55	57	20	46.5	2
NR/NRS 65	69.4	22	59	3.2
NR/NRS 75	81.7	28	56	3.2
NR/NRS 85	91.4	22	68	3.2
NR/NRS 100	106.4	25	73	3.2

Model Number Coding

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

[LM Guide]

- **Models SHS, SSR, SVR/SVS, SHW, HSR, SR, NR/NRS, HRW, JR, NSR-TBC, HSR-M1, SR-M1 and HSR-M2.**

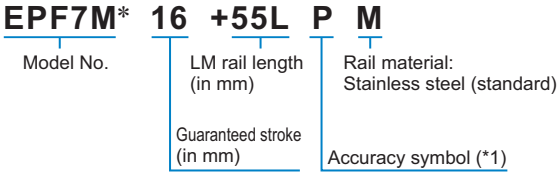


(*1) See contamination protection accessory on A1-492. (*2) See A1-70. (*3) See A1-75. (*4) See A1-13.

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

[Caged Ball LM Guide]

- **Model EPF**



(*1) See A1-85.

Note) ∗: Stainless steel is the standard material used for LM blocks.
This model number denotes one set consists of an LM block and LM rail.

[Caged Roller LM Guide]

● **Models SRG, SRN and SRW**

SRG45 LC 2 QZ KKHH C0 +1200L P T -Ⅱ

- SRG45: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) — 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 (*4)

(*1) See contamination protection accessory on **A1-492**. (*2) See **A1-70**. (*3) See **A1-75**. (*4) See **A1-13**.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

[Miniature Type LM Guide]

● **Models SRS, RSR and RSR-M1**

2 SRS20M QZ UU C1 +220L P M -Ⅱ

- 2: No. of LM blocks used on the same rail
- SRS20M: Model No.
- QZ: With QZ Lubricator
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) — Normal (No symbol)/Light preload (C1)
- +220L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H)/Precision grade (P)
- M: Stainless steel LM rail
- -Ⅱ: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on **A1-492**. (*2) See **A1-70**. (*3) See **A1-75**. (*4) See **A1-13**.

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

[Cross LM Guide]

● **Models SCR, CSR and MX**

4 SCR25 QZ KKHH C0 +1200/1000L P

- 4: Total No. of LM blocks
- SCR25: Model No.
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) — Normal (No symbol)/Light preload (C1), Medium preload (C0)
- +1200/1000L: LM rail length on the X axis (in mm) / LM rail length on the Y axis (in mm)
- P: Accuracy symbol (*3) — Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)

(*1) See contamination protection accessory on **A1-492**. (*2) See **A1-70**. (*3) See **A1-75**.

[Separate LM Guides]

● Model HR

2 HR2555 UU M +1000L P T M

- 2: No. of LM blocks used on the same rail
- HR2555: Model No.
- UU: Contamination protection accessory symbol (*1)
- M: Stainless steel LM block
- +1000L: LM rail length (in mm)
- P: Accuracy symbol (*2) 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
- M: Stainless steel LM rail

(*1) See contamination protection accessory on **A1-492**. (*2) See **A1-75**.

Note) One set of model HR means a combination of two LM rails and an LM blocks used on the same plane.

● Model GSR

● LM block

GSR25 T UU

- GSR25: Model number
- T: Type of LM block
- UU: Contamination protection accessory symbol (*1)

● LM rail

GSR25 -1060L H K

- GSR25: Model number
- -1060L: LM rail length (in mm)
- H: Symbol for tapped-hole LM rail type
- K: Accuracy symbol (*2) Normal grade (No Symbol) High accuracy grade (H) Precision grade (P)

(*1) See contamination protection accessory on **A1-492**. (*2) See **A1-75**.

● Combination of LM rail and LM block

GSR25 T 2 UU +1060L H T K

- GSR25: Model No.
- T: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- +1060L: LM rail length (in mm)
- H: Accuracy symbol (*2) Normal grade (No Symbol)/High accuracy grade (H)/Precision grade (P)
- T: Symbol for LM rail jointed use
- K: Symbol for tapped-hole LM rail type

(*1) See contamination protection accessory on **A1-492**. (*2) See **A1-75**.

Note) One set of model GSR: This model number indicates that a single-rail unit constitutes one set.

[R Guide]

● Model HCR

HCR25A 2 UU C1 +60 / 1000R H 6 T

- HCR25A: Model No.
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol)/Light preload (C1)
- +60: R-Guide center angle
- 1000R: LM rail radius (in mm)
- H: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H)
- 6: Number of LM rail joints used on one axis (*4)
- T: Symbol for LM rail jointed use

(*1) See **A1-492** (contamination protection accessories). (*2) See **A1-70**. (*3) See **A1-75**.
(*4) Number of LM rails used on one arc. For details, contact THK.

[Straight-Curved Guide]

● Model HMG

When 2 rails are used

HMG15A 2 UU C1 +1000L T + 60/150R 6T + 60/300R 6T -Ⅱ

- Model No.
- Contamination protection accessory symbol (*1)
- Overall linear LM rail length per rail
- Center angle of one inner curved rail
- No. of inner curved LM rails jointed
- Radius of outer curved rail
- Symbol for No. of rails used on the same plane (*2)

- No. of LM blocks used on the same rail
- Radial clearance symbol: Normal (No symbol)/Light preload (C1)
- Symbol for linear LM rail joint
- Radius of inner curved rail
- Center angle of one outer curved rail
- No. of outer curved LM rails jointed

(*1) See contamination protection accessory on A1-492. (*2) See A1-13.

Note) This model number denotes one set consists of an LM block and LM rail. (i.e. If you are using 2 shafts, the required number of sets is 2.)
Model HMG does not have a seal as standard.

[LM Guide for Medium-to-Low Vacuum]

● Model HSR-M1VV

HSR15M1R 1 VV C1 +400L P -Ⅱ

- Model No.
- No. of LM blocks used on one rail
- Labyrinth seal symbol (*2)
- Radial clearance symbol (*1)
- LM rail length (in mm)
- Accuracy symbol (*3)
- Symbol for No. of rails used on the same plane (*4)

(*1) See A1-70 (*2) See A1-379 (*3) See A1-75 (*4) See A1-13.

Note1) The radial clearance, maximum LM rail length and accuracy class are equal to that of model HSR.
Note2) 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).

[Oil-Free LM Guide for Special Environments]

● Model SR-MS

SR15MSV 1 CS +340L P -Ⅱ

- Model No.
- No. of LM blocks used on one rail
- Radial clearance symbol (*1)
- LM rail length (in mm)
- Accuracy symbol (*2)
- Symbol for No. of rails used on the same plane (*3)

(*1) See A1-70. (*2) See A1-75. (*3) See A1-13.

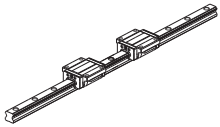
Note) With this model, a single-rail unit constitutes one set (i.e., the required number of sets when 2 rails are used in parallel is 2).

Notes on Ordering

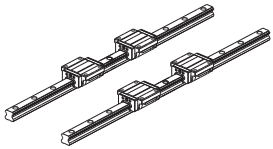
[Order units]

Note that the number of items that constitute one set differs depending on the type of LM guide. Check the sample model number configurations and the accompanying notes.

- **Sample LM guide orders**

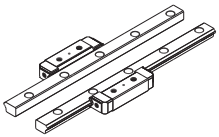


SHS25C2SSC1+640L 1 set



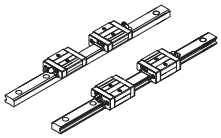
SHS25C2SSC1+640L-Ⅱ 2 sets

- **Sample model HR orders**



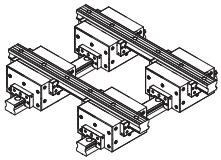
HR2555UU+600L 1 set

- **Sample model GSR and GSR-R orders**



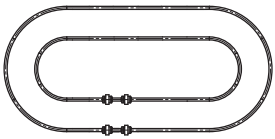
GSR25T2UU+1060L 2 sets

- **Sample cross LM guide orders (SCR, CSR and MX)**



4SCR25UU+1200/1000LP 1 set

- **Sample model HMG orders**



HMG15A 2 UU C1 +1000L T + 60/150R 6T + 60/300R 6T - Ⅱ 2 sets

Note) When ordering model HMG, attach a reference diagram clearly showing the positioning of the LM block and LM rail.

[Mounted orientation and lubrication method]
When placing an order, 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.

[Supported options]
The supported options differ depending on the model number. Check the available options when ordering.
See **A1-456**.

[Maximum manufactured lengths for LM rails]
Where a high degree of precision is required, limits apply to the maximum manufactured lengths for LM rails. In such situations, contact THK.

Precautions on Using the LM Guide

[Handling]

(1) Please use at least two people to move any product weighing 20 kg or more, or use a dolly or another conveyance. Doing so may cause injury or damage.
(2) Do not disassemble the parts. This will result in loss of functionality.
(3) Tilting an LM block or LM rail may cause them to fall by their own weight.
(4) Take care not to drop or strike the LM Guide. Doing so may cause injury or damage. Giving an impact to it could also cause damage to its function even if the product looks intact.
(5) Do not remove the LM block from the LM rail during setup.
(6) Do not insert hands or fingers into the mounting holes on the LM rail, as they could get caught between the rail and the LM block, resulting in injury.
(7) To ensure personal safety, wear gloves and protective footwear when handling this product.

[Precautions on Use]

(1) Prevent foreign material, such as cutting chips or coolant, from entering the product. Failure to do so may cause damage.
(2) If the product is used in an environment where cutting chips, coolant, corrosive solvents, water, etc., may enter the product, use bellows, covers, etc., to prevent them from entering the product.
(3) Do not use this product if the external temperature exceeds 80℃. Unless the unit is specially designed to be heat-resistant, exposure to such temperatures may deform or damage plastic and rubber parts.
(4) If foreign material such as cutting chips adheres to the product, replenish the lubricant after cleaning the product.
(5) Micro-strokes tend to obstruct oil film to form on the raceway in contact with the rolling element, and may lead to fretting corrosion. Take consideration using grease offering excellent fretting prevention. It is also recommended that a stroke movement corresponding to the length of the LM block be made on a regular basis to make sure oil film is formed between the raceway and rolling element.
(6) Do not use undue force when fitting parts (pin, key, etc.) to the product. This may generate permanent deformation on the raceway, leading to loss of functionality.
(7) If, for operational reasons, it becomes absolutely necessary to remove the LM block from the LM rail and reattach it, a special mounting jig must be used for this purpose. (The mounting jig is not included with standard versions of the product. To obtain one, please contact THK.)
(8) Position the mounting jig so that one end abuts the end of the LM rail. When the rail and the jig are exactly aligned, the LM block can be loaded onto the rail.
(9) Take care to keep the LM block straight. Loading the block at an angle can introduce foreign matter, damage internal components, or cause balls to fall out.
(10) The LM block must contain all its internal rolling elements (balls) when mounted on the LM rail. Using a block with any balls removed may result in premature damage.
(11) Please contact THK if any balls fall out of the LM block; do not use the block if any balls are missing.

(12) If the end plate is damaged due to an accident, etc., balls may fall out or the LM block may become detached from the LM rail and drop. If the LM Guide will be used hanging upside down, take preventive measures such as adding a safety mechanism to prevent falls.
(13) Insufficient rigidity or accuracy of mounting members causes the bearing load to concentrate on one point and the bearing performance will drop significantly. Accordingly, give sufficient consideration to the rigidity/accuracy of the housing and base and strength of the fixing bolts.
(14) When removing the LM block from the LM rail and then replacing the block, an LM block mounting/removing jig that facilitates such installation is available. Contact THK for details.

[Lubrication]
(1) Thoroughly remove anti-rust oil and feed lubricant before using the product.
(2) Do not mix different lubricants. Mixing greases using the same type of thickening agent may still cause adverse interaction between the two greases if they use different additives, etc.
(3) When using the product in locations exposed to constant vibrations or in special environments such as clean rooms, vacuum and low/high temperature, use the grease appropriate for the specification/environment.
(4) When lubricating the product having no grease nipple or oil hole, apply grease directly on the raceway and stroke the product several times to let the grease spread inside.
(5) The consistency of grease changes according to the temperature. Take note that the slide resistance of the LM Guide also changes as the consistency of grease changes.
(6) After lubrication, the slide resistance of the LM Guide may increase due to the agitation resistance of grease. Be sure to perform a break-in to let the grease spread fully, before operating the machine.
(7) Excess grease may scatter immediately after lubrication, so wipe off scattered grease as necessary.
(8) The properties of grease deteriorate and its lubrication performance drops over time, so grease must be checked and added properly according to the use frequency of the machine.
(9) Although the lubrication interval may vary according to use conditions and the service environment, lubrication should be performed approximately every 100 km in travel distance (three to six months). Set the final lubrication interval/amount based on the actual machine.
(10) If the mounting orientation is other than horizontal use, the lubricant may not reach the raceway completely. For the mounting orientation and the lubrication, see B**1-28** and B**24-2**, respectively.
(11) When adopting oil lubrication, the lubricant may not be distributed throughout the LM block depending on the mounting orientation of the block. Contact THK in advance for details.

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

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

Precautions on Handling the LM Guide for Special Environment

LM Guide for Medium-to-Low Vacuum

[Handling]

(1) This product has been thoroughly cleaned and degreased and then sealed in moisture-proof packaging. If possible, open the package immediately prior to using the product.
(2) Once the packaging has been opened, store the product inside a clean, dry receptacle accompanied by silica gel or another drying agent. Do not use anti-rust oil or corrosion- or tarnish-preventive paper or fluid with this product.
(3) Wear protective rubber or vinyl gloves while handling this product and make sure the surrounding environment is relatively clean.

Oil-Free LM Guide

[Handling]

(1) The Oil-Free LM Guide is suitable for use at high temperatures, under atmospheric pressure or in a high-vacuum environment of 10^{-6} Pa, and is designed for ultra-low dust emission. It is not intended for use in locations requiring rigidity. Because a preload would affect the strength of its Dry Lubrication S-Compound Film, it does not support preloads.
(2) The product can be used in temperatures ranging from −20 to 150℃.
(3) To ensure proper function of the Dry Lubrication S-Compound Film, use this product in an environment free from condensation, at a humidity level of 40% or less.
(4) This product is not intended for joint use.
(5) Great care must be taken in the installation of the Oil-Free LM Guide, which requires greater precision compared to standard LM Guides.
(6) If the LM block is removed from the LM rail, balls may fall out, and the Dry Lubrication S-Compound Film can be damaged when the block is remounted. If it becomes necessary to remove the LM block from the LM rail, please contact THK.
(7) This product should be stored in a horizontal position, in its original wrapping and package, in a controlled, stable environment free from abnormal high or low temperatures or high humidity. THK recommends storing it at room temperature (25±5℃), with a humidity level of 40% RH or lower and an air-purity level of 10,000 or lower.
(8) This product has been thoroughly cleaned and degreased and then sealed in moisture-proof packaging. If possible, open the package immediately prior to using the product.
(9) Once the packaging has been opened, store the product inside a clean, dry receptacle accompanied by silica gel or another drying agent. Do not use anti-rust oil or corrosion- or tarnish-preventive paper or fluid with this product.
(10) Wear protective rubber or vinyl gloves while handling this product and make sure the surrounding environment is relatively clean.

Precautions on Using Options for the LM Guide

QZ Lubricator for the LM Guide

For details regarding the QZ, see A1-485.

[Precaution on Selection]
Secure a stroke longer than the overall LM block with QZ Lubricator attached.

[Handling]
Take care not to drop or strike this product. This could cause injury or product damage.
Do not block the vent hole with grease or the like.
The QZ device supplies oil only to the raceway, so use it in combination with regular greasing/lubrication. If the product is used in an environment exposed to coolant, cutting chips or other foreign material, oil on the raceway is lost easily. Accordingly, be sure to also use covers, bellows, etc.

[Service environment]
Be sure the service temperature of this product is between −10 to 50℃, and do not clean the product by immersing it in an organic solvent or white kerosene, or leave it unpacked.

Laminated Contact Scraper LaCS, Side Scraper for LM Guides

For details regarding the LaCS, see A1-462. For details regarding the side scraper, see A1-464.

[Handling]
The lubricant impregnated into the scraper is used to increase its sliding capability. For lubrication of the LM Guide, attach QZ Lubricator, or the grease nipple on the side face of the end plate of the LM block, before providing a lubricant.
When using the product, be sure to attach the rail cap C or the plate cover.

[Service environment]
Be sure the service temperature of this product is between -20 to +80℃, and do not clean the product by immersing it in an organic solvent or white kerosene, or leave it unpacked.

[Notes on the Product Functions]
It is specifically designed to provide dust prevention capability to remove foreign material and liquid. To seal oil, an end seal is required.

Light Contact Seal LiCS for LM Guides

For details regarding the LiCS, see A1-466.

[Handling]
The lubricant impregnated into LiCS is used to increase its sliding capability. For lubrication of the LM Guide, attach the grease nipple on the end plate of the LM block before providing a lubricant.

[Service environment]
Be sure the service temperature of this product is between -20 to +80℃, and do not clean the product by immersing it in an organic solvent or white kerosene, or leave it unpacked.
It contacts only with the LM rail raceway. Do not use it in harsh environments.

Cap GC

For details regarding the GC cap, see A1-511.

[Handling]
If GC caps are specified for the product, the edges of the LM rail mounting hole openings will be sharp. Take great care not to injure your fingers or hands while working.
When fitting GC caps, use a flat aligning tool to gradually punch the cap into the hole until it is level with the upper surface of the LM rail. Then run an oil stone over the rail until the upper surface of the rail and the GC caps are completely flat.