

Quick Ship Program

Linear Motion Guide Interchangeable Series

Rails & Blocks are Individually Stocked
for Easy/Fast Interchangeability



LINEAR MOTION GUIDES

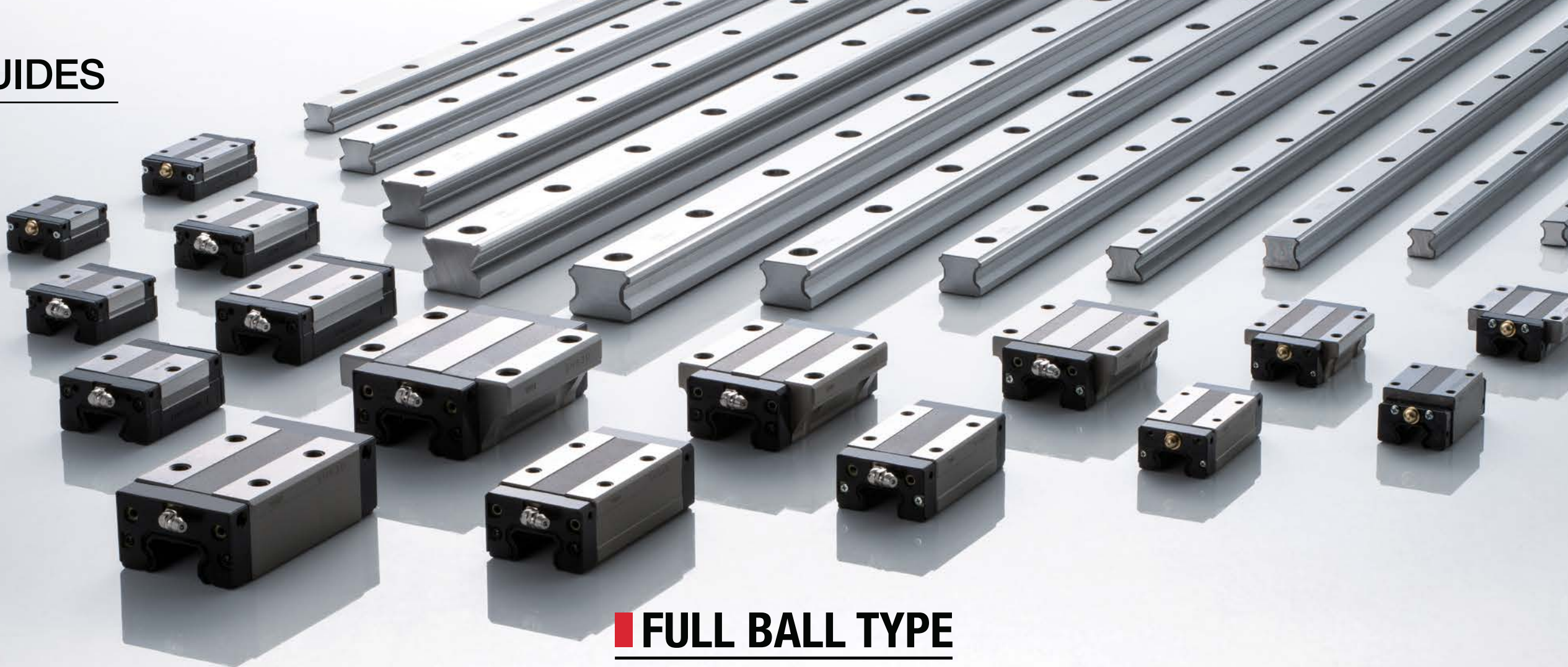
Rails & Blocks Stocked Individually for Easy/Fast Interchangeability

THK's original technology is behind the smooth and silent movement of the "Linear Motion System."

The rotating movement of "rolling" uses bearings that have been used in products for over 100 years.

However, the world's first "rolling" in linear movement was achieved in 1972 when THK developed the "Linear Motion System."

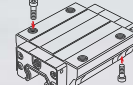
Since then, all THK technologies have been employed for the only purpose of providing smoothness and accuracy to "movement" of all mechanisms.

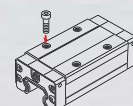


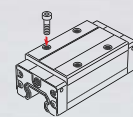
CAGED TYPE

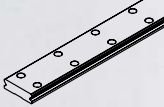
Long-Term Maintenance Free

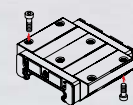
SHS Global Standard Size / Long-Term Maintenance Free  

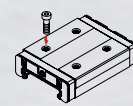
C/LC: The flange of the LM Block has tapped holes. Can be mounted from the top or bottom. 

V/LV: With this type, the LM block has smaller width (W) and tapped holes. 

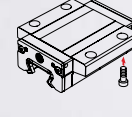
R/LR: It succeeds the height dimension of full-ball type LM guide HSR-R. 

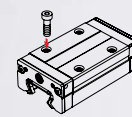
SHW Wide Rail / Long-Term Maintenance Free  

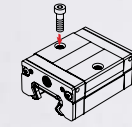
CAN: The flange of the LM block has tapped holes. Can be mounted from the top or bottom. 

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

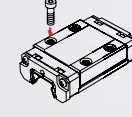
SSR Radial Type / Long-Term Maintenance Free  

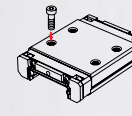
XTB: LM block can be mounted from the bottom, therefore this type is optimal for applications where through holes for mounting bolts cannot be drilled on the table. 

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

XV: This type has the same cross-sectional shape as SSR-XW but has a shorter overall LM Block length (L). 

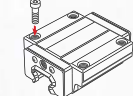
SRS Miniature Type / Long-Term Maintenance Free  

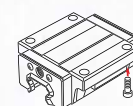
M/N: Standard type of SRS 

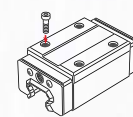
WM/WN: Longer overall LM Block length, greater width for larger rated load and permissible load. 

FULL BALL TYPE

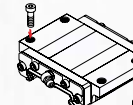
HSR Global Standard Size 

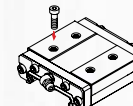
A/LA: The flange of its LM block has tapped holes. 

B/LB: The flange of the LM block has through holes. Used in places where tables cannot have through holes for mounting blocks. 

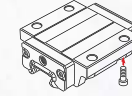
R/LR: Having a smaller LM block width (W) and tapped holes, this model is optimal for compact design. 

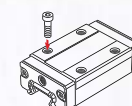
HRW Wide Rail 

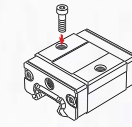
CA: The flange of the LM block has tapped holes. Can be mounted from the top or bottom. 

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

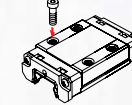
SR Radial Type 

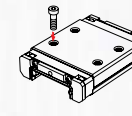
TB: The LM block has the same height as model SR-W and can be mounted from the bottom. 

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

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

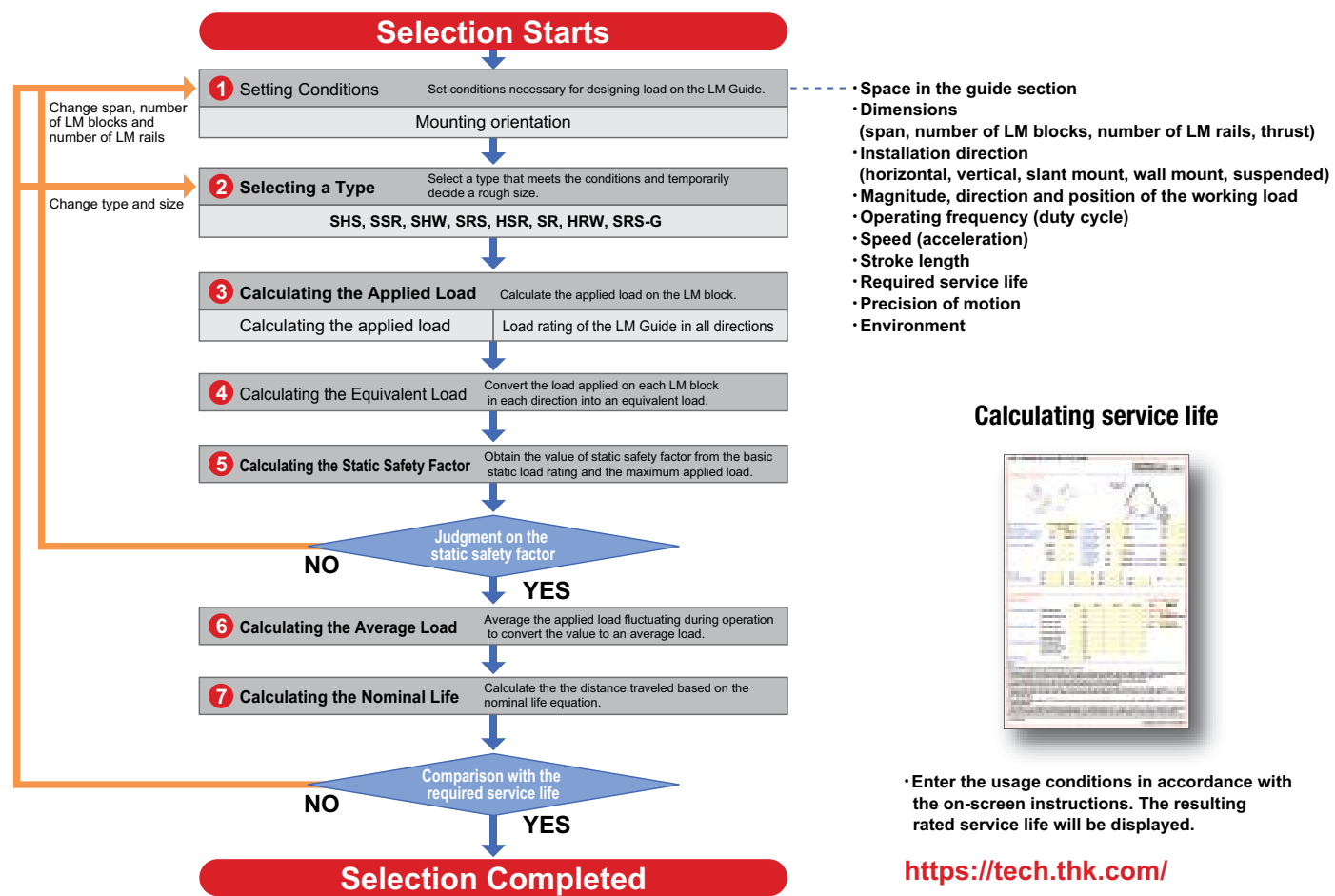
SRS-G Miniature Type 

GM/GN: Standard type of SRS 

WM/WN: Longer overall LM block length, greater width for larger rated load and permissible moment. 

STEPS SELECTING AN LM GUIDE

The following flowchart can be used as reference for selecting a LM Guide.



CALCULATING THE STATIC SAFETY FACTOR

To calculate a load applied to the LM guide, the average load required for calculating the service life and the maximum load needed for calculating the static safety factor must be obtained first. In a system subject to frequent starts and stops, placed under cutting forces or under a large moment caused by an overhang load, an excessively large load may apply to the LM Guide. When selecting a model number, make sure that the desired model is capable of receiving the required maximum load (whether stationary or in motion).

This table shows reference values for the static safety factor.

MACHINE USING THE LM GUIDE	LOAD CONDITIONS	LOWER LIMIT OF f_s
GENERAL INDUSTRIAL MACHINERY	Without vibration or impact	1.0 to 3.5
	With vibration or impact	2.0 to 5.0
MACHINE TOOL	Without vibration or impact	1.0 to 4.0
	With vibration or impact	2.5 to 7.0

WHEN THE RADIAL LOAD IS LARGE	$\frac{f_T \cdot f_C \cdot C_0}{P_R} \geq f_s$
WHEN THE REVERSE RADIAL LOAD IS LARGE	$\frac{f_T \cdot f_C \cdot C_{0L}}{P_L} \geq f_s$
WHEN THE LATERAL LOADS ARE LARGE	$\frac{f_T \cdot f_C \cdot C_{0T}}{P_T} \geq f_s$

f_s : Static Safety Factor
 C_0 : Basic Static Load Rating (Radial Direction) (N)
 C_{0L} : Basic Static Load Rating (Reverse-Radial Direction) (N)
 C_{0T} : Basic Static Load Rating

CALCULATING NOMINAL LIFE

The service life of an LM Guide is subject to variations even under the same operational conditions. Therefore, it is necessary to use the nominal life defined below as a reference value for obtaining the service life of the LM Guide. The nominal life means the total travel distance that 90% of a group of units of the same LM Guide model can achieve without flaking (scale-like pieces on the metal surface) after individually running under the same conditions.

[f_T : Temperature Factor]

If the temperature of the environment surrounding the operating LM Guide exceeds 100°C, take into account the adverse effect of the high temperature and multiply the basic load ratings by the temperature factor indicated in Fig.2.

In addition, the selected LM Guide must also be of a high temperature type.

Note: LM guides not designed to withstand high temperatures should be used at 80°C or less. Please contact THK if application requirements exceed 80°C.

[f_C : Contact Factor]

When multiple LM blocks are used in close contact with each other, it is difficult to achieve uniform load distribution due to moment loads and mounting-surface accuracy. When using multiple blocks in close contact with each other, multiply the basic load rating (C or C_0) by the corresponding contact factor indicated in Table2.

Note: If uneven load distribution is expected in a large machine, take into account the respective contact factor indicated in Table2.

[f_W : Load Factor]

In general, reciprocating machines tend to involve vibrations or impact during operation. It is extremely difficult to accurately determine vibrations generated during high-speed operation and impact during frequent start and stop. Therefore, where the effects of speed and vibration are estimated to be significant, divide the basic dynamic load rating (C) by a load factor selected from Table3, which contains empirically obtained data.

Equivalent Load P_E :

The LM Guide can bear loads and moments in all directions, including a radial load (PR), reverse radial load (PL) and lateral loads (PT), simultaneously. When two or more loads (e.g., radial load and lateral load) are simultaneously applied to the LM Guide, the service life and the static safety factor are calculated using equivalent load values obtained by converting all the loads into radial load or reverse radial load.

[Equivalent Load Equation]

When the LM block of the LM Guide receives loads simultaneously in the radial and lateral directions, or the reverse radial and lateral directions, the equivalent load is obtained from the equation below.

$$P_E = X \cdot P_{R(L)} + Y \cdot P_T$$

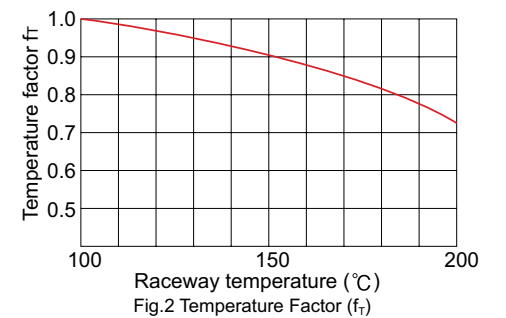
P_E : Equivalent load (N)
 - Radial direction
 - Reverse radial direction

P_L : Reverse radial load (N)
 P_T : Lateral Load (N)
 X, Y : Equivalent factor (see each product page)

Nominal Life Equation for Ball Guide (SHS, SSR, SHW, SRS, HSR, SR, HRW, SRS-G):

$$L = \left(\frac{f_T \cdot f_C}{f_W} \cdot \frac{C}{P_C} \right)^3 \times 50$$

L : Nominal life (km)
 C : Basic dynamic load rating (N)
 P_C : Calculated load (N)
 f_T : Temperature factor (see Fig. 2)
 f_C : Contact factor (see table2)
 f_W : Load factor (see table3)



NO. OF BLOCKS USED IN CLOSE CONTACT	CONTACT FACTOR f_C
2	0.81
3	0.72
4	0.66
5	0.61
6 or greater	0.6
Normal Use	1

VIBRATIONS/IMPACT	SPEED (V)	f_W
Faint	Very Low $V \leq 0.25\text{m/s}$	1 to 1.2
Weak	Slow $0.25 < V \leq 1\text{m/s}$	1.2 to 1.5
Medium	Medium $1 < V \leq 2\text{m/s}$	1.5 to 2
Strong	High $V > 2\text{m/s}$	2 to 3.5

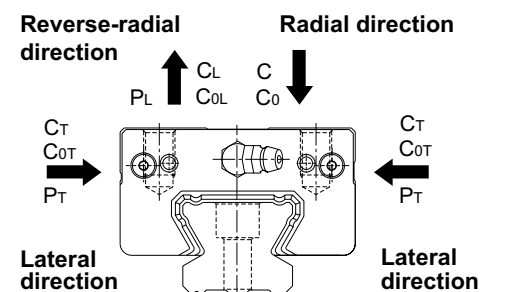
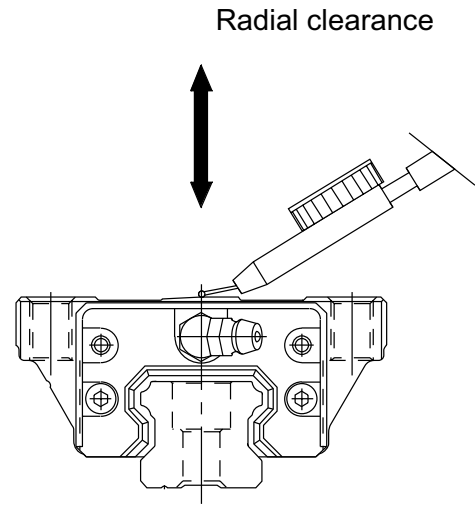


Fig.3 Equivalent of Load of the LM Guide

RADIAL CLEARANCE STANDARD:



*Please contact THK for higher preload type.

[Model SHS] Unit: μm

MODEL NO.	NORMAL	LIGHT PRELOAD
	NO SYMBOL	C1
15	-5 to 0	-12 to -5
20	-6 to 0	-12 to -6
25	-8 to 0	-14 to -8
30	-9 to 0	-17 to -9
35	-11 to 0	-19 to -11
45	-12 to 0	-22 to -12
55	-15 to 0	-28 to -16
65	-18 to 0	-34 to -22

[Model SSR] Unit: μm

MODEL NO.	NORMAL	LIGHT PRELOAD
	NO SYMBOL	C1
15	-4 to +2	-10 to -4
20	-5 to +2	-12 to -5
25	-6 to +3	-15 to -6
30	-7 to +4	-18 to -7
35	-8 to +4	-20 to -8

[Model SHW] Unit: μm

MODEL NO.	NORMAL	LIGHT PRELOAD
	NO SYMBOL	C1
21	-4 to +2	-8 to -4
27	-5 to +2	-11 to -5
35	-8 to +4	-18 to -8

[Model SRS] Unit: μm

MODEL NO.	NORMAL	LIGHT PRELOAD
	NO SYMBOL	C1
9	-2 to +2	-4 to 0
12	-3 to +3	-6 to 0
15	-5 to +5	-10 to 0

[Model HSR] Unit: μm

MODEL NO.	NORMAL	LIGHT PRELOAD
	NO SYMBOL	C1
15	-4 to +2	-12 to -4
20	-5 to +2	-14 to -5
25	-6 to +3	-16 to -6
30	-7 to +4	-19 to -7
35	-8 to +4	-22 to -8
45	-10 to +5	-25 to -10
55	-12 to +5	-29 to -12
65	-14 to +7	-32 to -14

[Model SR] Unit: μm

MODEL NO.	NORMAL	LIGHT PRELOAD
	NO SYMBOL	C1
15	-4 to +2	-10 to -4
20	-5 to +2	-12 to -5
25	-6 to +3	-15 to -6
30	-7 to +4	-18 to -7
35	-8 to +4	-20 to -8
45	-10 to +5	-24 to -10
55	-12 to +5	-28 to -12

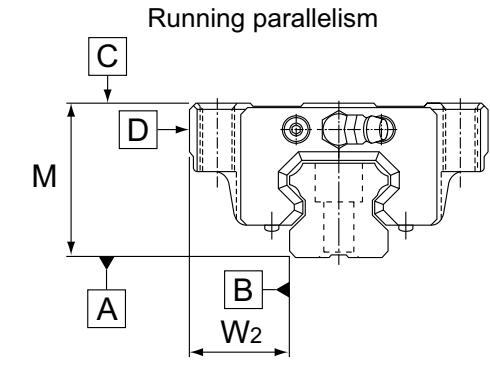
[Model HRW] Unit: μm

MODEL NO.	NORMAL	LIGHT PRELOAD
	NO SYMBOL	C1
17	-3 to +2	-7 to -3
21	-4 to +2	-8 to -4
27	-5 to +2	-11 to -5
35	-8 to +4	-18 to -8
50	-10 to +5	-24 to -10

[Model SRS-G] Unit: μm

MODEL NO.	NORMAL	LIGHT PRELOAD
	NO SYMBOL	C1
9	-2 to +2	-4 to 0
12	-3 to +3	-6 to 0
15	-5 to +5	-10 to 0

ACCURACY STANDARD:



*Please contact THK for other accuracy or longer rail length.

[Model SHS, SSR, SHW, HSR, SR, HRW] Table 4 Unit: μm

LM RAIL LENGTH (MM)	RUNNING PARALLELISM VALUES	
	ABOVE	OR LESS
—	200	5
200	250	6
250	315	7
315	400	8
400	500	9
500	630	11
630	800	12
800	1000	13
1000	1250	15
1250	1600	16
1600	2000	18
2000	2500	20
2500	3000	21

[Model SRS, SRS-G] Table 5 Unit: μm

LM RAIL LENGTH (MM)	RUNNING PARALLELISM VALUES	
	ABOVE	OR LESS
—	40	8
40	70	10
70	100	11
100	130	12
130	160	13
160	190	14
190	220	15
220	250	16
250	310	17
310	370	18
370	400	19
400	460	20
460	520	21
520	640	22
640	820	23
820	970	24
970	1000	25

[Model SHS, SSR, SHW, HSR, SR, HRW] Unit: μm

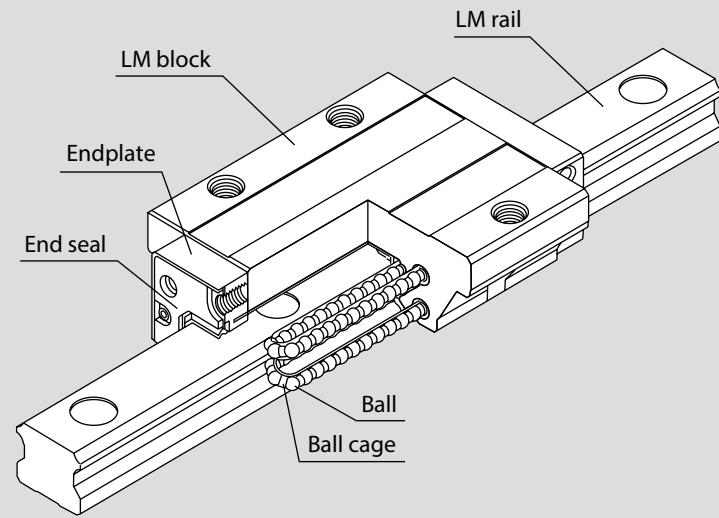
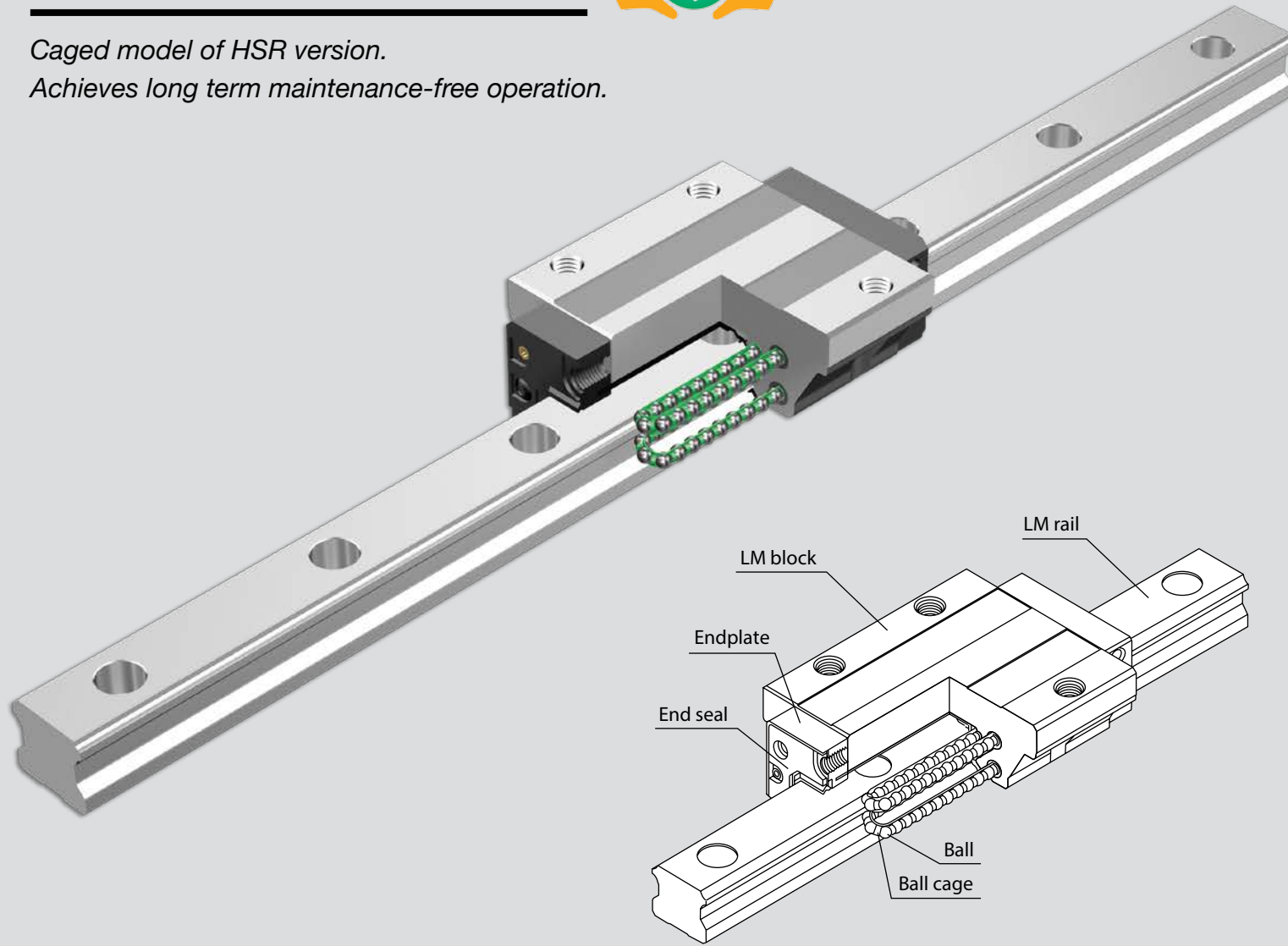
ACCURACY STANDARDS	NORMAL GRADE - NO SYMBOL			
	SIZE			
	15, 17, 20, 21	25, 27, 30, 35	45, 55	65
Dimensional tolerance in height M	± 0.07	± 0.08	± 0.08	± 0.08
Dimensional tolerance in width W	± 0.06	± 0.07	± 0.07	± 0.08
Running parallelism of surface C against surface A	as shown table 4			
Running parallelism of surface D against surface B	as shown table 4			

[Model SRS, SRS-G] Unit: μm

Accuracy Standards	Normal Grade - No Symbol
	Size
	9, 12, 15
Dimensional tolerance in height M	± 0.04
Dimensional tolerance in width W	± 0.04
Running parallelism of surface C against surface A	as shown table 5
Running parallelism of surface D against surface B	as shown table 5



Caged model of HSR version.
Achieves long term maintenance-free operation.

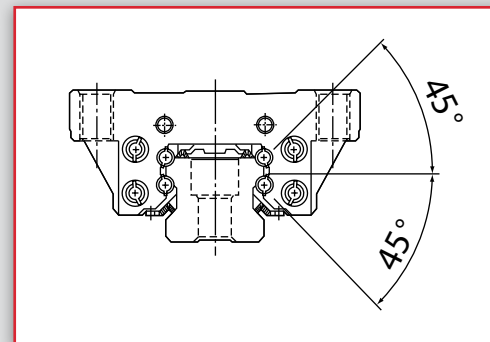


Structure:

Balls roll in four rows of raceways precision-ground on an LM rail and an LM block, and endplates incorporated in the LM block allow the balls to circulate to realize infinite motion. The use of a ball cage allows lines of evenly spaced balls, thus to eliminate friction between the balls.

Since the balls are held, they do not fall off even if the LM block is pulled out from LM rail. (Ball may fall depending on the handling. Use dummy rail when removing the LM block.)

[Cross Section]

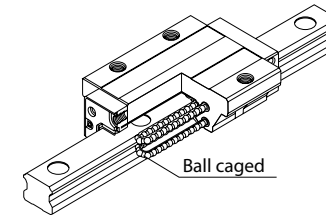


Features:

1. Caged Ball:

The ball cage drastically improves the performance of the LM guide. The effects of the ball cage are:

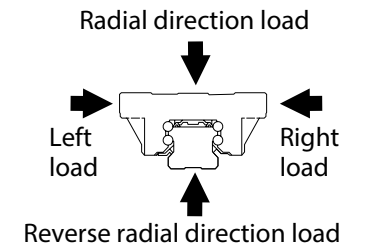
- Long service life and long-term maintenance-free operation
- Smoother running
- Low noise, acceptable running sound and high-speed
- Low dust generation



2. 4-Way Equal Load:

Each row of balls is placed at a contact angle of 45° so that the rated loads applied to the LM block are uniform in the four directions (radial, reverse radial and lateral directions).

Therefore it can be used in any direction and used for a wide range of applications.



3. Low Center of Gravity, High Rigidity:

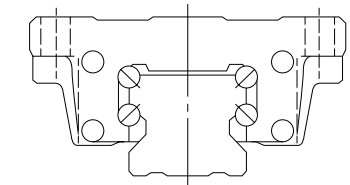
As a result of downsizing the LM rail section, the center of gravity is lowered and the rigidity is increased.

5. Global Standard LM Guide:

SHS is designed to have dimensions almost the same as that of LM Guide model HSR, which THK as a pioneer of the linear motion system has developed for the first time in the world and is practically a global standard size (ISO12090).

4. Self-Aligning Capability:

The self-aligning capability through face-to-face configuration of THK's unique circular-arc grooves (DF Structure) enables a mounting error to be absorbed even under a preload, thus to achieve highly accurate, smooth straight motion.



LM guide (DF structure) of the four-row circular-arc groove, two point contact structure.

[Rated Loads of Model SHS in All Directions]

DIRECTION	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING
RADIAL DIRECTION	C	C ₀
REVERSE RADIAL DIRECTION	C _L =C	C _{0L} =C ₀
LATERAL DIRECTION	C _T =C	C _{0T} =C ₀

[Equivalent Factor of Model SHS]

PE	X	Y
EQUIVALENT IN RADIAL DIRECTION	1.000	1.000
EQUIVALENT IN REVERSE RADIAL DIRECTION	1.000	1.000

MODEL AND TYPES OF LM BLOCK:

The applicable model and LM block types are as follows.

MODEL	TYPE	FEATURES
SHS-C	Standard Type	<ul style="list-style-type: none"> The flange of its LM block has tapped holes. The LM blocks can be mounted from the top and the bottom. Upward mounting is used when any through holes cannot be made on the table and the tap machining is required for the table. This is suitable for design compact in the height direction.
SHS-LC	Long Type	<ul style="list-style-type: none"> The LM block has the same cross-sectional shape as model SHS-C, but has a longer overall LM block length and a greater rated load.
SHS-V	Standard Type	<ul style="list-style-type: none"> With this type, the LM block has a smaller width and tapped holes. Suitable for places where the space for table width is limited. This is suitable for design compact in the height direction.
SHS-LV	Long Type	<ul style="list-style-type: none"> The LM block has the same cross-sectional shape as model SHS-V, but has a longer overall LM block length and a greater rated load.
SHS-R	Standard Type	<ul style="list-style-type: none"> With this type, the LM block has a smaller width and tapped holes. Suitable for places where space for table width is limited. It succeeds the height dimension of full-ball type LM Guide HSR.
SHS-LR	Long Type	<ul style="list-style-type: none"> The LM block has the same cross-sectional shape as model SHS-R, but has a longer overall LM block length and a greater rated load.

• = Interchangeable Series Available

MODEL	SIZE							
	15	20	25	30	35	45	55	65
SHS-C	•	•	•	•	•	•	•	•
SHS-LC	•	•	•	•	•	•	•	•
SHS-V	•	•	•	•	•	•	•	•
SHS-LV	•	•	•	•	•	•	•	•
SHS-R	•	-	•	•	•	•	•	-
SHS-LR	-	-	•	•	•	•	•	-

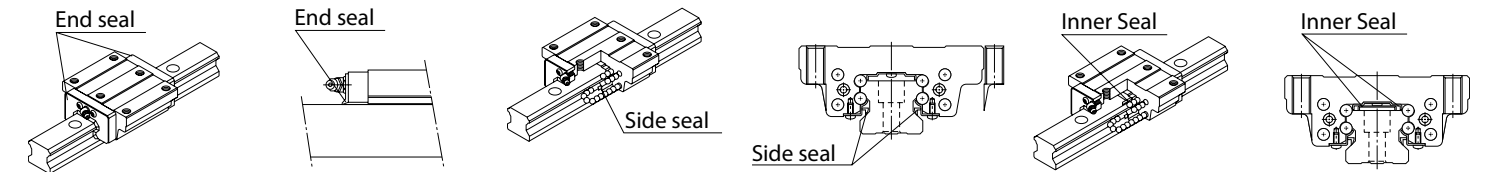
MODEL NUMBER CODING:

BLOCK

: Choose Quick-Ship Option
 : Standard/Only Quick Ship Option

Step 1		Step 2		Step 3		
MODEL NUMBER	BLOCK TYPE	BLOCK QUANTITY	SEAL TYPE	RADIAL CLEARANCE	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
SHS25	LC	1	SS	C1	(GK)	SHS25LC1SSC1(GK) BLOCK
		<i>Standard for interchangeable blocks = 1</i>	<i>Standard for SHS*: Contamination Protection Seal "SS"</i>	<i>Normal Clearance = No Symbol; Light Preload = C1</i>		

*SS = End Seal + Side Seal + Inner Seal



Please contact THK for other seal options.

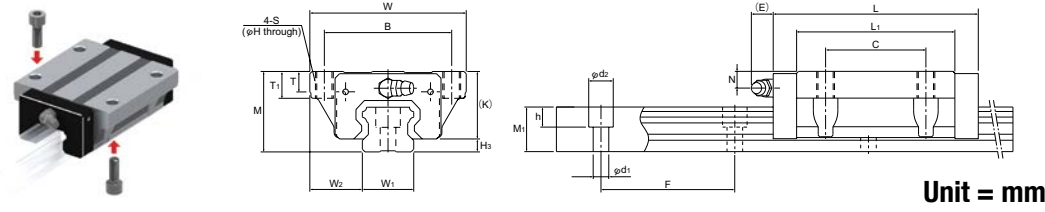
RAIL

Step 1		Step 2		SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
MODEL NUMBER		OVERALL LENGTH (mm)*			
SHS25	-	440L	(GK)	SHS25-440L(GK) RAIL	
		<i>Add "L" to end of length</i>			

* If you need a non-standard rail length, please let us know overall length with G/g dimensions. EX: SHS25-2340L(GK) RAIL (G=40/g=20).

Note: If you need jointed rails (two or more rails butted end to end), please let us know overall length with drawing. Part number will have "T" after overall length. EX: SHS35-3560LT(GK) RAIL

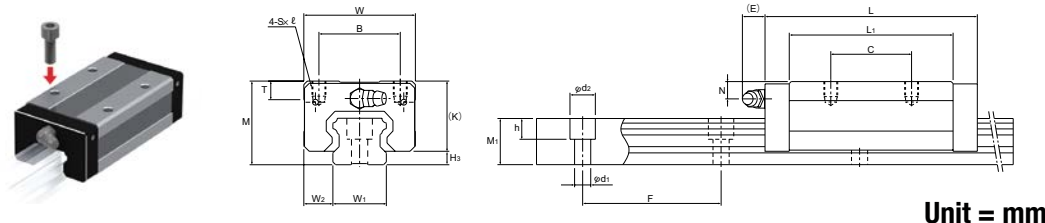
SHS-C, LC:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS										H ₃	BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg	
	HEIGHT M	WIDTH W	LENGTH L	B	C	S	H	L ₁	T	T ₁	K	N	E		GREASE NIPPLE	C kN	CO kN	MA		MB			MC
																		1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK		1 BLOCK
SHS 15C SHS 15LC	24	47	64.4 79.4	38	30	M5	4.4	48 63	5.9	8	21	5.5	5.5	PB1021B	3	14.2 17.2	24.2 31.9	0.175 0.296	0.898 1.43	0.175 0.296	0.898 1.43	0.16 0.212	0.23 0.29
SHS 20C SHS 20LC	30	63	79 98	53	40	M6	5.4	59 78	7.2	10	25.4	6.5	12	B-M6F	4.6	22.3 28.1	38.4 50.3	0.334 0.568	1.75 2.8	0.334 0.568	1.75 2.8	0.361 0.473	0.46 0.61
SHS 25C SHS 25LC	36	70	92 109	57	45	M8	6.8	71 88	9.1	12	30.2	7.5	12	B-M6F	5.8	31.7 36.8	52.4 64.7	0.566 0.848	2.75 3.98	0.566 0.848	2.75 3.98	0.563 0.696	0.72 0.89
SHS 30C SHS 30LC	42	90	106 131	72	52	M10	8.5	80 105	11.5	15	35	8	12	B-M6F	7	44.8 54.2	66.6 88.8	0.786 1.36	4.08 6.6	0.786 1.36	4.08 6.6	0.865 1.15	1.34 1.66
SHS 35C SHS 35LC	48	100	122 152	82	62	M10	8.5	93 123	11.5	15	40.5	8	12	B-M6F	7.5	62.3 72.9	96.6 127	1.38 2.34	6.76 10.9	1.38 2.34	6.76 10.9	1.53 2.01	1.9 2.54
SHS 45C SHS 45LC	60	120	140 174	100	80	M12	10.5	106 140	14.1	18	51.1	10.5	16	B-R1/8 (B-PT1/8)	8.9	82.8 100	126 166	2.05 3.46	10.1 16.3	2.05 3.46	10.1 16.3	2.68 3.53	3.24 4.19
SHS 55C SHS 55LC	70	140	171 213	116	95	M14	12.5	131 173	16	21	57.3	11	16	B-R1/8 (B-PT1/8)	12.7	128 161	197 259	3.96 6.68	19.3 31.1	3.96 6.68	19.3 31.1	4.9 6.44	5.35 6.97
SHS 65C SHS 65LC	90	170	221 272	142	110	M16	14.5	175 226	18.8	24	71	19	16	B-R1/8 (B-PT1/8)	19	205 253	320 408	8.26 13.3	40.4 62.6	8.26 13.3	40.4 62.6	9.4 11.9	10.7 13.7

SHS-V, LV:

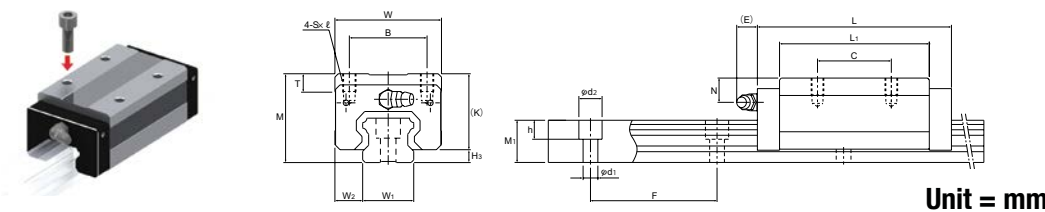


Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS										H ₃	BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x l	L ₁	T	K	N	E	GREASE NIPPLE	C kN		CO kN	MA		MB		MC		
																1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK	1 BLOCK		
SHS 15V SHS 15LV	24	34	64.4 79.4	26	26	M4x4	48 63	5.9	21	5.5	5.5	PB1021B	3	14.2 17.2	24.2 31.9	0.175 0.296	0.898 1.43	0.175 0.296	0.898 1.43	0.16 0.212	0.19 0.22	
SHS 20V SHS 20LV	30	44	79 98	32	36	M5x5	59 78	8	25.4	6.5	12	B-M6F	4.6	22.3 28.1	38.4 50.3	0.334 0.568	1.75 2.8	0.334 0.568	1.75 2.8	0.361 0.473	0.35 0.46	
SHS 25V SHS 25LV	36	48	92 109	35	35	M6x6.5	71 88	8	30.2	7.5	12	B-M6F	5.8	31.7 36.8	52.4 64.7	0.566 0.848	2.75 3.98	0.566 0.848	2.75 3.98	0.563 0.696	0.54 0.67	
SHS 30V SHS 30LV	42	60	106 131	40	40	M8x8	80 105	8	35	8	12	B-M6F	7	44.8 54.2	66.6 88.8	0.786 1.36	4.08 6.6	0.786 1.36	4.08 6.6	0.865 1.15	0.94 1.16	
SHS 35V SHS 35LV	48	70	122 152	50	50	M8x10	93 123	14.7	40.5	8	12	B-M6F	7.5	62.3 72.9	96.6 127	1.38 2.34	6.76 10.9	1.38 2.34	6.76 10.9	1.53 2.01	1.4 1.84	
SHS 45V SHS 45LV	60	86	140 174	60	60	M10x15	106 140	14.9	51.1	10.5	16	B-R1/8 (B-PT1/8)	8.9	82.8 100	126 166	2.05 3.46	10.1 16.3	2.05 3.46	10.1 16.3	2.68 3.53	2.54 3.19	
SHS 55V SHS 55LV	70	100	171 213	75	75	M12x15	131 173	19.4	57.3	11	16	B-R1/8 (B-PT1/8)	12.7	128 161	197 259	3.96 6.68	19.3 31.1	3.96 6.68	19.3 31.1	4.9 6.44	4.05 5.23	
SHS 65V SHS 65LV	90	126	221 272	76	70	M16x20	175 226	19.5	71	19	16	B-R1/8 (B-PT1/8)	19	205 253	320 408	8.26 13.3	40.4 62.6	8.26 13.3	40.4 62.6	9.4 11.9	8.41 10.7	

Static Permissible Moment: Double Blocks - value with 2 blocks in close contact with each other.
Lubrication: Lithium soap base grease No. 2 (THK AFB-LF grease) is contained.

SHS-R, LR:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS										H ₃	BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x l	L ₁	T	K	N	E	GREASE NIPPLE	C kN		CO kN	MA		MB		MC		
																1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK	1 BLOCK		
SHS 15R	28	34	64.4	26	26	M4x5	48	5.9	25	9.5	5.5	PB1021B	3	14.2	24.2	0.175	0.898	0.175	0.898	0.16	0.22	
SHS 25R SHS 25LR	40	48	92 109	35	35	M6x8	71 88	8	34.2	11.5	12	B-M6F	5.8	31.7 36.8	52.4 64.7	0.566 0.848	2.75 3.98	0.566 0.848	2.75 3.98	0.563 0.696	0.66 0.8	
SHS 30R SHS 30LR	45	60	106 131	40	40	M8x10	80 105	8	38	11	12	B-M6F	7	44.8 54.2	66.6 88.8	0.786 1.36	4.08 6.6	0.786 1.36	4.08 6.6	0.865 1.15	1.04 1.36	
SHS 35R SHS 35LR	55	70	122 152	50	50	M8x12	93 123	14.7	47.5	15	12	B-M6F	7.5	62.3 72.9	96.6 127	1.38 2.34	6.76 10.9	1.38 2.34	6.76 10.9	1.53 2.01	1.8 2.34	
SHS 45R SHS 45LR	70	86	140 174	60	60	M10x17	106 140	14.9	61.1	20.5	16	B-R1/8 (B-PT1/8)	8.9	82.8 100	126 166	2.05 3.46	10.1 16.3	2.05 3.46	10.1 16.3	2.68 3.53	3.24 4.19	
SHS 55R SHS 55LR	80	100	171 213	75	75	M12x18	131 173	19.4	67.3	21	16	B-R1/8 (B-PT1/8)	12.7	128 161	197 259	3.96 6.68	19.3 31.1	3.96 6.68	19.3 31.1	4.9 6.44	5.05 6.57	

Static Permissible Moment: Double Blocks - value with 2 blocks in close contact with each other.
Lubrication: Lithium soap base grease No. 2 (THK AFB-LF grease) is contained.

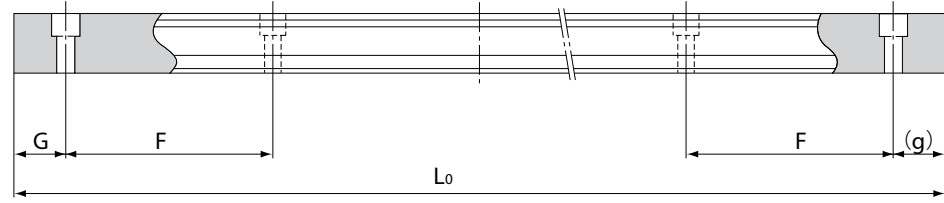
SHS LM RAIL:



Unit = mm

MODEL NO.	LM RAIL DIMENSIONS					MASS kg/m
	WIDTH W1 0 -0.05	W2	HEIGHT M1	PITCH F	d1xd2xh	
SHS 15	15	10	13	60	4.5x 7.5x 5.3	1.3
SHS 20	20	12	16.5	60	6 x 9.5x 8.5	2.3
SHS 25	23	13	20	60	7 x 11 x 9	3.2
SHS 30	28	16	23	80	9 x 14 x 12	4.5
SHS 35	34	18	26	80	9 x 14 x 12	6.2
SHS 45	45	21	32	105	14 x 20 x 17	10.4
SHS 55	53	23.5	38	120	16 x 23 x 20	14.5
SHS 65	63	31.5	53	150	18 x 26 x 22	23.7

STANDARD / MAXIMUM LENGTH OF LM RAIL:



MODEL NO.	SHS 15	SHS 20	SHS 25	SHS 30	SHS 35	SHS 45	SHS 55	SHS 65
LM RAIL STANDARD LENGTH (L ₀)	160	220	220	280	280	570	780	1270
	220	280	280	360	360	675	900	1570
	280	340	340	440	440	780	1020	2020
	340	400	400	520	520	885	1140	2620
	400	460	460	600	600	990	1260	
	460	520	520	680	680	1095	1380	
	520	580	580	760	760	1200	1500	
	580	640	640	840	840	1305	1620	
	640	700	700	920	920	1410	1740	
	700	760	760	1000	1000	1515	1860	
	760	820	820	1080	1080	1620	1980	
	820	940	940	1160	1160	1725	2100	
	940	1000	1000	1240	1240	1830	2220	
	1000	1060	1060	1320	1320	1935	2340	
	1060	1120	1120	1400	1400	2040	2460	
	1120	1180	1180	1480	1480	2145	2580	
	1180	1240	1240	1560	1560	2250	2700	
	1240	1360	1300	1640	1640	2355	2820	
	1360	1480	1360	1720	1720	2460	2940	
	1480	1600	1420	1800	1800	2565	3060	
	1600	1720	1480	1880	1880	2670		
		1840	1540	1960	1960	2775		
		1960	1600	2040	2040	2880		
		2080	1720	2200	2200	2985		
		2200	1840	2360	2360	3090		
			1960	2520	2520			
		2080	2680	2680				
		2200	2840	2840				
		2320	3000	3000				
		2440	2500					
STANDARD PITCH F	60	60	60	80	80	105	120	150
G/g	20	20	20	20	20	22.5	30	35
STANDARD MAX LENGTH		3000	3000	3000	3000	3090	3060	3000
CUSTOM ORDER MAX LENGTH	3000	★ 7000	★ 7000	★ 7000	★ 7000	★ 7000	★ 7000	★ 7000

Lengths in **Red** are standard U.S. stock items.
Other lengths are to be cut from longer stock rails or to be manufactured.
Precautions on using Linear Motion Guide - Please refer to general catalog.

★ **7m Single Rails Are Available in Stock!**

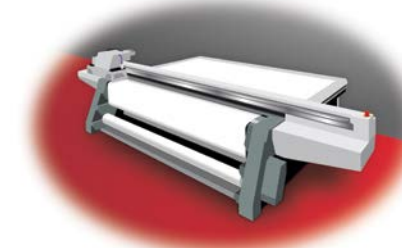
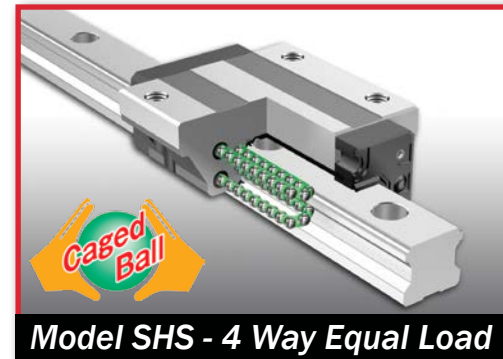


7M SINGLE PIECE RAIL

Extended Linear Rail

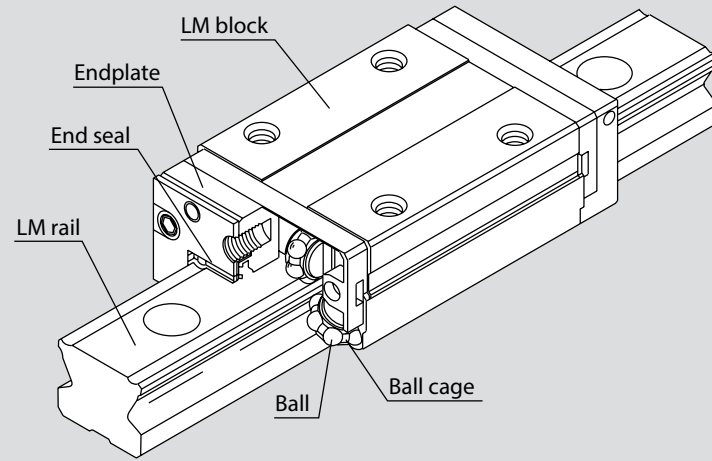
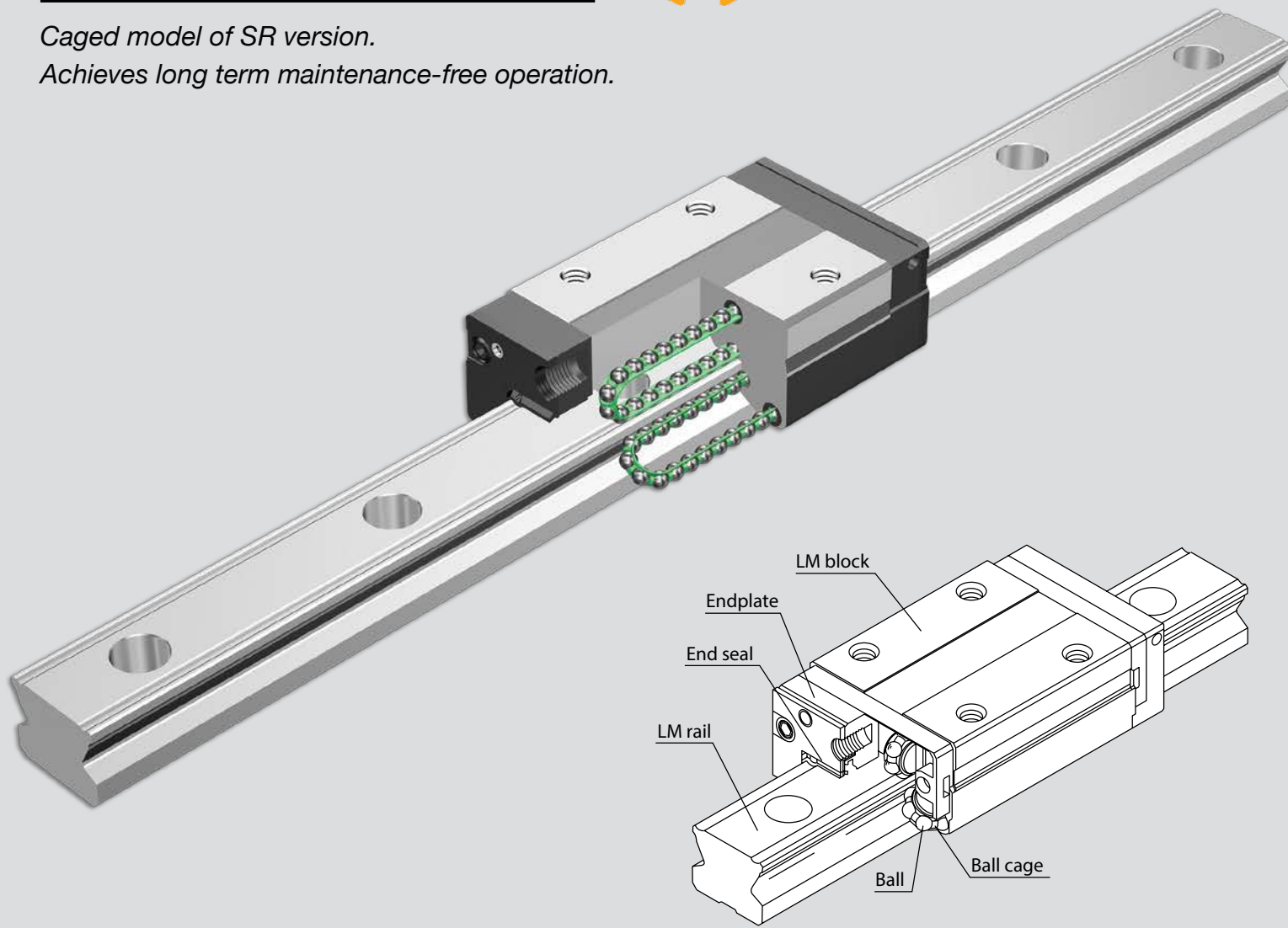
- **LENGTHS UP TO 7m** - Cut to your specs
- More accurate motion with a single rail
- U.S.A. stock available for **FAST DELIVERY!**

Available in Four Models:

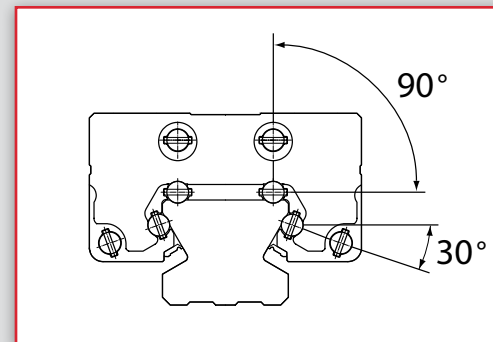




Caged model of SR version.
Achieves long term maintenance-free operation.



[Cross Section]



Structure:

Balls roll in four rows of raceways precision-ground on an LM rail and an LM block, and endplates incorporated in the LM block allow the balls to circulate to realize infinite motion. The use of a ball cage allows lines of evenly spaced balls, thus to eliminate friction between the balls.

Since the balls are held, they do not fall off even if the LM block is pulled out from the LM rail.

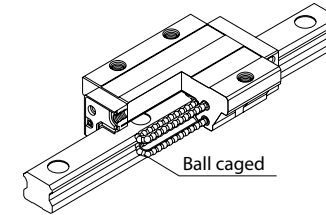
(Ball may fall depending on the handling. Use dummy rail when removing LM block.)

Features:

1. Caged Ball:

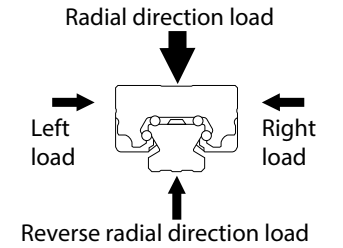
The ball cage drastically improves the performance of the LM guide. The effects of the ball cage are:

- Long service life and long-term maintenance-free operation
- Smoother running
- Low noise, acceptable running sound and high-speed
- Low dust generation



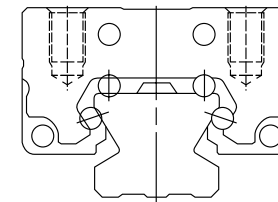
2. Compact & Efficient Design:

Since it is a compactly designed model that has a low sectional height and a ball contact structure in the radial direction, this model is suitable for horizontal guide units.



3. Self-Aligning Capability:

The self-aligning capability through face-to-face configuration of THK's unique circular-arc grooves (DF Structure) enables a mounting error to be absorbed even under a preload, thus to achieve highly accurate, smooth straight motion.



LM guide (DF structure) of the four-row circular-arc groove, two point contact structure.

4. Superb Planar Running Accuracy:

Use of a ball contact structure whose upper raceway is highly resistant to loads in the radial direction minimizes radial displacement under radial loads and provides stable, highly accurate motion.

[Rated Loads of Model SSR in All Directions]

DIRECTION	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING
RADIAL DIRECTION	C	C ₀
REVERSE RADIAL DIRECTION	C _L =0.50C ₀	C _{OL} =0.50C ₀
LATERAL DIRECTION	C _T =0.53C	C _{OT} =0.43C ₀

[Equivalent Factor of Model SSR]

PE	X	Y
EQUIVALENT IN RADIAL DIRECTION	--	--
EQUIVALENT IN REVERSE RADIAL DIRECTION	1.000	1.155

MODEL AND TYPES OF LM BLOCK:

The applicable model and LM block types are as follows.

MODEL	TYPE	FEATURES
SSR-XW	Standard Type	<ul style="list-style-type: none"> With this type, the LM block has a smaller width and tapped holes on the top face of the block. This is suitable for design compact in the height and width dimensions.
SSR-XV	Short Type	<ul style="list-style-type: none"> A space-saving type whose LM block has the same cross-sectional shape as model SSR-XW, but has a smaller overall LM block length.
SSR-XTB	Standard Type	<ul style="list-style-type: none"> Since the LM block can be mounted from the bottom, this type is suitable for applications where through holes for mounting bolts cannot be drilled on the table.

• = Interchangeable Series Available

MODEL	SIZE				
	15	20	25	30	35
SSR-XW	•	•	•	•	•
SSR-XV	•	•	•	-	-
SSR-XTB	•	•	•	-	-

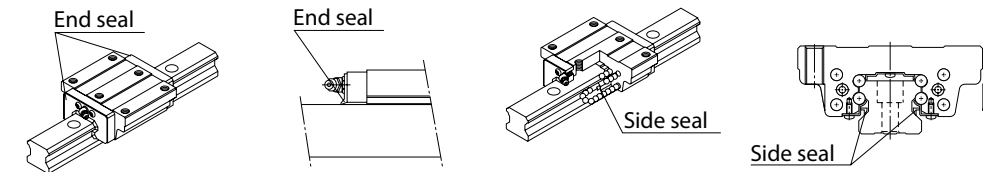
MODEL NUMBER CODING:

BLOCK

: Choose Quick-Ship Option
 : Standard/Only Quick Ship Option

Step 1		Step 2		Step 3		
MODEL NUMBER	BLOCK TYPE	BLOCK QUANTITY	SEAL TYPE	RADIAL CLEARANCE	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
SSR20	XV	1	SS	C1	(GK)	SSR20XV1SSC1(GK) BLOCK
		<i>Standard for interchangeable blocks = 1</i>	<i>Standard for SSR*: Contamination Protection Seal "SS"</i>	<i>Normal Clearance = No Symbol; Light Preload = C1</i>		

*SS = End Seal + Side Seal



Please contact THK for other seal options.

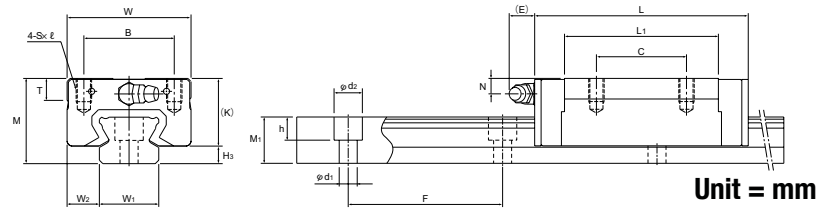
RAIL

Step 1		Step 2		Step 3	
MODEL NUMBER		OVERALL LENGTH (mm)*	RAIL CODE	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
SR25	-	1540L	Y	(GK)	SR25-1540LY(GK)RAIL
		<i>Add "L" to end of length</i>	<i>Size 20/30/35 = no symbol added</i>		
			<i>Size 15/25 = Y</i>		

* If you need a non-standard rail length, please let us know overall length with G/g dimensions. EX: SR30-500L(GK) RAIL (G=10/g=10).

Note: If you need jointed rails (two or more rails butted end to end), please let us know overall length with drawing. Part number will have "T" after overall length. EX: SR25-4120LYT (GK) RAIL.

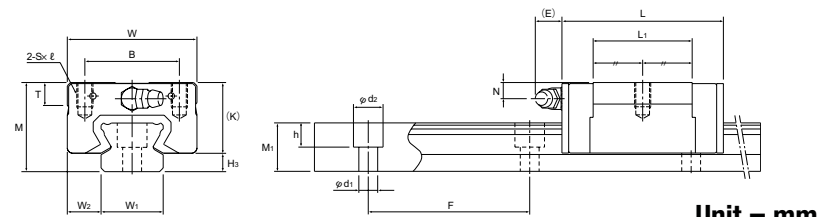
SSR-XW:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS								BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg		
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x t	L1	T	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB		MC	
																1 BLOCK	DOUBLE BLOCK	1 BLOCK		DOUBLE BLOCK	1 BLOCK
SSR 15XW	24	34	56.9	26	26	M4x7	39.9	6.5	19.5	4.5	5.5	PB1021B	4.5	14.7	16.5	0.0792	0.44	0.0486	0.274	0.0962	0.15
SSR 20XW	28	42	66.5	32	32	M5x8	46.6	8.2	22	5.5	12	B-M6F	6	19.6	23.4	0.138	0.723	0.0847	0.448	0.18	0.25
SSR 25XW	33	48	83	35	35	M6x9	59.8	8.4	26.2	6	12	B-M6F	6.8	31.5	36.4	0.258	1.42	0.158	0.884	0.33	0.4
SSR 30XW	42	60	97	40	40	M8x12	70.7	11.3	32.5	8	12	B-M6F	9.5	46.5	52.7	0.446	2.4	0.274	1.49	0.571	0.8
SSR 35XW	48	70	110.9	50	50	M8x12	80.5	13	36.5	8.5	12	B-M6F	11.5	64.6	71.6	0.711	3.72	0.437	2.31	0.936	1.1

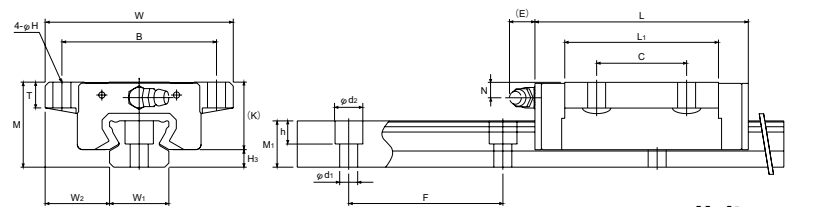
SSR-XV:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS								BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg	
	HEIGHT M	WIDTH W	LENGTH L	B	S x t	L1	T	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB			MC
															1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK		1 BLOCK
SSR 15XV	24	34	40.3	26	M4x7	23.3	6.5	19.5	4.5	5.5	PB1021B	4.5	9.1	9.7	0.0303	0.192	0.0189	0.122	0.0562	0.08
SSR 20XV	28	42	47.7	32	M5x8	27.8	8.2	22	5.5	12	B-M6F	6	13.4	14.4	0.0523	0.336	0.0326	0.213	0.111	0.14
SSR 25XV	33	48	60	35	M6x9	36.8	8.4	26.2	6	12	B-M6F	6.8	21.7	22.5	0.104	0.661	0.0652	0.419	0.204	0.23

SSR-XTB:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS								BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg		
	HEIGHT M	WIDTH W	LENGTH L	B	C	H	L1	T	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB		MC	
																1 BLOCK	DOUBLE BLOCK	1 BLOCK		DOUBLE BLOCK	1 BLOCK
SSR 15XTB	24	52	56.9	41	26	4.5	39.9	7	19.5	4.5	5.5	PB1021B	4.5	14.7	16.5	0.0792	0.44	0.0486	0.274	0.0962	0.19
SSR 20XTB	28	59	66.5	49	32	5.5	46.6	9	22	5.5	12	B-M6F	6	19.6	23.4	0.138	0.723	0.0847	0.448	0.18	0.31
SSR 25XTB	33	73	83	60	35	7	59.8	10	26.2	6	12	B-M6F	6.8	31.5	36.4	0.258	1.42	0.158	0.884	0.33	0.53

Static Permissible Moment: Double Blocks - value with 2 blocks in close contact with each other.
Lubrication: Lithium soap base grease No. 2 (THK AFB-LF grease) is contained.

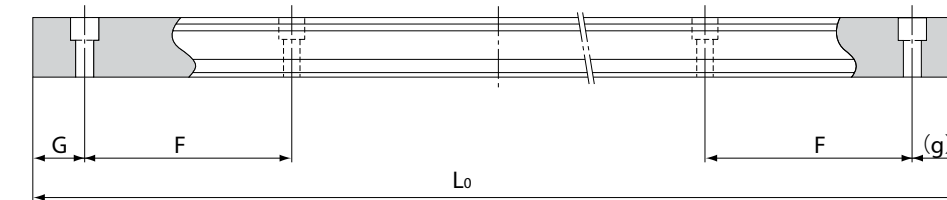
SSR LM RAIL:



Unit = mm

MODEL NO.	LM RAIL DIMENSIONS					MASS kg/m
	Width W1 ±0.05	W2	HEIGHT M1	PITCH F	d1xd2xh	
SR 15Y	15	9.5	12.5	60	4.5× 7.5× 5.3	1.2
SR 20	20	11	15.5	60	6 × 9.5× 8.5	2.1
SR 25Y	23	12.5	18	60	7 × 11 × 9	2.7
SR 30	28	16	23	80	7 × 11 × 9	4.3
SR 35	34	18	27.5	80	9 × 14 × 12	6.4

STANDARD / MAXIMUM LENGTH OF LM RAIL:



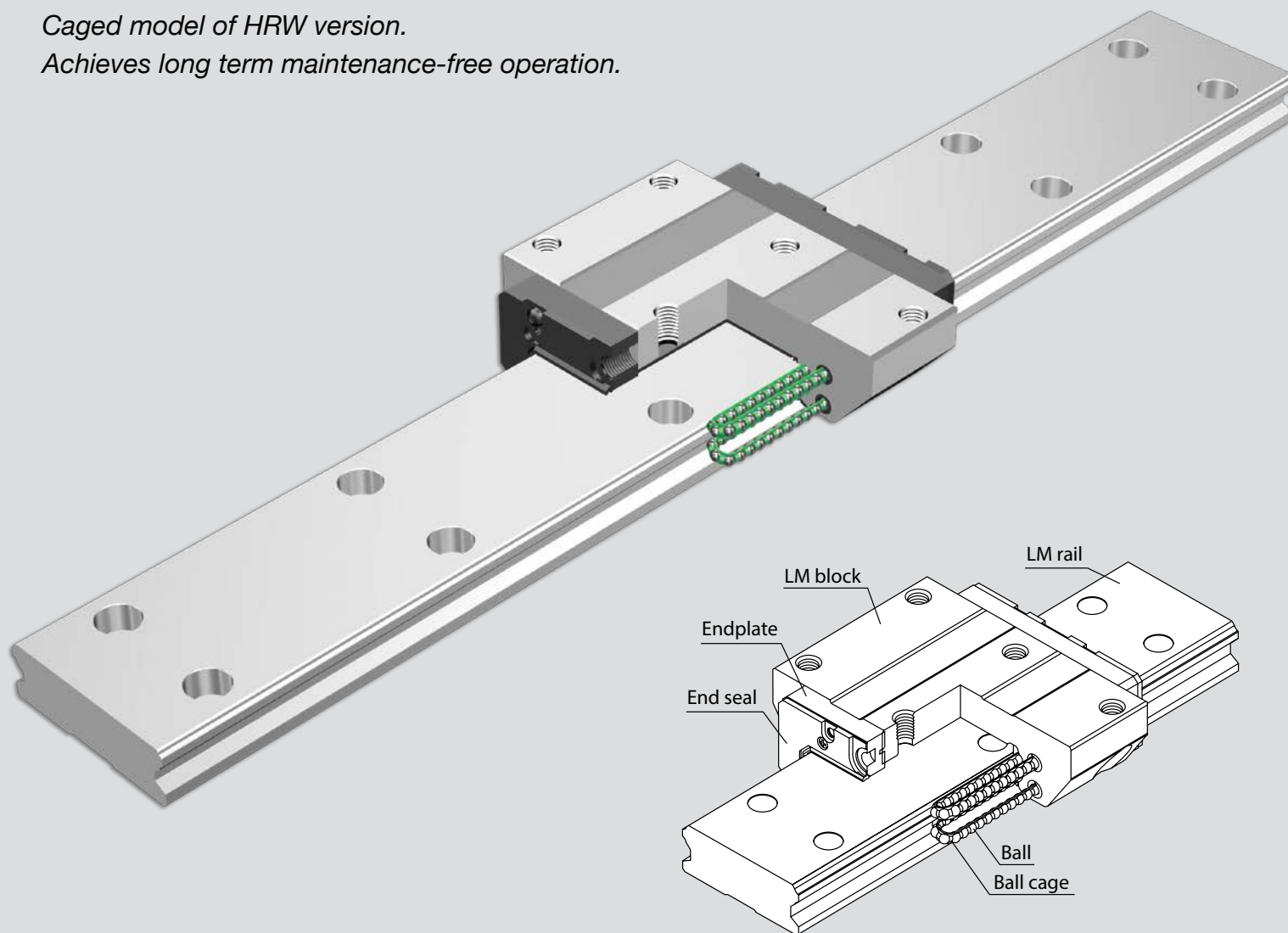
MODEL NO.	SSR 15	SSR 20	SSR 25	SSR 30	SSR 35
LM RAIL STANDARD LENGTH (L0)	160	220	220	280	280
	220	280	280	360	360
	280	340	340	440	440
	340	400	400	520	520
	400	460	460	600	600
	460	520	520	680	680
	520	580	580	760	760
	580	640	640	840	840
	640	700	700	920	920
	700	760	760	1000	1000
	760	820	820	1080	1080
	820	940	940	1160	1160
	940	1000	1000	1240	1240
	1000	1060	1060	1320	1320
	1060	1120	1120	1400	1400
	1120	1180	1240	1480	1480
	1180	1240	1300	1560	1640
	1240	1300	1360	1640	1720
	1300	1360	1420	1720	1800
	1360	1420	1480	1800	1880
	1420	1480	1540	1880	1960
	1480	1540	1600	1960	2040
	1540	1600	1660	2040	2120
	1600	1660	1720	2120	2200
	1720	1780	2200	2280	
	1780	1840	2280	2360	
	1840	1900	2360	2440	
	1900	1960	2440	2520	
	1960	2020	2520	2600	
	2020	2080	2600	2680	
	2080	2140	2680	2760	
	2140	2200	2760	2840	
	2200	2260	2840	2920	
	2260	2320	2920		
	2320	2380			
	2380	2440			
	2440	2500			
STANDARD PITCH F	60	60	60	80	80
G/g	20	20	20	20	20
STANDARD MAX LENGTH		3000	3000	3000	3000
CUSTOM ORDER MAX LENGTH	3000	7000	7000	7000	7000

Lengths in Red are standard U.S. stock items.
Other lengths are to be cut from longer stock rails or to be manufactured.
Precautions on using Linear Motion Guide - Please refer to general catalog.

★ 7m Single Rails Are Available in Stock!



Caged model of HRW version.
Achieves long term maintenance-free operation.



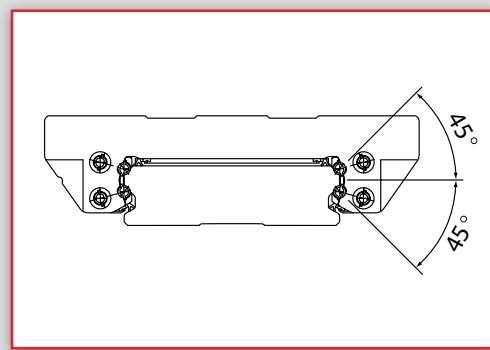
Structure:

Balls roll in four rows of raceways precision-ground on an LM rail and an LM block, and endplates incorporated in the LM block allow the balls to circulate to realize infinite motion.

The use of a ball cage allows lines of evenly spaced balls, thus to eliminate friction between the balls.

Since the balls are held, they do not fall off even if the LM block is pulled out from LM rail. (Ball may fall depending on the handling. Use dummy rail when removing LM block.)

[Cross Section]

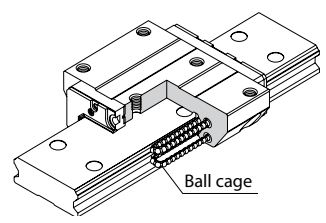


Features:

1. Caged Ball:

The ball cage drastically improves the performance of the LM guide. The effects of the ball cage are:

- Long service life and long-term maintenance-free operation
- Smoother running
- Low noise, acceptable running sound and high-speed
- Low dust generation

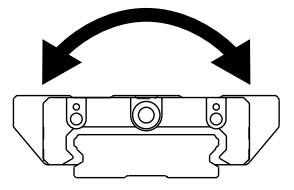


2. Wide and Low:

The LM rail is wide and the distance between the right and left raceways is long, so high for the Mc moment rigidity.

This is suitable for places where space saving is required thanks to the low center of gravity with low LM Guide length.

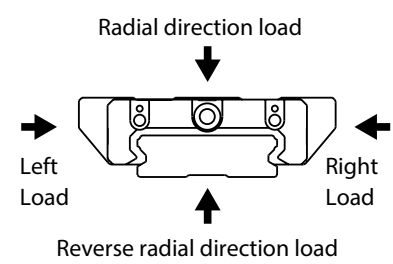
This is a high-rigidity guide suitable for usage in single-axis applications.



3. 4-Way Equal Load:

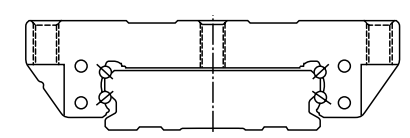
Each row of balls is placed at a contact angle of 45° so that the rated loads applied to the LM block are uniform in the four directions (radial, reverse radial and lateral directions).

Therefore it can be used in any direction and used for a wide range of applications.



4. Self-Aligning Capability:

The self-aligning capability through face-to-face configuration of THK's unique circular-arc grooves (DF Structure) enables a mounting error to be absorbed even under a preload, thus to achieve highly accurate, smooth straight motion.



LM guide (DF structure) of the four-row circular-arc groove, two point contact structure.

[Rated Loads of Model SHW in All Directions]



DIRECTION	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING
RADIAL DIRECTION	C	C ₀
REVERSE RADIAL DIRECTION	C _L =C	C _{0L} =C ₀
LATERAL DIRECTION	C _T =C	C _{0T} =C ₀

[Equivalent Factor of Model SHW]

PE	X	Y
EQUIVALENT IN RADIAL DIRECTION	1.000	1.000
EQUIVALENT IN REVERSE RADIAL DIRECTION	1.000	1.000

MODEL AND TYPES OF LM BLOCK:

The applicable model and LM block types are as follows.

MODEL	TYPE	FEATURES
 SHW-CAN	Standard Type	<ul style="list-style-type: none"> The flange of its LM block has tapped holes. The LM blocks can be mounted from the top and the bottom.
 SHW-CRN	Standard Type	<ul style="list-style-type: none"> With this type, the LM block has a smaller width and tapped holes. This is suitable for places where the space for table width is limited and for the purpose of space saving in the width direction.

• = Interchangeable Series Available

MODEL	SIZE		
	21	27	35
SHW-CAN	•	•	•
SHW-CRN	•	•	•

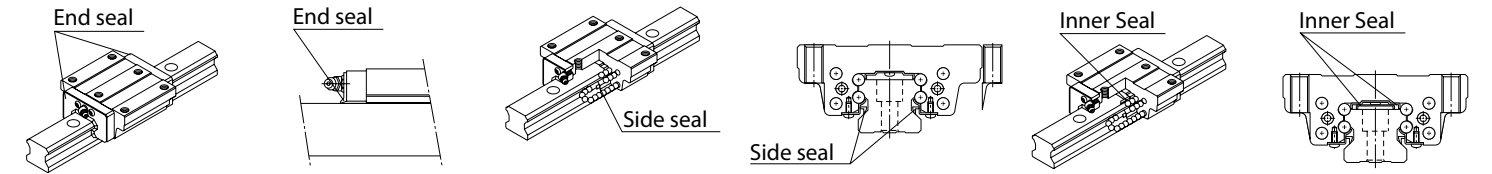
MODEL NUMBER CODING:

BLOCK

: Choose Quick-Ship Option
 : Standard/Only Quick Ship Option

Step 1		Step 2		Step 3		
MODEL NUMBER	BLOCK TYPE	BLOCK QUANTITY	SEAL TYPE	RADIAL CLEARANCE	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
SHW27	CAN	1	SS	C1	(GK)	SHW27CAN1SSC1(GK) BLOCK
		<i>Standard for interchangeable blocks = 1</i>	<i>Standard for SHW*: Contamination Protection Seal "SS"</i>	<i>Normal Clearance = No Symbol; Light Preload = C1</i>		

*SS = End Seal + Side Seal + Inner Seal



Please contact THK for other seal options.

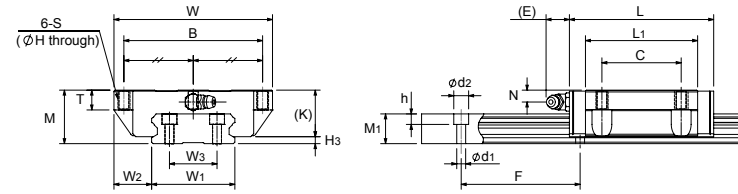
RAIL

Step 1		Step 2		SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
MODEL NUMBER	OVERALL LENGTH (mm)*				
SHW35	-	640L	(GK)	SHW35-640L (GK) RAIL	
		<i>Add "L" to end of length</i>			

* If you need a non-standard rail length, please let us know overall length with G/g dimensions. EX: SHW21-330L(GK) RAIL (G=20/g=10).

Note: If you need jointed rails (two or more rails butted end to end), please let us know overall length with drawing. Part number will have "T" after overall length. EX: SHW35-3600LT(GK) RAIL

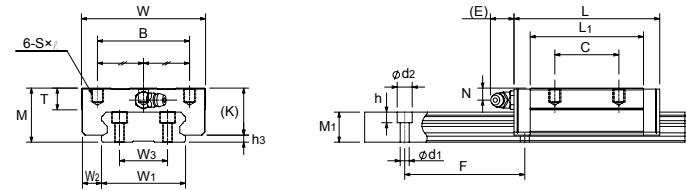
SHW-CAN:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS										BASIC LOAD RATING			STATIC PERMISSIBLE MOMENT kN-M					MASS kg
	HEIGHT M	WIDTH W	LENGTH L	B	C	S	H	L ₁	T	K	N	E	GREASE NIPPLE	H ₃	C kN	CO kN	MA		MB		MC	
																	1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK	1 BLOCK	
SHW 21CAN	21	68	59	60	29	M5	4.4	43.6	8	17.7	5	5.5	PB1021B	3.3	8.24	12.8	0.0806	0.434	0.0806	0.434	0.229	0.24
SHW 27CAN	27	80	72.8	70	40	M6	5.3	56.6	10	23.5	6	12	B-M6F	3.5	16	22.7	0.187	0.949	0.187	0.949	0.455	0.47
SHW 35CAN	35	120	107	107	60	M8	6.8	83	14	31	7.6	12	B-M6F	4	35.5	49.2	0.603	3	0.603	3	1.63	1.4

SHW-CRN:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS										BASIC LOAD RATING			STATIC PERMISSIBLE MOMENT kN-M					MASS kg
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x l	L ₁	T	K	N	E	GREASE NIPPLE	H ₃	C kN	CO kN	MA		MB		MC		
																1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK	1 BLOCK		
SHW 21CRN	21	54	59	31	19	M5x6	43.6	8	17.7	5	5.5	PB1021B	3.3	8.24	12.8	0.0806	0.434	0.0806	0.434	0.229	0.19	
SHW 27CRN	27	62	72.8	46	32	M6x6	56.6	10	23.5	6	12	B-M6F	3.5	16	22.7	0.187	0.949	0.187	0.949	0.455	0.36	
SHW 35CRN	35	100	107	76	50	M8x8	83	14	31	7.6	12	B-M6F	4	35.5	49.2	0.603	3	0.603	3	1.63	1.2	

Static Permissible Moment: Double Blocks - value with 2 blocks in close contact with each other.
Lubrication: Lithium soap base grease No. 2 (THK AFB-LF grease) is contained.

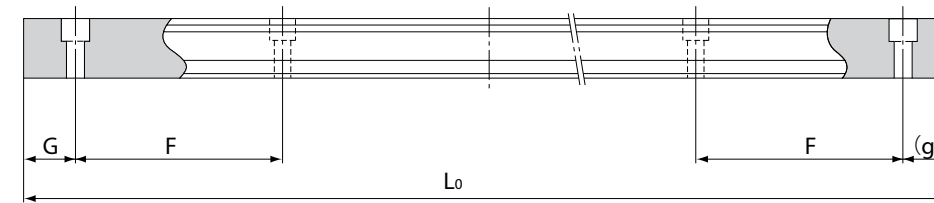
SHW LM RAIL:



Unit = mm

MODEL NO.	LM RAIL DIMENSIONS						MASS kg/m
	Width W1 0 -0.05	W2	W3	HEIGHT M1	PITCH F	d1 x d2 x h	
SHW 21	37	8.5	22	11	50	4.5x7.5x5.3	2.9
SHW 27	42	10	24	15	60	4.5x7.5x5.3	4.5
SHW 35	69	15.5	40	19	80	7x11x9	9.6

STANDARD / MAXIMUM LENGTH OF LM RAIL:

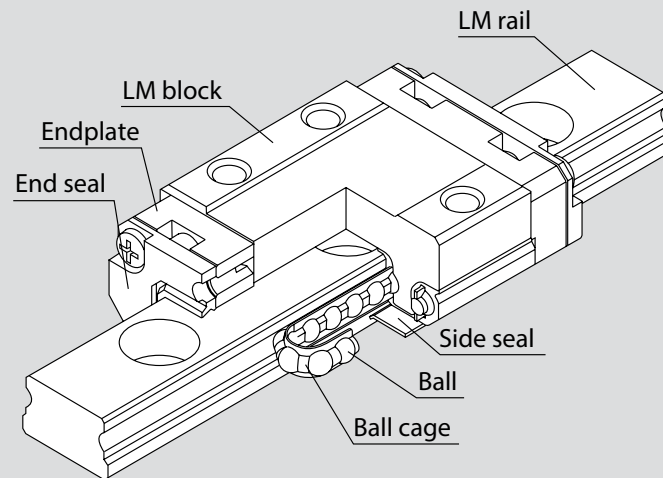
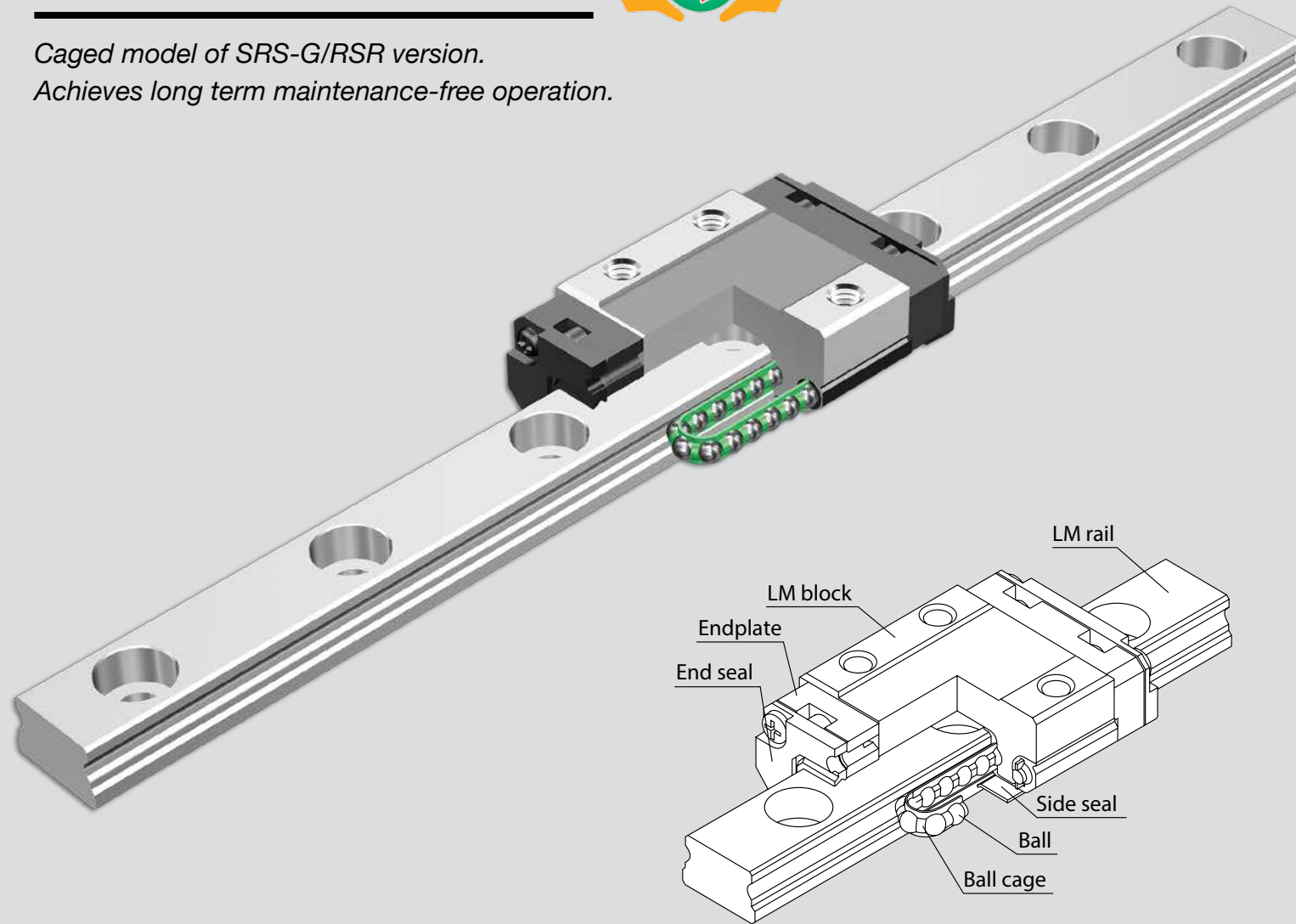


MODEL NO.	SHW 21	SHW 27	SHW 35
LM RAIL STANDARD LENGTH (L ₀)	130	160	280
	230	280	440
	380	340	760
	480	460	1000
	580	640	1240
	780	820	1560
STANDARD PITCH F	50	60	80
G/g	15	20	20
STANDARD MAX LENGTH	1900	3000	3000

Lengths in **Red** are standard U.S. stock items.
Other lengths are to be cut from longer stock rails or to be manufactured.
Contact THK for custom max length.
Precautions on using Linear Motion Guide - Please refer to general catalog.



Caged model of SRS-G/RSR version.
Achieves long term maintenance-free operation.

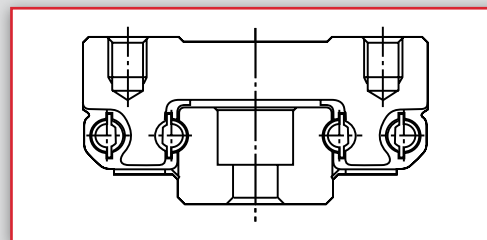


Structure:

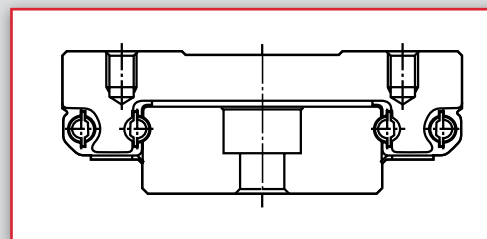
Ball roll in two rows are raceways precision-ground on an LM rail and an LM block, and endplates incorporated in the LM block allow the balls to circulate to realize infinite motion.

The use of a ball cage allows lines of evenly spaced balls, thus to eliminate friction between the balls. Since the balls are held, they do not fall off even if the LM block is pulled out from LM rail. (Ball may fall depending on handling. Use dummy rail when removing LM block.)

[Cross Section - Compact Type SRS-M]



[Cross Section - Wide Type SRS-WM]

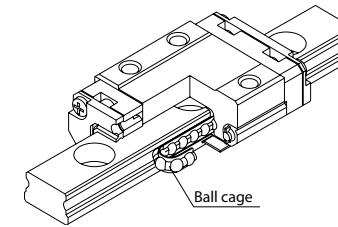


Features:

1. Caged Ball:

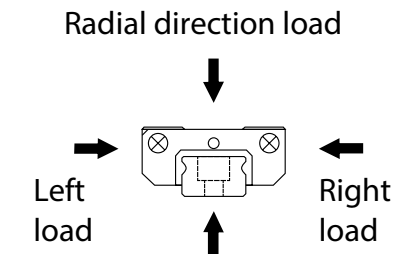
The ball cage drastically improves the performance of the LM guide. The effects of the ball cage are:

- Long service life and long-term maintenance-free operation
- Smoother running
- Low noise, acceptable running sound and high-speed
- Low dust generation



2. Wide and Low:

Since SRS has a compact structure where the rail cross section is designed to be low and that contains only two rows of balls, it can be installed in space-saving locations.



3. Lightweight:

Since part of the LM block is made of resin and formed through insert molding, SRS is a lightweight type of LM guide.

[Rated Loads of Model SRS in All Directions - Size 9]

DIRECTION	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING
RADIAL DIRECTION	C	C ₀
REVERSE RADIAL DIRECTION	C _L =C	C _{0L} =C ₀
LATERAL DIRECTION	C _T =1.19C	C _{0T} =1.19C ₀

[Rated Loads of Model SRS in All Directions - Size 12, 15]

DIRECTION	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING
RADIAL DIRECTION	C	C ₀
REVERSE RADIAL DIRECTION	C _L =C	C _{0L} =C ₀
LATERAL DIRECTION	C _T =C	C _{0T} =C ₀

[EQUIVALENT FACTOR OF MODEL SRS - SIZE 9]





PE	X	Y
EQUIVALENT IN RADIAL DIRECTION	1.000	0.839
EQUIVALENT IN REVERSE RADIAL DIRECTION	1.000	0.89

[Equivalent Factor of Model SRS - Size 12, 15]

PE	X	Y
EQUIVALENT IN RADIAL DIRECTION	1.000	1.000
EQUIVALENT IN REVERSE RADIAL DIRECTION	1.000	1.000

MODEL AND TYPES OF LM BLOCK:

The applicable model and LM block types are as follows.

MODEL	TYPE	FEATURES
 SRS-M	Standard Type	• With this type, the LM block has a smaller width and tapped holes. This is suitable for design compact in the width and height directions.
 SRS-N	Long Type	• The LM block has the same cross-sectional shape as model SRS-M, but has a longer overall LM block length and a greater rated load and permissible moment.
 SRS-WM	Standard Type	• Has a longer overall LM block length, a greater width and a larger rated load and permissible moment than SRS-M.
 SRS-WN	Long Type	• The LM block has the same cross-sectional shape as model SRS-WM, but has a longer overall LM block length and a greater rated load and permissible moment.

• = Interchangeable Series Available

MODEL	SIZE		
	9	12	15
SRS-M	•	•	•
SRS-N	•	•	•
SRS-WM	•	•	•
SRS-WN	•	•	•

MODEL NUMBER CODING:

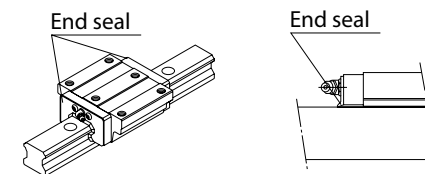
BLOCK

: Choose Quick-Ship Option
 : Standard/Only Quick Ship Option

MODEL NUMBER	BLOCK TYPE	SEAL TYPE	RADIAL CLEARANCE	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
SRS9X	M	UU	C1	(GK)	SRS9XMUUC1 (GK) BLOCK

Standard for SRS:*
 Contamination Protection Seal "UU"
Normal Clearance =
 No Symbol;
 Light Preload = C1

*UU = End Seal



Please contact THK for other seal options.

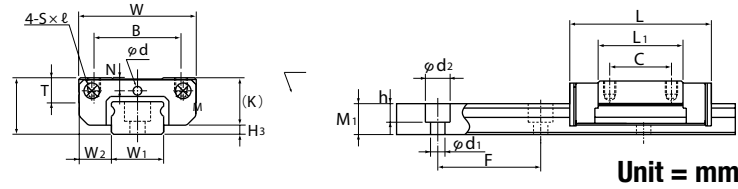
RAIL

MODEL NUMBER	OVERALL LENGTH (mm)*	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
SRS15W	220L	(GK)	SRS15W-220L (GK) RAIL

Add "L" to end of length

* If you need a non-standard rail length, please let us know overall length with G/g dimensions. EX: SRS9X-120L(GK) RAIL (G=10/g=10).

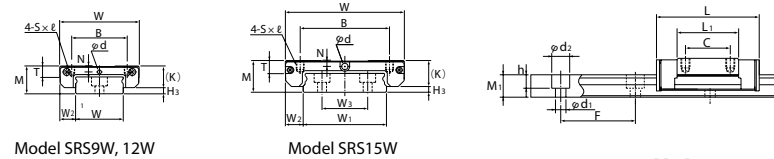
SRS-M, N:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS								BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg	
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x l	L ₁	T	K	N	GREASING HOLE d	H ₃	C kN	CO kN	MA		MB			MC
															1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK		1 BLOCK
SRS 9XM	10	20	30.8	15	10	M3x2.8	19.8	4.5	8.5	2.4	1.6	1.5	2.69	2.75	9.31	52.2	10.7	60.3	12.7	0.016
SRS 9XN	10	20	40.8	15	16	M3x2.8	29.8	4.5	8.5	2.4	1.6	1.5	3.48	3.98	18.7	96.5	21.6	112	18.3	0.024
SRS 12M	13	27	34.4	20	15	M3x3.2	20.6	5.7	11	3	2	2	4.00	3.53	12.0	78.5	12.0	78.5	23.1	0.027
SRS 12N	13	27	47.1	20	20	M3x3.2	33.3	5.7	11	3	2	2	5.82	5.30	28.4	151	28.4	151	34.7	0.049
SRS 15M	16	32	43	25	20	M3x3.5	25.7	6.5	13.3	3	3	2.7	6.66	5.7	26.2	154	26.2	154	40.4	0.047
SRS 15N	16	32	60.8	25	25	M3x3.5	43.5	6.5	13.3	3	3	2.7	9.71	8.55	59.7	312	59.7	312	60.7	0.095

SRS-WM, WN:



Model SRS9W, 12W

Model SRS15W

Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS								BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg	
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x l	L ₁	T	K	N	GREASING HOLE d	H ₃	C kN	CO kN	MA		MB			MC
															1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK		1 BLOCK
SRS 9WM	12	30	39	21	12	M3x2.8	27	4.9	9.1	2.3	1.6	2.9	3.29	3.34	14.0	78.6	16.2	91.0	31.5	0.031
SRS 9WN	12	30	50.7	23	24	M3x2.8	38.7	4.9	9.1	2.3	1.6	2.9	4.20	4.37	25.1	130	29.1	151	41.3	0.049
SRS 12WM	14	40	44.5	28	15	M3x3.5	30.9	5.7	11	3	2	3	5.48	5.3	26.4	143	26.4	143	66.5	0.055
SRS 12WN	14	40	59.5	28	28	M3x3.5	45.9	5.7	11	3	2	3	7.13	7.07	49.2	249	49.2	249	88.7	0.091
SRS 15WM	16	60	55.5	45	20	M4x4.5	38.9	6.5	13.3	3	3	2.7	9.12	8.55	51.2	290	51.2	290	176	0.13
SRS 15WN	16	60	74.5	45	35	M4x4.5	57.9	6.5	13.3	3	3	2.7	12.4	12.1	106	532	106	532	250	0.201

Static Permissible Moment: Double Blocks - value with 2 blocks in close contact with each other.
Lubrication: ABF Grease is contained.

SRS-M LM RAIL:



Unit = mm

MODEL NO.	LM RAIL DIMENSIONS					MASS kg/m
	Width W1 0 -0.05	W2	HEIGHT M1	PITCH F	d1xd2xh	
SRS 9X	9	5.5	5.5	20	3.5x6x3.3	0.36
SRS 12	12	7.5	7.5	25	3.5x6x4.5	0.65
SRS 15	15	8.5	9.5	40	3.5x6x4.5	0.96

SRS-W LM RAIL:

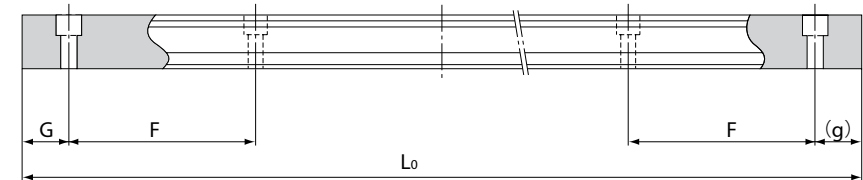


Unit = mm

MODEL NO.	LM RAIL DIMENSIONS					MASS kg/m	
	Width W1 0 -0.05	W2	W3	HEIGHT M1	PITCH F		d1xd2xh
SRS 9W	18	6	—	7.5	30	3.5x6x4.5	1.01
SRS 12W	24	8	—	8.5	40	4.5x8x4.5	1.52
SRS 15W	42	9	23	9.5	40	4.5x8x4.5	2.87

SRS/SRS-G Blocks use the same rail.

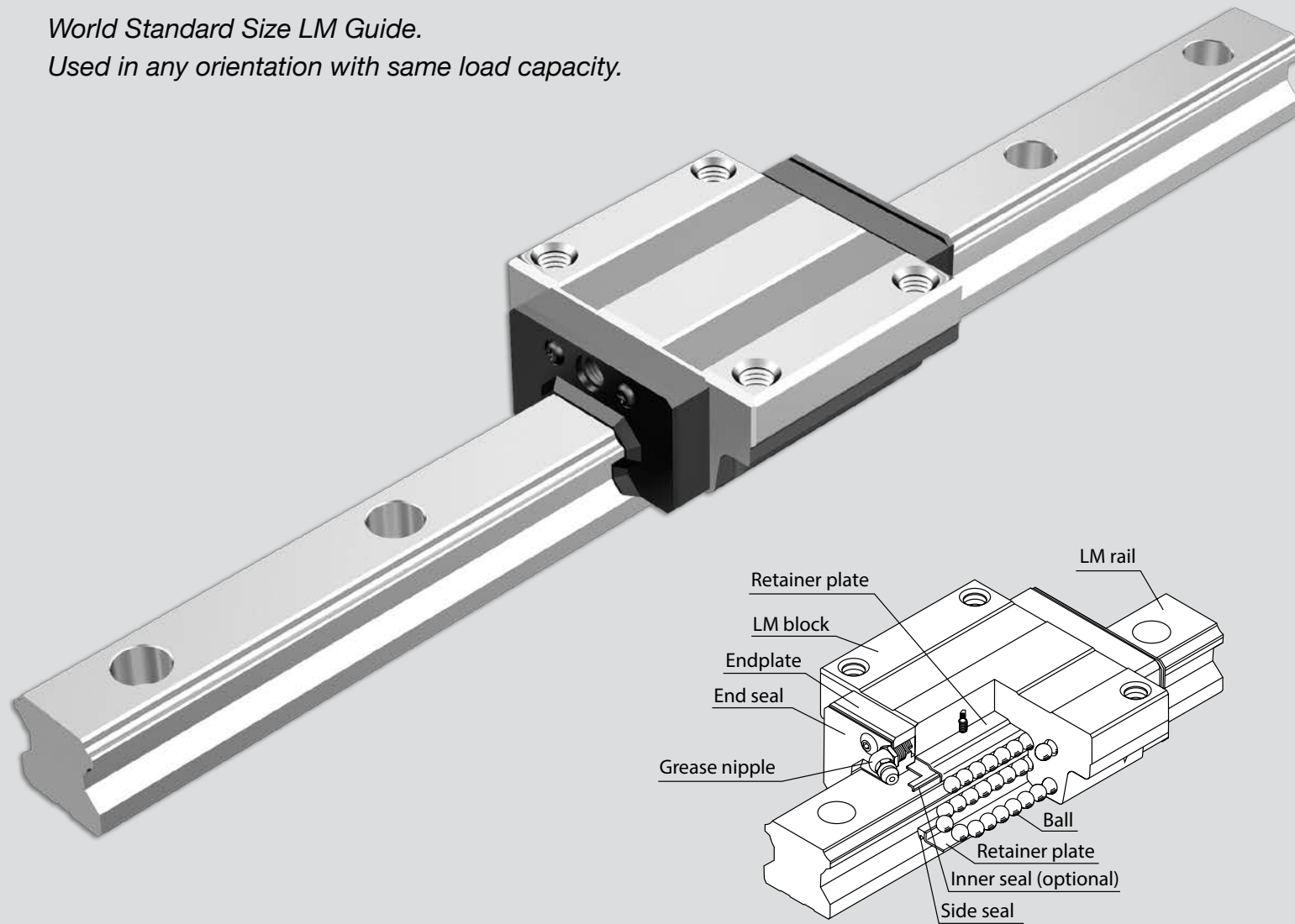
STANDARD / MAXIMUM LENGTH OF LM RAIL:



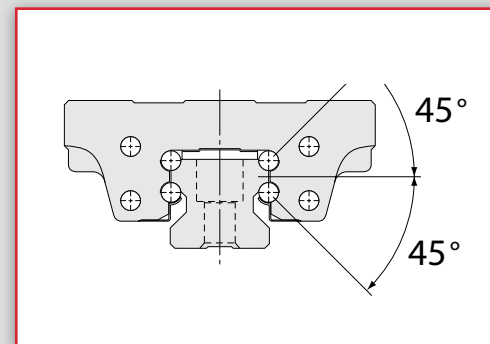
MODEL NO.	SRS 9X	SRS 9W	SRS 12	SRS 12W	SRS 15	SRS 15W
LM RAIL STANDARD LENGTH (L ₀)	55	50	70	70	70	110
	75	80	95	110	110	150
	95	110	120	150	150	190
	115	140	145	190	190	230
	135	170	170	230	230	270
	155	200	195	270	270	310
	175	260	220	310	310	430
	195	290	245	390	350	550
	275	320	270	470	390	670
	375		320	550	430	790
			370		470	
			470		550	
			570		670	
					870	
STANDARD PITCH F	20	30	25	40	40	40
G	7.5	10	10	15	15	15
STANDARD MAX LENGTH	1000	1000	1000	1000	1000	1000

Lengths in **Red** are standard U.S. stock items.
Other lengths are to be cut from longer stock rails or to be manufactured.
Contact THK for custom max length.
Precautions on using Linear Motion Guide - Please refer to general catalog.

World Standard Size LM Guide.
Used in any orientation with same load capacity.



[Cross Section]



Structure:

Balls roll in four rows of raceways precision-ground on an LM rail and an LM block, and endplates incorporated in the LM block allow the balls to circulate to realize infinite motion.

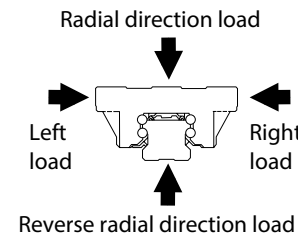
Since retainer plates hold the balls, they do not fall out even if the LM block is pulled out from the LM rail (except models HSR 8, 10 and 12). (Ball may fall out depending on handling. Use dummy rail when removing the LM block.)

Features:

1. 4-Way Equal Load:

Each row of balls is placed at a contact angle of 45° so that the rated loads applied to the LM block are uniform in the four directions (radial, reverse radial and lateral directions).

Therefore it can be used in any direction and used for a wide range of applications.

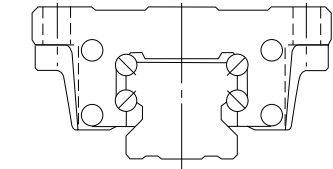


3. High Rigidity:

Since balls are arranged in four rows in a well-balanced manner, a large preload can be applied and the rigidity in four directions can easily be increased.

2. Self-Aligning Capability:

The self-aligning capability through face-to-face configuration of THK's unique circular-arc grooves (DF Structure) enables a mounting error to be absorbed even under a preload, thus to achieve highly accurate, smooth straight motion.



LM Guide (DF structure) of four-row circular-arc groove, two-point contact structure.

4. High Durability:

Even under a preload or excessive eccentric load, differential slip of balls does not occur. As a result, smooth motion, high wear resistance and long-term maintenance of accuracy are achieved.

[Rated Loads of Model HSR in All Directions]

DIRECTION	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING
RADIAL DIRECTION	C	C ₀
REVERSE RADIAL DIRECTION	C _L =C	C _{0L} =C ₀
LATERAL DIRECTION	C _T =C	C _{0T} =C ₀

[Equivalent Factor of Model HSR]

PE	X	Y
EQUIVALENT IN RADIAL DIRECTION	1.000	1.000
EQUIVALENT IN REVERSE RADIAL DIRECTION	1.000	1.000

MODEL AND TYPES OF LM BLOCK:

The applicable model and LM block types are as follows.

MODEL	TYPE	FEATURES
HSR-A	Standard Type	<ul style="list-style-type: none"> The flange of its LM block has tapped holes. This is suitable for design compact in the height direction.
HSR-LA	Long Type	<ul style="list-style-type: none"> The LM block has the same cross-sectional shape as model HSR-A, but has a longer overall LM block length and a greater rated load.
HSR-B	Standard Type	<ul style="list-style-type: none"> The flange of its LM block has a through hole. Tap machining is required to mount the LM block to the table.
HSR-LB	Long Type	<ul style="list-style-type: none"> The LM block has the same cross-sectional shape as model HSR-B, but has a longer overall LM block length and a greater rated load.
HSR-R	Standard Type	<ul style="list-style-type: none"> With this type, the LM block has a smaller width and tapped holes. This is suitable for design compact with width direction.
HSR-LR	Long Type	<ul style="list-style-type: none"> The LM block has the same cross-sectional shape as model HSR-R, but has a longer overall LM block length and a greater rated load.
HSR-YR	Standard Type	<ul style="list-style-type: none"> This type has tapped holes on the side of the LM block.

• = Interchangeable Series Available

MODEL	SIZE							
	15	20	25	30	35	45	55	65
HSR-A	•	•	•	•	•	•	•	•
HSR-LA	-	•	•	•	•	•	•	•
HSR-B	•	•	•	•	•	•	•	•
HSR-LB	-	•	•	•	•	•	•	•
HSR-R	•	•	•	•	•	•	•	•
HSR-LR	-	•	•	•	•	•	•	•
HSR-YR	•	•	•	•	•	•	•	•

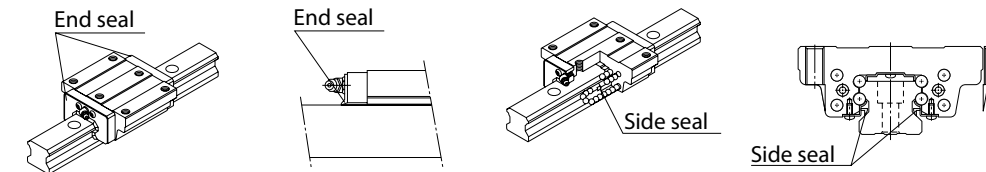
MODEL NUMBER CODING:

BLOCK

: Choose Quick-Ship Option
 : Standard/Only Quick Ship Option

Step 1		Step 2		Step 3		
MODEL NUMBER	BLOCK TYPE	BLOCK QUANTITY	SEAL TYPE	RADIAL CLEARANCE	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
HSR25	LA	1	SS	C1	(GK)	HSR25LA1SSC1 (GK) BLOCK
		Standard for interchangeable blocks = 1	Standard for HSR*: Contamination Protection Seal "SS"	Normal Clearance = No Symbol; Light Preload = C1		

*SS = End Seal + Side Seal



Please contact THK for other seal options.

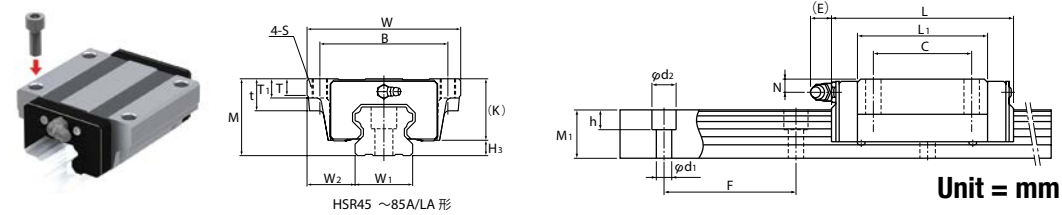
RAIL

Step 1		Step 2		SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
MODEL NUMBER		OVERALL LENGTH (mm)*			
HSR25	-	1240L	(GK)	HSR25-1240L (GK) RAIL	
Add "L" to end of length					

* If you need a non-standard rail length, please let us know overall length with G/g dimensions. EX: HSR25-2340L(GK) RAIL (G=40/g=20).

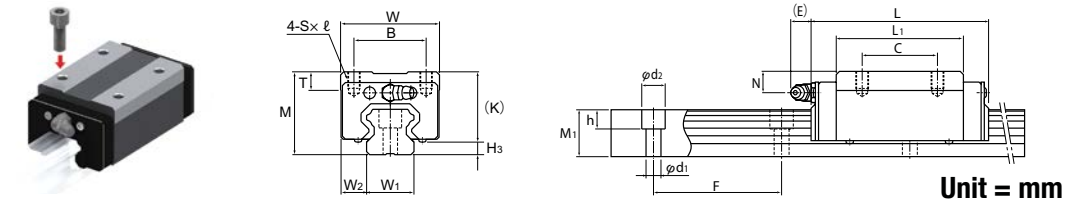
Note: If you need jointed rails (two or more rails butted end to end), please let us know overall length with drawing. Part number will have "T" after overall length. EX: HSR35-3560LT(GK) RAIL.

HSR-A, LA:



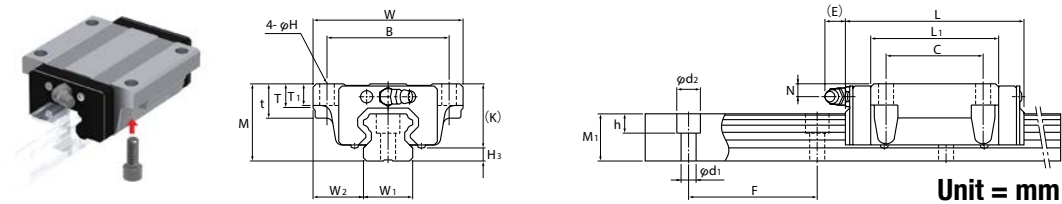
MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS										BASIC LOAD RATING			STATIC PERMISSIBLE MOMENT kN-M					MASS kg	
	HEIGHT M	WIDTH W	LENGTH L	B	C	S	L1	t	T	T1	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB			MC
																		1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK		1 BLOCK
HSR 15A	24	47	56.6	38	30	M5	38.8	—	7	11	19.3	4.3	5.5	PB1021B	4.7	10.9	15.7	0.0945	0.527	0.0945	0.527	0.0998	0.2
HSR 20A	30	63	74	53	40	M6	50.8	—	9.5	10	26	5	12	B-M6F	4	19.8	27.4	0.218	1.2	0.218	1.2	0.235	0.35
HSR 20LA	30	63	90	53	40	M6	66.8	—	9.5	10	26	5	12	B-M6F	4	23.9	35.8	0.363	1.87	0.363	1.87	0.307	0.47
HSR 25A	36	70	83.1	57	45	M8	59.5	—	11	16	30.5	6	12	B-M6F	5.5	27.6	36.4	0.324	1.8	0.324	1.8	0.366	0.59
HSR 25LA	36	70	102.2	57	45	M8	78.6	—	11	16	30.5	6	12	B-M6F	5.5	35.2	51.6	0.627	3.04	0.627	3.04	0.518	0.75
HSR 30A	42	90	98	72	52	M10	70.4	—	9	18	35	7	12	B-M6F	7	40.5	53.7	0.599	3.1	0.599	3.1	0.652	1.1
HSR 30LA	42	90	120.6	72	52	M10	93	—	9	18	35	7	12	B-M6F	7	48.9	70.2	0.995	4.89	0.995	4.89	0.852	1.3
HSR 35A	48	100	109.4	82	62	M10	80.4	—	12	21	40.5	8	12	B-M6F	7.5	53.9	70.2	0.895	4.51	0.895	4.51	1.05	1.6
HSR 35LA	48	100	134.8	82	62	M10	105.8	—	12	21	40.5	8	12	B-M6F	7.5	65	91.7	1.49	7.13	1.49	7.13	1.37	2
HSR 45A	60	120	139	100	80	M12	98	25	13	15	50	10	16	B-R1/8 (B-PT1/8)	10	82.2	101	1.5	8.37	1.5	8.37	1.94	2.8
HSR 45LA	60	120	170.8	100	80	M12	129.8	25	13	15	50	10	16	B-R1/8 (B-PT1/8)	10	100	135	2.59	13.4	2.59	13.4	2.6	3.3
HSR 55A	70	140	163	116	95	M14	118	29	13.5	17	57	11	16	B-R1/8 (B-PT1/8)	13	121	146	2.6	14.1	2.6	14.1	3.43	4.5
HSR 55LA	70	140	201.1	116	95	M14	156.1	29	13.5	17	57	11	16	B-R1/8 (B-PT1/8)	13	148	194	4.46	22.7	4.46	22.7	4.56	5.7
HSR 65A	90	170	186	142	110	M16	147	37	21.5	23	76	19	16	B-R1/8 (B-PT1/8)	14	195	228	5.08	25	5.08	25	6.2	8.5
HSR 65LA	90	170	245.5	142	110	M16	206.5	37	21.5	23	76	19	16	B-R1/8 (B-PT1/8)	14	249	323	9.81	45.6	9.81	45.6	8.79	10.7

HSR-R, LR:



MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS										BASIC LOAD RATING			STATIC PERMISSIBLE MOMENT kN-M					MASS kg
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x l	L1	T	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB		MC		
																1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK	1 BLOCK		
HSR 15R	28	34	56.6	26	26	M4x5	38.8	6	23.3	8.3	5.5	PB1021B	4.7	10.9	15.7	0.0945	0.527	0.0945	0.527	0.0998	0.18	
HSR 20R	30	44	74	32	36	M5x6	50.8	8	26	5	12	B-M6F	4	19.8	27.4	0.218	1.2	0.218	1.2	0.235	0.25	
HSR 20LR	30	44	90	32	36	M5x6	66.8	8	26	5	12	B-M6F	4	23.9	35.8	0.363	1.87	0.363	1.87	0.307	0.35	
HSR 25R	40	48	83.1	35	35	M6x8	59.5	9	34.5	10	12	B-M6F	5.5	27.6	36.4	0.324	1.8	0.324	1.8	0.366	0.54	
HSR 25LR	40	48	102.2	35	35	M6x8	78.6	9	34.5	10	12	B-M6F	5.5	35.2	51.6	0.627	3.04	0.627	3.04	0.518	0.67	
HSR 30R	45	60	98	40	40	M8x10	70.4	9	38	10	12	B-M6F	7	40.5	53.7	0.599	3.1	0.599	3.1	0.652	0.9	
HSR 30LR	45	60	120.6	40	40	M8x10	93	9	38	10	12	B-M6F	7	48.9	70.2	0.995	4.89	0.995	4.89	0.852	1.1	
HSR 35R	55	70	109.4	50	50	M8x12	80.4	11.7	47.5	15	12	B-M6F	7.5	53.9	70.2	0.895	4.51	0.895	4.51	1.05	1.5	
HSR 35LR	55	70	134.8	50	50	M8x12	105.8	11.7	47.5	15	12	B-M6F	7.5	65	91.7	1.49	7.13	1.49	7.13	1.37	2	
HSR 45R	70	86	139	60	60	M10x17	98	15	60	20	16	B-R1/8 (B-PT1/8)	10	82.2	101	1.5	8.37	1.5	8.37	1.94	2.6	
HSR 45LR	70	86	170.8	60	60	M10x17	129.8	15	60	20	16	B-R1/8 (B-PT1/8)	10	100	135	2.59	13.4	2.59	13.4	2.6	3.1	
HSR 55R	80	100	163	75	75	M12x18	118	20.5	67	21	16	B-R1/8 (B-PT1/8)	13	121	146	2.6	14.1	2.6	14.1	3.43	4.3	
HSR 55LR	80	100	201.1	75	75	M12x18	156.1	20.5	67	21	16	B-R1/8 (B-PT1/8)	13	148	194	4.46	22.7	4.46	22.7	4.56	5.4	
HSR 65R	90	126	186	70	70	M16x20	147	23	76	19	16	B-R1/8 (B-PT1/8)	14	195	228	5.08	25	5.08	25	6.2	7.3	
HSR 65LR	90	126	245.5	70	70	M16x20	206.5	23	76	19	16	B-R1/8 (B-PT1/8)	14	249	323	9.81	45.6	9.81	45.6	8.79	9.3	

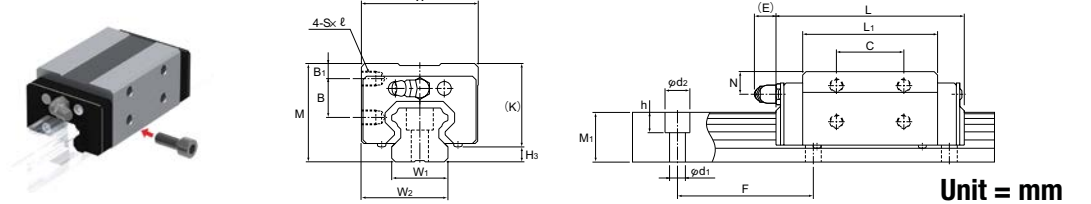
HSR-B, LB:



MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS										BASIC LOAD RATING			STATIC PERMISSIBLE MOMENT kN-M					MASS kg	
	HEIGHT M	WIDTH W	LENGTH L	B	C	H	L1	t	T	T1	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB			MC
																		1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK		1 BLOCK
HSR 15B	24	47	56.6	38	30	4.5	38.8	11	7	7	19.3	4.3	5.5	PB1021B	4.7	10.9	15.7	0.0945	0.527	0.0945	0.527	0.0998	0.2
HSR 20B	30	63	74	53	40	6	50.8	10	9.5	10	26	5	12	B-M6F	4	19.8	27.4	0.218	1.2	0.218	1.2	0.235	0.35
HSR 20LB	30	63	90	53	40	6	66.8	10	9.5	10	26	5	12	B-M6F	4	23.9	35.8	0.363	1.87	0.363	1.87	0.307	0.47
HSR 25B	36	70	83.1	57	45	7	59.5	16	11	10	30.5	6	12	B-M6F	5.5	27.6	36.4	0.324	1.8	0.324	1.8	0.366	0.59
HSR 25LB	36	70	102.2	57	45	7	78.6	16	11	10	30.5	6	12	B-M6F	5.5	35.2	51.6	0.627	3.0	0.627	3.04	0.518	0.75
HSR 30B	42	90	98	72	52	9	70.4	18	9	10	35	7	12	B-M6F	7	40.5	53.7	0.599	3.1	0.599	3.1	0.652	1.1
HSR 30LB	42	90	120.6	72	52	9	93	18	9	10	35	7	12	B-M6F	7	48.9	70.2	0.995	4.89	0.995	4.89	0.852	1.3
HSR 35B	48	100	109.4	82	62	9	80.4	21	12	13	40.5	8	12	B-M6F	7.5	53.9	70.2	0.895	4.51	0.895	4.51	1.05	1.6
HSR 35LB	48	100	134.8	82	62	9	105.8	21	12	13	40.5	8	12	B-M6F	7.5	65	91.7	1.49	7.13	1.49	7.13	1.37	2
HSR 45B	60	120	139	100	80	11	98	25	13	15	50	10	16	B-R1/8 (B-PT1/8)	10	82.2	101	1.5	8.37	1.5	8.37	1.94	2.8
HSR 45LB	60	120	170.8	100	80	11	129.8	25	13	15	50	10	16	B-R1/8 (B-PT1/8)	10	100	135	2.59	13.4	2.59	13.4	2.6	3.3
HSR 55B	70	140	163	116	95	14	118	29	13.5	17	57	11	16	B-R1/8 (B-PT1/8)	13	121	146	2.6	14.1	2.6	14.1	3.43	4.5
HSR 55LB	70	140	201.1	116	95	14	156.1	29	13.5	17	57	11	16	B-R1/8 (B-PT1/8)	13	148	194	4.46	22.7	4.46	22.7	4.56	5.7
HSR 65B	90	170	186	142	110	16	147	37	21.5	23	76	19	16	B-R1/8 (B-PT1/8)	14	195	228	5.08	25	5.08	25	6.2	8.5
HSR 65LB	90	170	245.5	142	110	16	206.5	37	21.5	23	76	19	16	B-R1/8 (B-PT1/8)	14	249	323	9.81	45.6	9.81	45.6	8.79	10.7

Static Permissible Moment: Double Blocks - value with 2 blocks in close contact with each other.
Lubrication: Lithium soap base grease No. 2 (THK AFB-LF grease) is contained.

HSR-YR:



MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS										BASIC LOAD RATING			STATIC PERMISSIBLE MOMENT kN-M					MASS kg
	HEIGHT M	WIDTH W	LENGTH L	B1	B	C	S x l	L1	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB		MC		
																1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK	1 BLOCK		
HSR 15YR	28	33.5	56.6	4.3	11.5	18	M4x5	38.8	23.3	8.3	5.5	PB1021B	4.7	10.9	15.7	0.0945	0.527	0.0945	0.527	0.0998	0.18	
HSR 20YR	30	43.5	74	4	11.5	25	M5x6	50.8	26	5	12	B-M6F	4	19.8	27.4	0.218	1.2	0.218	1.2	0.235	0.25	
HSR 25YR	40	47.5	83.1	6	16	30	M6x6	59.5	34.5	10	12	B-M6F	5.5	27.6	36.4	0.324	1.8	0.324	1.8	0.366	0.54	
HSR 30YR	45	59.5	98	8	16	40	M6x9	70.4	38	10	12	B-M6F	7	40.5	53.7	0.599	3.1	0.599	3.1	0.652	0.9	
HSR 35YR	55	69.5	109.4	8	23	43	M8x10	80.4	47.5	15	12	B-M6F	7.5	53.9	70.2	0.895	4.51	0.895	4.51	1.05	1.5	
HSR 45YR	70	85.5	139	10	30	55	M10x14	98	60	20	16	B-PT1/8	10	82.2	101	1.5	8.37	1.5	8.37	1.94	2.6	

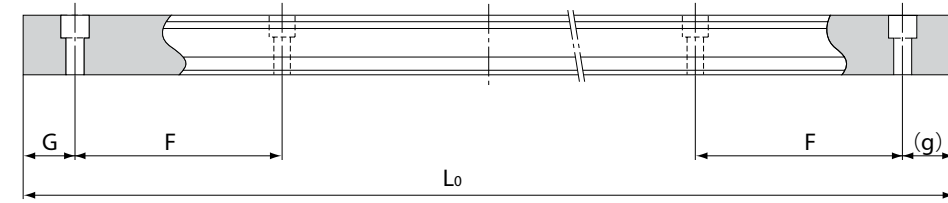
HSR LM RAIL:



Unit = mm

MODEL NO.	LM RAIL DIMENSIONS					MASS kg/m
	Width W1 ±0.05	W2	HEIGHT M1	PITCH F	d1×d2×h	
HSR 15	15	16	15	60	4.5×7.5×5.3	1.5
HSR 20	20	21.5	18	60	6×9.5×8.5	2.3
HSR 25	23	23.5	22	60	7×11×9	3.3
HSR 30	28	31	26	80	9×14×12	4.8
HSR 35	34	33	29	80	9×14×12	6.6
HSR 45	45	37.5	38	105	14×20×17	11
HSR 55	53	43.5	44	120	16×23×20	15.1
HSR 65	63	53.5	53	150	18×26×22	22.5

STANDARD / MAXIMUM LENGTH OF LM RAIL:



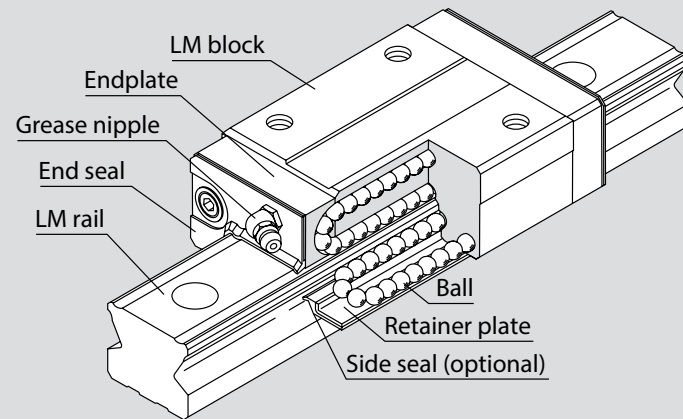
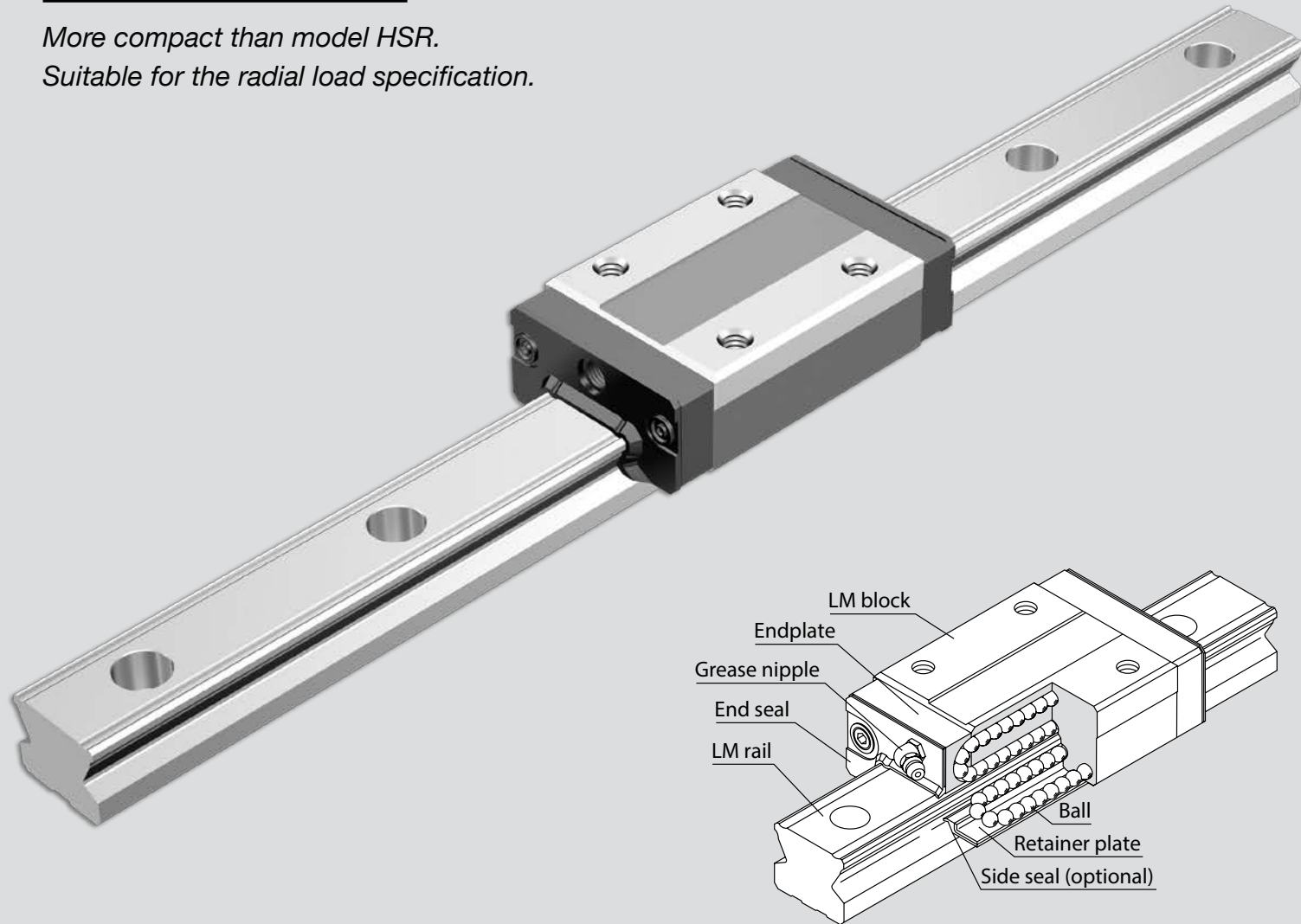
MODEL NO.	HSR 15	HSR 20	HSR 25	HSR 30	HSR 35	HSR 45	HSR 55	HSR 65
LM RAIL STANDARD LENGTH (L ₀)	160	160	220	280	280	570	780	1270
	220	220	280	360	360	675	900	1570
	280	280	340	440	440	780	1020	2020
	340	340	400	520	520	885	1140	2620
	400	400	460	600	600	990	1260	
	460	460	520	680	680	1095	1380	
	520	520	580	760	760	1200	1500	
	580	580	640	840	840	1305	1620	
	640	640	700	920	920	1410	1740	
	700	700	760	1000	1000	1515	1860	
	760	760	820	1080	1080	1620	1980	
	820	820	940	1160	1160	1725	2100	
	940	940	1000	1240	1240	1830	2220	
	1000	1000	1060	1320	1320	1935	2340	
	1060	1060	1120	1400	1400	2040	2460	
	1120	1120	1180	1480	1480	2145	2580	
	1180	1180	1240	1560	1560	2250	2700	
	1240	1240	1300	1640	1640	2355	2820	
	1360	1360	1360	1720	1720	2460	2940	
	1480	1480	1420	1800	1800	2565	3060	
1600	1600	1480	1880	1880	2670			
		1720	1960	1960	2775			
		1840	2040	2040	2880			
		1960	2120	2120	2985			
		2080	2200	2200	3090			
		2200	2280	2280				
		2320	2360	2360				
		2440	2440	2440				
		2500	2500	2500				
STANDARD PITCH F	60	60	60	80	80	105	120	150
G/g	20	20	20	20	20	22.5	30	35
STANDARD MAX LENGTH		3000	3000	3000	3000	3090	3060	3000
CUSTOM ORDER MAX LENGTH	3000	5000	5000	★ 7000	★ 7000	★ 7000	★ 7000	★ 7000

Lengths in **Red** are standard U.S. stock items.
 Other lengths are to be cut from longer stock rails or to be manufactured.
 Precautions on using Linear Motion Guide - Please refer to general catalog.

★ **7m Single Rails Are Available in Stock!**



More compact than model HSR.
Suitable for the radial load specification.

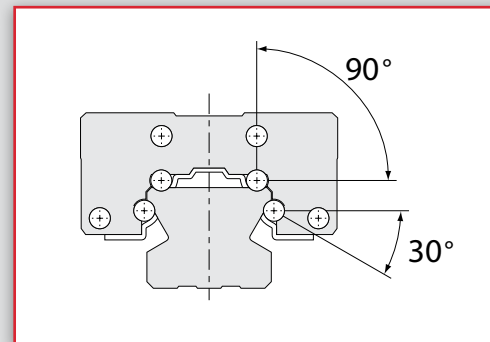


Structure:

Balls roll in four rows of raceways precision-ground on an LM rail and an LM block, and endplates incorporated in the LM block allows the balls to circulate to realize infinite motion. Since the balls are held, they do not fall off even if the LM block is pulled out from the LM rail. (Ball may fall depending on handling. Use dummy rail when removing LM block.)

It is a compact designed model that has a low sectional height and a ball contact structure rigid in the radial direction.

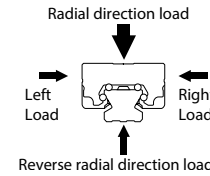
[Cross Section]



Features:

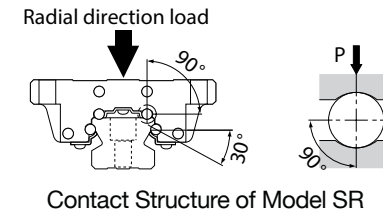
1. Compact & Efficient Design:

Since it is a compactly designed model that has a low sectional height and a ball contact structure in the radial direction, this model is suitable for horizontal guide units.



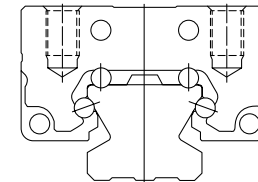
2. High Loading Capacity:

Model SR, whose angle of upper raceway has 90° contact structure, is suitable for the radial direction load. Compared with the LM Guide with 45° contact structure and the same ball diameter, this model can receive 1.4 or more larger radial direction load and its nominal life is twice or longer.



3. Self-Aligning Capability:

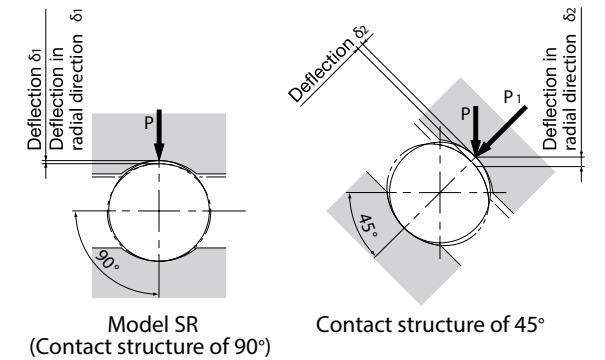
The self-aligning capability through face-to-face configuration of THK's unique circular-arc grooves (DF structure) enables a mounting error to be absorbed even under a preload, thus to achieve highly accurate, smooth straight motion.



LM Guide (DF Structure) of Four-Row circular-arc groove Two-point contact structure.

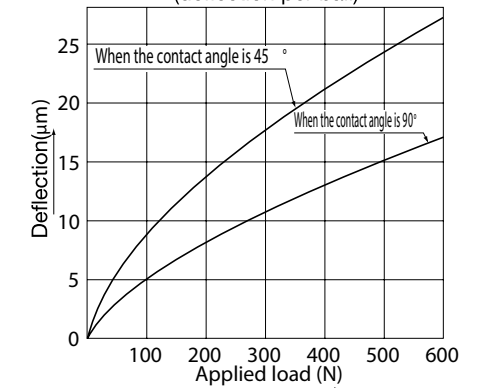
4. High Rigidity against Radial Direction Load:

Model SR, whose angle of upper raceway is 90° contact structure, has high rigidity against the radial direction load. If it receives the same radial load as that of the LM Guide with 45° contact structure and the same ball diameter, the radial direction displacement will be reduced to 56%. Model SR is suitable for cases that radial direction rigidity is required.



Deflection under a Radial Load

Load and Deflection when the contact angle are not the same (Da=6.35mm) (deflection per ball)



Radial Load and Deflection

[Rated Loads of Model SR in All Directions]

DIRECTION	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING
RADIAL DIRECTION	C	C ₀
REVERSE RADIAL DIRECTION	C _L =0.62C	C _{0L} =0.50C ₀
LATERAL DIRECTION	C _T =0.56C	C _{0T} =0.43C ₀

[Equivalent Factor of Model SR]

PE	X	Y
EQUIVALENT IN RADIAL DIRECTION	-	-
EQUIVALENT IN REVERSE RADIAL DIRECTION	1.000	1.155

MODEL AND TYPES OF LM BLOCK:

The applicable model and LM block types are as follows.

MODEL	TYPE	FEATURES
SR-W	Standard Type	<ul style="list-style-type: none"> With this type, the LM block has a smaller width and tapped holes on the top face of the block. This is suitable for design compact in the height and width directions.
SR-V	Short Type	<ul style="list-style-type: none"> With this type, the LM block has smaller width and tapped holes on the top face of the block. This is suitable for design compact in the height and width directions. A space-saving type whose LM block has the same cross-sectional shape as model SR-W, but has smaller overall LM block length.
SR-TB	Standard Type	<ul style="list-style-type: none"> Since the LM block can be mounted from the bottom, this type is suitable for applications where through holes for mounting bolts cannot be drilled on the table.
SR-SB	Short Type	<ul style="list-style-type: none"> Since the LM block can be mounted from the bottom, this type is suitable for applications where through holes for mounting bolts cannot be drilled on the table. A space-saving type whose LM block has the same cross-sectional shape as model SR-TB, but has a smaller overall LM block length.

• = Interchangeable Series Available

MODEL	SIZE						
	15	20	25	30	35	45	55
SR-W	•	•	•	•	•	•	•
SR-V	•	•	•	•	•	-	-
SR-TB	•	•	•	•	•	•	•
SR-SB	•	•	•	•	•	-	-

MODEL NUMBER CODING:

BLOCK

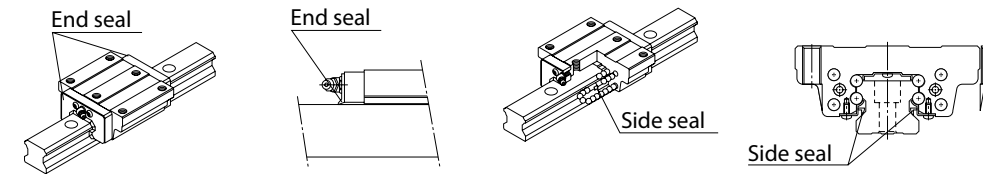
: Choose Quick-Ship Option
 : Standard/Only Quick Ship Option

MODEL NUMBER	BLOCK TYPE	BLOCK QUANTITY	SEAL TYPE	RADIAL CLEARANCE	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
SR20	V	1	SS	C1	(GK)	SR20V1SSC1 (GK) BLOCK

Step 1 | **Step 2** | **Step 3**

Standard for interchangeable blocks = 1
Standard for SR: Contamination Protection Seal "SS"*
Normal Clearance = No Symbol; Light Preload = C1

*SS = End Seal + Side Seal



Please contact THK for other seal options.

RAIL

MODEL NUMBER	OVERALL LENGTH (mm)*	RAIL CODE	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
SR25	1540L	Y	(GK)	SR25-1540LY(GK)RAIL

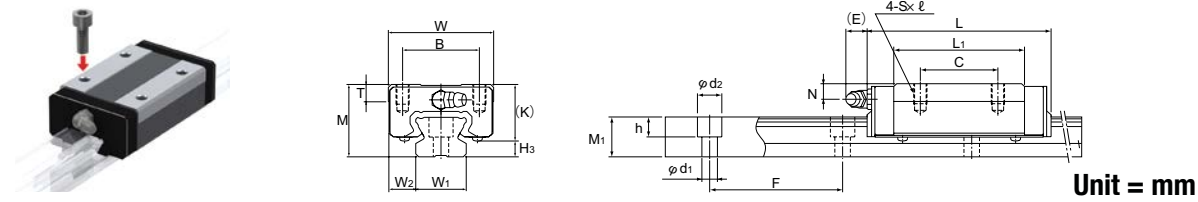
Step 1 | **Step 2** | **Step 3**

Add "L" to end of length
Size 15/20/30/35 = no symbol added
Size 25 = Y

* If you need a non-standard rail length, please let us know overall length with G/g dimensions. EX: SR30-500L(GK) RAIL (G=10/g=10).

Note: If you need jointed rails (two or more rails butted end to end), please let us know overall length with drawing. Part number will have "T" after overall length. EX: SR25-4120LYT (GK) RAIL.

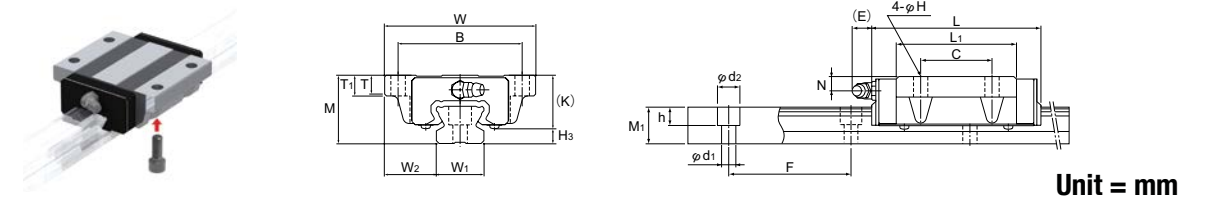
SR-W:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS									BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg	
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x l	L1	T	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB			MC
																1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK		1 BLOCK
SR 15W	24	34	57	26	26	M4x7	39.5	5.7	18.2	6	5.5	PB1021B	5.8	13.8	20.5	0.0984	0.551	0.0604	0.343	0.122	0.2
SR 20W	28	42	66.2	32	32	M5x8	46.7	7.2	22	6	12	B-M6F	6	19.2	28.6	0.167	0.887	0.102	0.55	0.224	0.3
SR 25W	33	48	83	35	35	M6x9	59	7.7	26	7	12	B-M6F	7	30.9	44.7	0.326	1.74	0.2	1.08	0.408	0.4
SR 30W	42	60	96.8	40	40	M8x12	69.3	8.5	32.5	8	12	B-M6F	9.5	45.6	64.4	0.564	2.92	0.346	1.8	0.703	0.8
SR 35W	48	70	111	50	50	M8x12	79	12.5	36.5	8.5	12	B-M6F	11.5	60.4	81.8	0.785	4.27	0.482	2.65	1.08	1.2
SR 45W	60	86	126	60	60	M10x15	90.5	15	47.5	11.5	16	B-R1/8 (B-PT1/8)	12.5	80.4	107	1.17	6.34	0.721	3.94	1.89	2.2
SR 55W	68	100	156	75	75	M12x20	117	16.7	54.5	12	16	B-R1/8 (B-PT1/8)	13.5	136	179	2.61	13	1.6	8.05	3.33	3.6

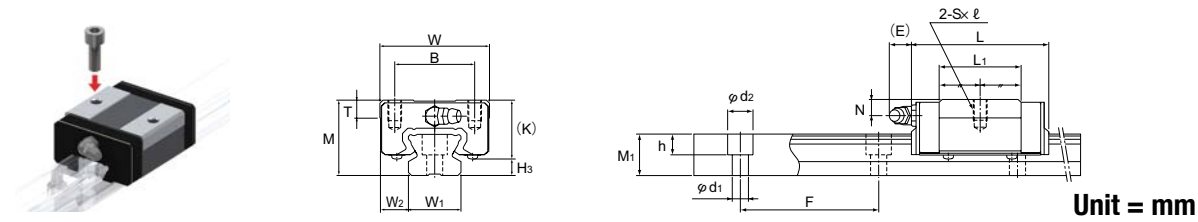
SR-TB:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS									BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg		
	HEIGHT M	WIDTH W	LENGTH L	B	C	H	L1	T	T1	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB		MC	
																	1 BLOCK	DOUBLE BLOCK	1 BLOCK		DOUBLE BLOCK	1 BLOCK
SR 15TB	24	52	57	41	26	4.5	39.5	6.1	7	18.2	6	5.5	PB1021B	5.8	13.8	20.5	0.0984	0.551	0.0604	0.343	0.122	0.2
SR 20TB	28	59	66.2	49	32	5.5	46.7	8	9	22	6	12	B-M6F	6	19.2	28.6	0.167	0.887	0.102	0.55	0.224	0.4
SR 25TB	33	73	83	60	35	7	59	9.1	10	26	7	12	B-M6F	7	30.9	44.7	0.326	1.74	0.2	1.08	0.408	0.6
SR 30TB	42	90	96.8	72	40	9	69.3	8.7	10	32.5	8	12	B-M6F	9.5	45.6	64.4	0.564	2.92	0.346	1.8	0.703	1.1
SR 35TB	48	100	111	82	50	9	79	11.2	13	36.5	8.5	12	B-M6F	11.5	60.4	81.8	0.785	4.27	0.482	2.65	1.08	1.5
SR 45TB	60	120	126	100	60	11	90.5	12.8	15	47.5	11.5	16	B-R1/8 (B-PT1/8)	12.5	80.4	107	1.17	6.34	0.721	3.94	1.89	2.5
SR 55TB	68	140	156	116	75	14	117	15.3	17	54.5	12	16	B-R1/8 (B-PT1/8)	13.5	136	179	2.61	13	1.6	8.05	3.33	4.2

SR-V:

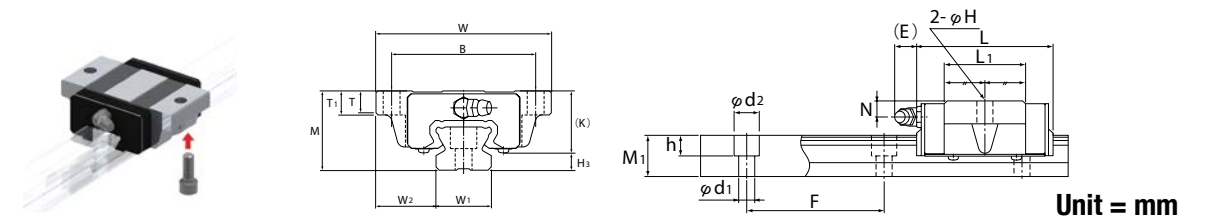


Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS									BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg
	HEIGHT M	WIDTH W	LENGTH L	B	S x l	L1	T	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB		MC	
															1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK	1 BLOCK	
SR 15V	24	34	40.4	26	M4x7	22.9	5.7	18.2	6	5.5	PB1021B	5.8	9.1	11.7	0.0344	0.234	0.0215	0.149	0.0694	0.12
SR 20V	28	42	47.3	32	M5x8	27.8	7.2	22	6	12	B-M6F	6	13.4	17.2	0.064	0.396	0.0397	0.25	0.135	0.2
SR 25V	33	48	59.2	35	M6x9	35.2	7.7	26	7	12	B-M6F	7	21.6	26.8	0.125	0.773	0.0774	0.488	0.245	0.3
SR 30V	42	60	67.9	40	M8x12	40.4	8.5	32.5	8	12	B-M6F	9.5	29.5	34.4	0.173	1.15	0.108	0.735	0.376	0.5
SR 35V	48	70	77.6	50	M8x12	45.7	12.5	36.5	8.5	12	B-M6F	11.5	40.9	46.7	0.275	1.79	0.171	1.14	0.615	0.8

Static Permissible Moment: Double Blocks - value with 2 blocks in close contact with each other.
Lubrication: Lithium soap base grease No. 2 (THK AFB-LF grease) is contained.

SR-SB:



Unit = mm

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS									BASIC LOAD RATING		STATIC PERMISSIBLE MOMENT kN-M					MASS kg	
	HEIGHT M	WIDTH W	LENGTH L	B	H	L1	T	T1	K	N	E	GREASE NIPPLE	H3	C kN	CO kN	MA		MB			MC
																1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK		1 BLOCK
SR 15SB	24	52	40.4	41	4.5	22.9	6.1	7	18.2	6	5.5	PB1021B	5.8	9.1	11.7	0.0344	0.234	0.0215	0.149	0.0694	0.15
SR 20SB	28	59	47.3	49	5.5	27.8	8	9	22	6	12	B-M6F	6	13.4	17.2	0.064	0.396	0.0397	0.25	0.135	0.3
SR 25SB	33	73	59.2	60	7	35.2	9.1	10	26	7	12	B-M6F	7	21.6	26.8	0.125	0.773	0.0774	0.488	0.245	0.4
SR 30SB	42	90	67.9	72	9	40.4	8.7	10	32.5	8	12	B-M6F	9.5	29.5	34.4	0.173	1.15	0.108	0.735	0.376	0.8
SR 35SB	48	100	77.6	82	9	45.7	11.2	13	36.5	8.5	12	B-M6F	11.5	40.9	46.7	0.275	1.79	0.171	1.14	0.615	1

Static Permissible Moment: Double Blocks - value with 2 blocks in close contact with each other.
Lubrication: Lithium soap base grease No. 2 (THK AFB-LF grease) is contained.

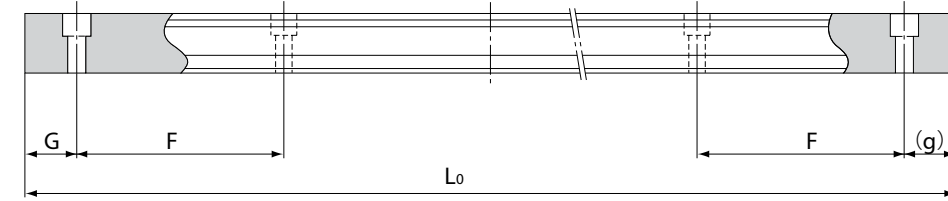
SR LM RAIL:



Unit = mm

MODEL NO.	LM RAIL DIMENSIONS					MASS kg/m
	Width W1 ±0.05	W2	HEIGHT M1	PITCH F	d1×d2×h	
SR 15	15	9.5	12.5	60	3.5×6×4.5	1.2
SR 20	20	11	15.5	60	6×9.5×8.5	2.1
SR 25Y	23	12.5	18	60	7×11×9	2.7
SR 30	28	16	23	80	7×11×9	4.3
SR 35	34	18	27.5	80	9×14×12	6.4
SR 45	45	20.5	35.5	105	11×17.5×14	11.3
SR 55	48	26	38	120	14×20×17	12.8

STANDARD / MAXIMUM LENGTH OF LM RAIL:



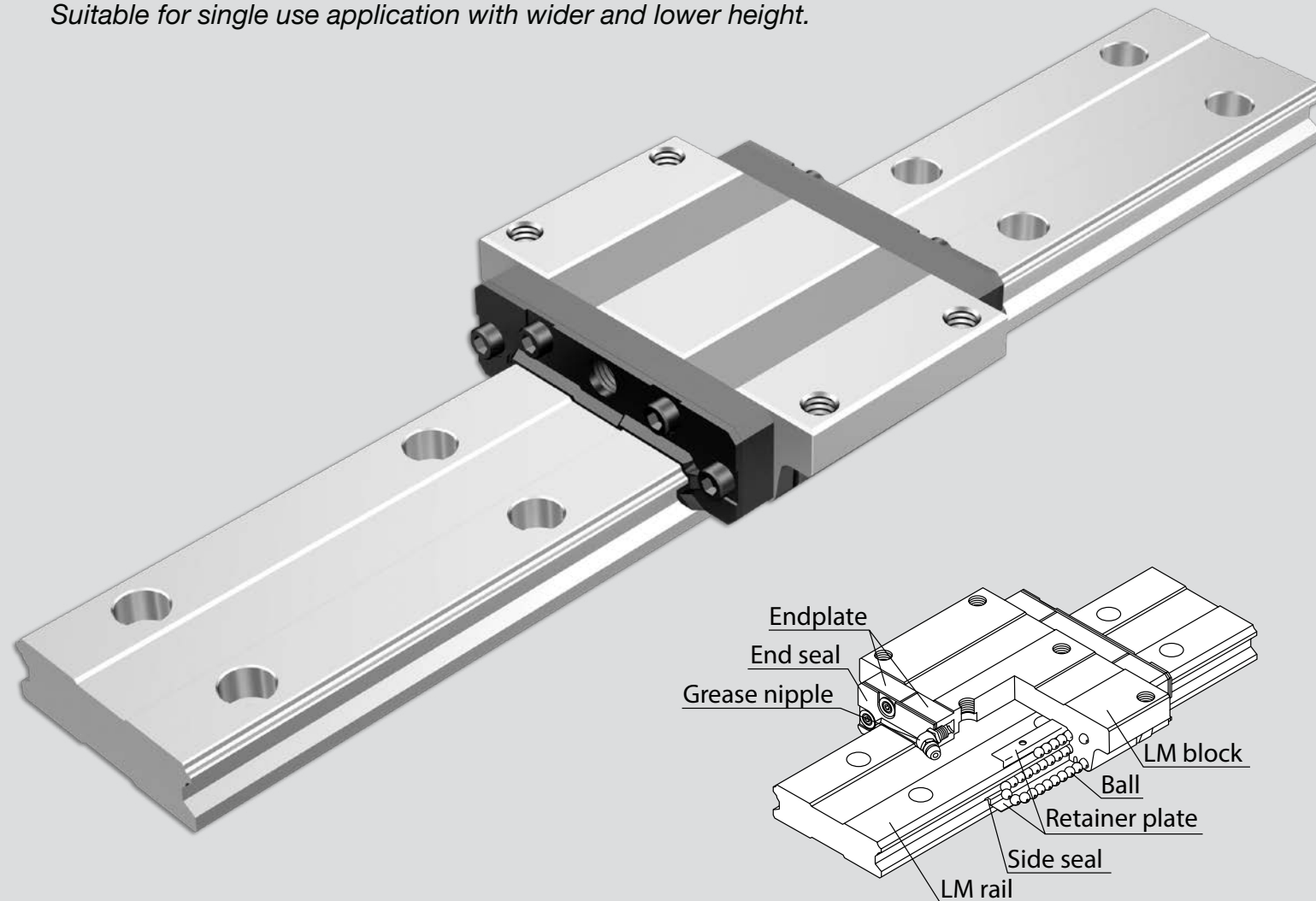
MODEL NO.	SR 15	SR 20	SR 25	SR 30	SR 35	SR 45	SR 55
LM RAIL STANDARD LENGTH (L ₀)	160	220	220	280	280	570	780
	220	280	280	360	360	675	900
	280	340	340	440	440	780	1020
	340	400	400	520	520	885	1140
	400	460	460	600	600	990	1260
	460	520	520	680	680	1095	1380
	520	580	580	760	760	1200	1500
	580	640	640	840	840	1305	1740
	640	700	700	920	920	1410	1860
	700	760	760	1000	1000	1515	1980
	760	820	820	1080	1080	1620	2100
	820	940	940	1160	1160	1725	2220
	940	1000	1000	1240	1240	1830	2340
	1000	1060	1060	1320	1320	1935	2460
	1060	1120	1120	1400	1400	2040	2580
	1120	1180	1240	1480	1480	2145	2700
	1180	1240	1300	1560	1640	2250	2820
	1240	1300	1360	1640	1720	2355	2940
	1300	1360	1420	1720	1800	2460	
	1360	1420	1480	1800	1880	2565	
	1420	1480	1540	1880	1960	2670	
	1480	1540	1600	1960	1960	2775	
	1540	1600	1660	2040	2120	2880	
	1600	1660	1720	2120	2200	2985	
		1720	1780	2200	2280		
		1780	1840	2280	2360		
		1840	1900	2360	2440		
	1900	1960	2440	2520			
	1960	2020	2520	2600			
	2020	2080	2600	2680			
	2080	2140	2680	2760			
	2140	2200	2760	2840			
	2200	2260	2840	2920			
	2260	2320	2920				
	2320	2380					
	2380	2440					
	2440	2500					
STANDARD PITCH F	60	60	60	80	80	105	120
G/g	20	20	20	20	20	22.5	30
STANDARD MAX LENGTH	3000	3000	3000	3000	3000	3000	3000
CUSTOM ORDER MAX LENGTH	3000	7000	★ 7000	★ 7000	★ 7000	7000	7000

Lengths in **Red** are standard U.S. stock items.
 Other lengths are to be cut from longer stock rails or to be manufactured.
 Precautions on using Linear Motion Guide - Please refer to general catalog.

★ **7m Single Rails Are Available in Stock!**



Suitable for single use application with wider and lower height.

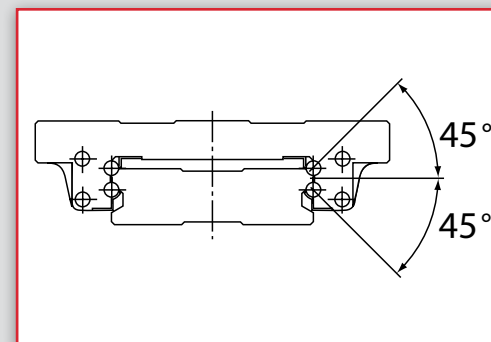


Structure:

Balls roll in 4 rows of raceways precision-ground on an LM rail and an LM block, and endplates incorporated in the LM block allow the balls to circulate to realize infinite motion.

Since the balls are held, they do not fall off even if the LM block is pulled from the LM rail. (Ball may fall depending on the handling. Use dummy rail when removing the LM block.)

[Cross Section - Models HRW17 to 50]

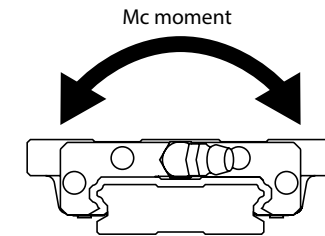


Features:

1. Wide and Low:

The LM rail is wide and the distance between the right and left raceways is long, so high for the Mc moment rigidity.

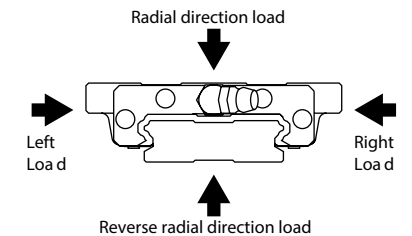
This is suitable for places where space saving is required thanks to the low center of gravity. This is a high-rigidity guide suitable for usage in single-axis applications.



2. 4-Way Equal Load:

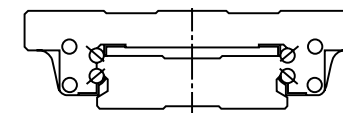
Each row of balls is placed at a contact angle of 45° so that the rated loads applied to the LM block are uniform in the four directions (radial, reverse radial and lateral directions).

Therefore, it can be used in any direction and used for a wide range of applications.



3. Self-Aligning Capability:

The self-aligning structure through face-to-face configuration of THK's unique circular-arc grooves (DF structure) enables a mounting error to be absorbed even under a preload, thus to achieve high accurate, smooth straight motion.



LM Guide (DF structure) of Four-row circular-arc groove two-point contact structure

[Rated Loads of Model HRW in All Directions]


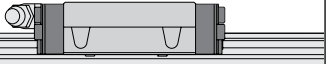

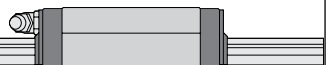
DIRECTION	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING
RADIAL DIRECTION	C	C ₀
REVERSE RADIAL DIRECTION	C _L =C	C _{0L} =C ₀
LATERAL DIRECTION	C _T =C	C _{0T} =C ₀

[Equivalent Factor of Model HRW]

PE	X	Y
EQUIVALENT IN RADIAL DIRECTION	1.000	1.000
EQUIVALENT IN REVERSE RADIAL DIRECTION	1.000	1.000

MODEL AND TYPES OF LM BLOCK:

The applicable model and LM block types are as follows.

MODEL	TYPE	FEATURES
 HRW-CA	 Standard Type	<ul style="list-style-type: none"> The flange of its LM block has tapped holes. The LM blocks can be mounted from the top and the bottom.
 HRW-CR	 Standard Type	<ul style="list-style-type: none"> With this type, the LM block has a smaller width and tapped holes.

• = Interchangeable Series Available

MODEL	SIZE				
	17	21	27	35	50
HRW-CA	•	•	•	•	•
HRW-CR	•	•	•	•	•

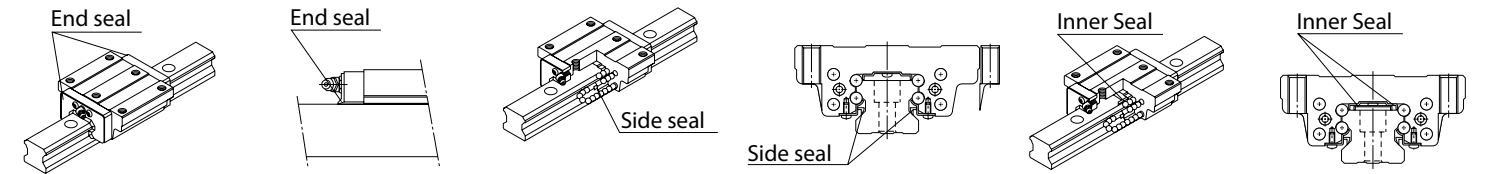
MODEL NUMBER CODING:

BLOCK

: Choose Quick-Ship Option
 : Standard/Only Quick Ship Option

Step 1		Step 2		Step 3		Step 4	
MODEL NUMBER	BLOCK TYPE	BLOCK QUANTITY	SEAL TYPE	RADIAL CLEARANCE	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER	
HRW17	CA	1	UU	C1	(GK)	HRW17CA1UUC1 (GK) BLOCK	
		<i>Standard for interchangeable blocks = 1</i>	<i>UU = Standard for HRW17/21 SS = Standard for HRW27/35/50*</i>	<i>Normal Clearance = No Symbol; Light Preload = C1</i>			

*UU = End Seal; SS = End Seal + Side Seal (not available for size 17/21)



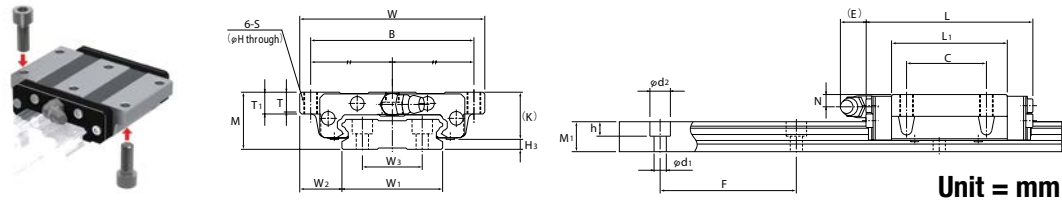
Please contact THK for other seal options.

RAIL

Step 1		Step 2			
MODEL NUMBER	OVERALL LENGTH (mm)*	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER		
HRW35	- 640L	(GK)	HRW35-640L (GK) RAIL		
<i>Add "L" to end of length</i>					

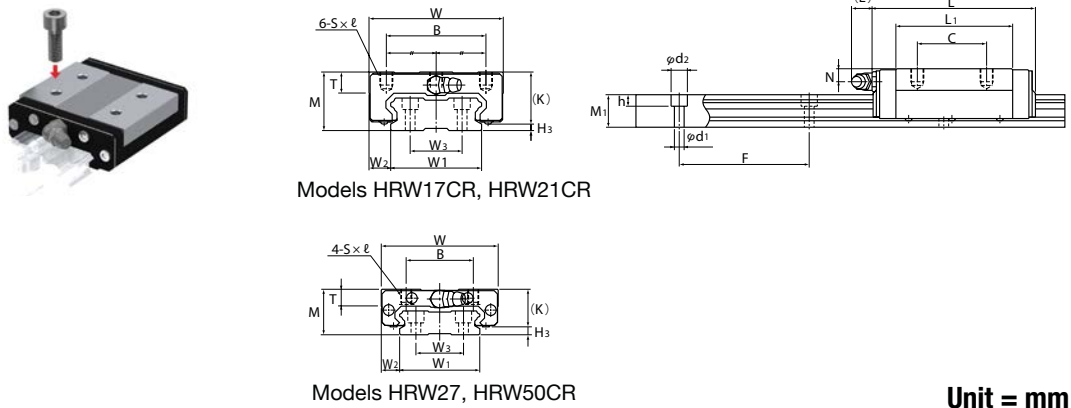
* If you need a non-standard rail length, please let us know overall length with G/g dimensions. EX: HRW21-330L(GK) RAIL (G=20/g=10).
 Note: If you need jointed rails (two or more rails butted end to end), please let us know overall length with drawing. Part number will have "T" after overall length. EX: HRW35-3600LT (GK) RAIL.

HRW-CA:



MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS											BASIC LOAD RATING			STATIC PERMISSIBLE MOMENT kN-M					MASS kg
	HEIGHT M	WIDTH W	LENGTH L	B	C	H	S	L ₁	T	T ₁	K	N	E	GREASE NIPPLE	H ₃	C kN	CO kN	MA		MB		MC	
																		1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK	1 BLOCK	
HRW 17CA	17	60	50.8	53	26	3.3	M4	33.6	5.5	6	14.5	4	2	PB107	2.5	5.53	9.1	0.0464	0.272	0.0464	0.272	0.144	0.15
HRW 21CA	21	68	58.8	60	29	4.4	M5	40	7.3	8	18	4.5	12	B-M6F	3	8.02	12.9	0.0784	0.445	0.0784	0.445	0.219	0.25
HRW 27CA	27	80	72.8	70	40	5.3	M6	51.8	9.5	10	24	6	12	B-M6F	3	14.2	21.6	0.166	0.923	0.166	0.923	0.423	0.5
HRW 35CA	35	120	106.6	107	60	6.8	M8	77.6	13	14	31	8	12	B-M6F	4	33.8	48.6	0.559	3.03	0.559	3.03	1.59	1.4
HRW 50CA	50	162	140.5	144	80	8.6	M10	103.5	16.5	18	46.6	14	16	B-R1/8 (B-PT1/8)	3.4	62.4	86.3	1.32	7.08	1.32	7.08	3.67	4

HRW-CR:



MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS											BASIC LOAD RATING			STATIC PERMISSIBLE MOMENT kN-M					MASS kg
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x l	L ₁	T	K	N	E	GREASE NIPPLE	H ₃	C kN	CO kN	MA		MB		MC			
																1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK	1 BLOCK			
HRW 17CR	17	50	50.8	29	15	M4x5	33.6	6	14.5	4	2	PB107	2.5	5.53	9.1	0.0464	0.272	0.0464	0.272	0.144	0.12		
HRW 21CR	21	54	58.8	31	19	M5x6	40	8	18	4.5	12	B-M6F	3	8.02	12.9	0.0784	0.445	0.0784	0.445	0.219	0.19		
HRW 27CR	27	62	72.8	46	32	M6x6	51.8	10	24	6	12	B-M6F	3	14.2	21.6	0.166	0.923	0.166	0.923	0.423	0.37		
HRW 35CR	35	100	106.6	76	50	M8x8	77.6	14	31	8	12	B-M6F	4	33.8	48.6	0.559	3.03	0.559	3.03	1.59	1.2		
HRW 50CR	50	130	140.5	100	65	M10x15	103.5	18	46.6	14	16	B-R1/8 (B-PT1/8)	3.4	62.4	86.3	1.32	7.08	1.32	7.08	3.67	3.2		

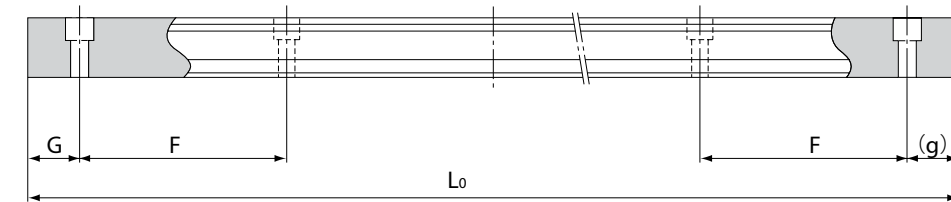
Static Permissible Moment: Double Blocks - value with 2 blocks in close contact with each other.
 Lubrication: Lithium soap base grease No. 2 (THK AFB-LF grease) is contained.

HRW LM RAIL:



MODEL NO.	LM RAIL DIMENSIONS						MASS kg/m
	Width W1 ±0.05	W2	W3	HEIGHT M1	PITCH F	d1 x d2 x h	
HRW 17	33	13.5	18	9	40	4.5x7.5x5.3	2.1
HRW 21	37	15.5	22	11	50	4.5x7.5x5.3	2.9
HRW 27	42	19	24	15	60	4.5x7.5x5.3	4.3
HRW 35	69	25.5	40	19	80	7x11x9	9.9
HRW 50	90	36	60	24	80	9x14x12	14.6

STANDARD / MAXIMUM LENGTH OF LM RAIL:

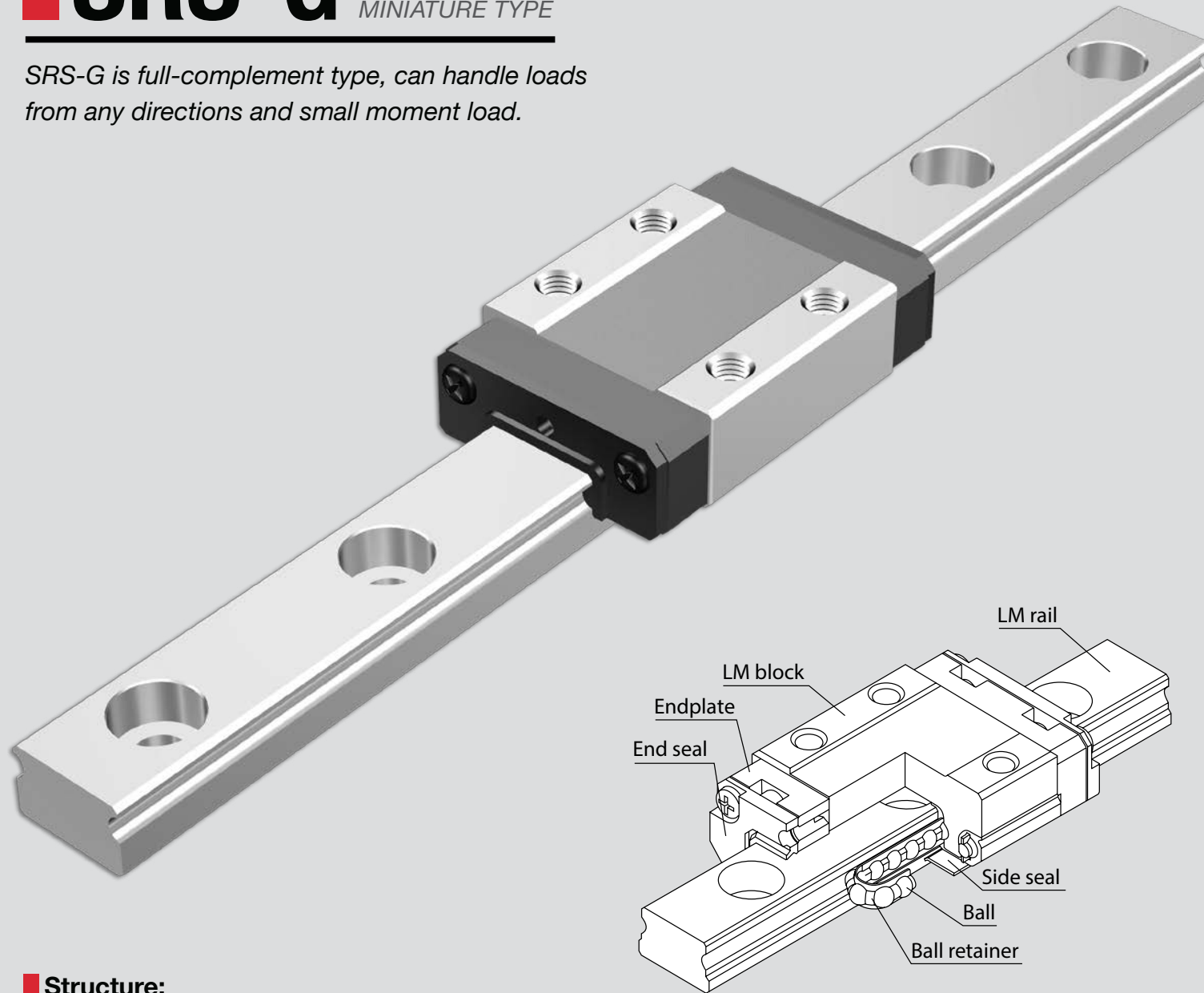


MODEL NO.	HRW 17	HRW 21	HRW 27	HRW 35	HRW 50
LM RAIL STANDARD LENGTH (L ₀)	110 190 310 470 550	130 230 380 480 580 780	160 280 340 460 640 820	280 440 760 1000 1240 1560	280 440 760 1000 1240 1640 2040
STANDARD PITCH F	40	50	60	80	80
G	15	15	20	20	20
STANDARD MAX LENGTH	1900	1900	3000	3000	3000

Lengths in **Red** are standard U.S. stock items.
 Other lengths are to be cut from longer stock rails or to be manufactured.
 Precautions on using Linear Motion Guide - Please refer to general catalog.

SRS-G LM GUIDE MINIATURE TYPE

SRS-G is full-complement type, can handle loads from any directions and small moment load.



Structure:

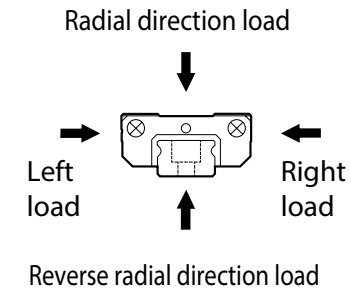
Balls roll in two rows of raceways precision-ground on an LM rail and an LM block, and endplates incorporated in the LM block allow the balls to circulate to realize infinite motion.

If LM blocks are removed from LM rails, balls will fall. Use dummy rail when removing LM blocks from LM rail.

Features:

1. Ultra Compact:

Since SRS-G has a compact structure where the rail cross section is designed to be low and that contains only two rows of balls, it can be installed in save-saving locations.



2. Lightweight:

Since part of the LM block is made of resin and formed through insert molding, SRS-G is a lightweight type of LM Guide.

[Rated Loads of Model SRS-G in All Directions - Size 9]

DIRECTION	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING
RADIAL DIRECTION	C	C ₀
REVERSE RADIAL DIRECTION	C _L =C	C _{0L} =C ₀
LATERAL DIRECTION	C _T =1.19C	C _{0T} =1.19C ₀

[Equivalent Factor of Model SRS-G - Size 9]

PE	X	Y
EQUIVALENT IN RADIAL DIRECTION	1.000	0.839
EQUIVALENT IN REVERSE RADIAL DIRECTION	1.000	0.839

[Rated Loads of Model SRS-G in All Directions - Size 12, 15]



DIRECTION	BASIC DYNAMIC LOAD RATING	BASIC STATIC LOAD RATING
RADIAL DIRECTION	C	C ₀
REVERSE RADIAL DIRECTION	C _L =C	C _{0L} =C ₀
LATERAL DIRECTION	C _T =C	C _{0T} =C ₀

[Equivalent Factor of Model SRS-G - Size 12, 15]

PE	X	Y
EQUIVALENT IN RADIAL DIRECTION	1.000	1.000
EQUIVALENT IN REVERSE RADIAL DIRECTION	1.000	1.000

MODEL AND TYPES OF LM BLOCK:

The applicable model and LM block types are as follows.

MODEL	TYPE	FEATURES
 SRS-GM	Standard Type	<ul style="list-style-type: none"> With this type, the LM block has a smaller width and tapped holes. This is suitable for design compact in the width and height directions.
 SRS-WGM	Standard Type	<ul style="list-style-type: none"> The LM block has the same cross-sectional shape as model SRS-GM, but has a longer overall LM block length, broader width, and a greater rated load and permissible moment.

• = Interchangeable Series Available

MODEL	SIZE		
	9	12	15
SRS-GM	•	•	•
SRS-WGM	•	•	•

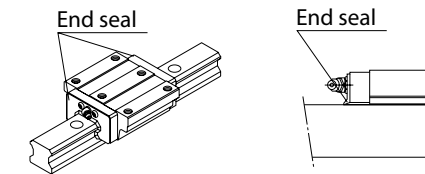
MODEL NUMBER CODING:

BLOCK

: Choose Quick-Ship Option
 : Standard/Only Quick Ship Option

Step 1	Step 2		Step 3		
MODEL NUMBER	BLOCK TYPE	SEAL TYPE	RADIAL CLEARANCE	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER
SRS9XG	M	UU	C1	(GK)	SRS9XGMUUC1 (GK) BLOCK
		<i>Standard for SRS-G*: Contamination Protection Seal "UU"</i>	<i>Normal Clearance = No Symbol; Light Preload = C1</i>		

*UU = End Seal



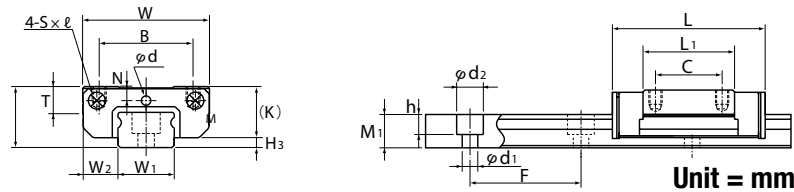
Please contact THK for other seal options.

RAIL

Step 1	Step 2			
MODEL NUMBER	OVERALL LENGTH (mm)*	SYMBOL FOR INTERCHANGEABLE BLOCK & RAIL	SAMPLE PART NUMBER	
SRS15W	- 220L	(GK)	SRS15W-220L (GK) RAIL	
<i>Add "L" to end of length</i>				

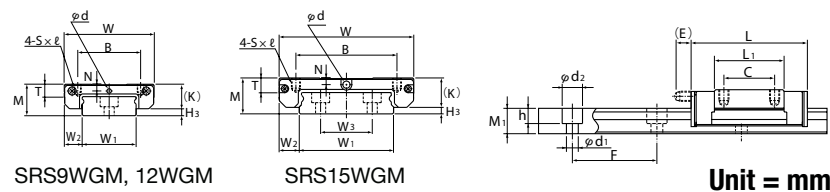
* If you need a non-standard rail length, please let us know overall length with G/g dimensions. EX: SRS9X-120L (GK) RAIL (G=10/g=10).

SRS-GM:



MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS							BASIC LOAD RATING			STATIC PERMISSIBLE MOMENT kN-M					MASS kg	
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x l	L1	T	K	N	GREASING HOLE D	H3	C kN	CO kN	MA		MB			MC
															1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK		1 BLOCK
SRS 9XGM	10	20	30.8	15	10	M3x2.8	19.8	4.5	8.5	2.4	1.6	1.5	2.22	3.06	9.87	57.9	11.4	66.9	14.1	0.016
SRS 12GM	13	27	34.4	20	15	M3x3.2	20.6	5.7	11	3	2	2	3.36	3.55	12.1	79.0	12.1	79.0	23.2	0.027
SRS 15GM	16	32	43	25	20	M3x3.5	25.7	6.5	13.3	3	3	2.7	5.59	5.72	24.8	158	24.8	158	40.6	0.047

SRS-WGM:



SRS9WGM, 12WGM

SRS15WGM

MODEL NO.	OUTER DIMENSIONS			LM BLOCK DIMENSIONS							BASIC LOAD RATING			STATIC PERMISSIBLE MOMENT kN-M					MASS kg	
	HEIGHT M	WIDTH W	LENGTH L	B	C	S x l	L1	T	K	N	GREASING HOLE D	H3	C kN	CO kN	MA		MB			MC
															1 BLOCK	DOUBLE BLOCK	1 BLOCK	DOUBLE BLOCK		1 BLOCK
SRS 9WGM	12	30	39	21	12	M3x2.8	27	4.9	9.1	2.3	1.6	2.9	2.67	3.35	13.9	69.7	16.6	96.7	31.7	0.031
SRS 12WGM	14	40	44.5	28	15	M3x3.5	30.9	5.7	11	3	2	3	4.46	5.32	25.7	146	25.7	146	66.8	0.055
SRS 15WGM	16	60	55.5	45	20	M4x4.5	38.9	6.5	13.3	3	3	2.7	7.43	8.59	52.7	293	52.7	293	178	0.13

Static Permissible Moment: Double Blocks - value with 2 blocks in close contact with each other.
Lubrication: ABF Grease is contained.

SRS-M LM RAIL:



Unit = mm

MODEL NO.	LM RAIL DIMENSIONS					MASS kg/m
	Width W1 0-0.05	W2	HEIGHT M1	PITCH F	d1xd2xh	
SRS 9X	9	5.5	5.5	20	3.5x6x3.3	0.36
SRS 12	12	7.5	7.5	25	3.5x6x4.5	0.65
SRS 15	15	8.5	9.5	40	3.5x6x4.5	0.96

SRS-W LM RAIL:

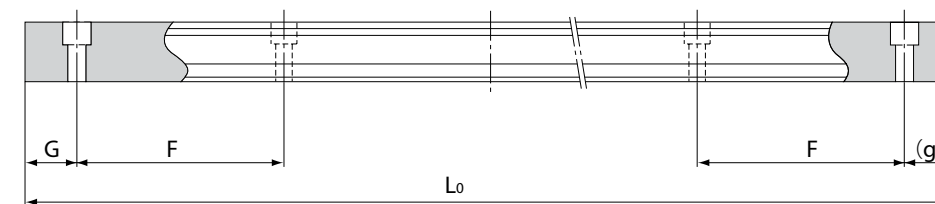


Unit = mm

MODEL NO.	LM RAIL DIMENSIONS					MASS kg/m	
	Width W1 0-0.05	W2	W3	HEIGHT M1	PITCH F		d1xd2xh
SRS 9W	18	6	—	7.5	30	3.5x6x4.5	1.01
SRS 12W	24	8	—	8.5	40	4.5x8x4.5	1.52
SRS 15W	42	9	23	9.5	40	4.5x8x4.5	2.87

SRS/SRS-G Blocks use the same rail.

STANDARD / MAXIMUM LENGTH OF LM RAIL:



MODEL NO.	SRS 9X	SRS 9W	SRS 12	SRS 12W	SRS 15	SRS 15W
LM RAIL STANDARD LENGTH (L0)	55	50	70	70	70	110
	75	80	95	110	110	150
	95	110	120	150	150	190
	115	140	145	190	190	230
	135	170	170	230	230	270
	155	200	195	270	270	310
	175	260	220	310	310	430
	195	290	245	390	390	550
	275	320	270	470	390	670
	375		320	550	430	790
				370		470
			470		550	
			570		670	
					870	
STANDARD PITCH F	20	30	25	40	40	40
G	7.5	10	10	15	15	15
STANDARD MAX LENGTH	1000	1000	1000	1000	1000	1000

Lengths in **Red** are standard U.S. stock items.
Other lengths are to be cut from longer stock rails or to be manufactured.
Contact THK for custom max length.
Precautions on using Linear Motion Guide - Please refer to general catalog.

GREASE:



AFB-LF: contained for SHS/SSR/SHW/HSR/SR/HRW



AFF: contained for SRS/SRS-G

ITEM	REPRESENTATIVE VALUE	TEST METHOD
Consistency enhancer	Lithium-based	
Base oil	Refined mineral oil	
Base oil kinematic viscosity: mm ² /s (40°C)	170	JIS K 2220 23
Worked penetration (25°C, 60W)	275	JIS K 2220 7
Mixing stability (100,000 W)	345	JIS K 2220 15
Dropping point °C	193	JIS K 2220 8
Evaporation amount: mass% (99°C, 22h)	0.4	JIS K 2220 10
Oil separation rate: mass% (100°C, 24h)	0.6	JIS K 2220 11
Copper plate corrosion (B method, 100°C, 24h)	Accepted	JIS K 2220 9
Low temp. torque: N-m (-20°C)	Start	130
	(revolutions)	51
4-ball testing (burn-in load): N	3089	ASTM D2596
Service Temperature Range °C	-15 to 100	
Color	Yellowish brown	

For other greases, please contact THK or check general catalog.

GREASE NIPPLE:

B-M6F, B-PT1: 45 Degree



B-M6F: for size 20 through 35
B-PT1/8: for size 45 through 65

PB1021B: Driven-in Nipple



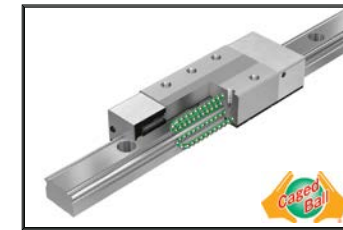
PB1021B: for size 15 & 17

Each block comes with one grease nipple and plug (except SRS/SRS-G).
For other grease nipples, please contact THK or check general catalog.

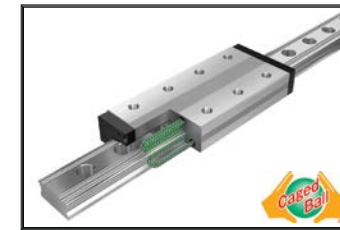
MORE LINEAR MOTION GUIDES:

Caged-Ball Linear Motion Guides:

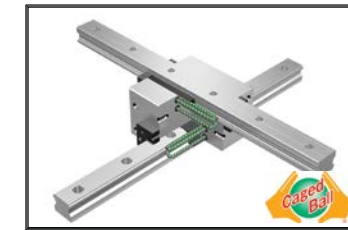
GK = Interchangeable Block/Rail Available



SVR/SVS: Ultra Heavy Load



SPR/SPS: Low Waiving

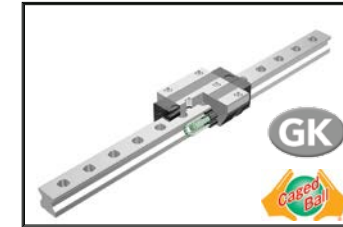


SCR: Cross

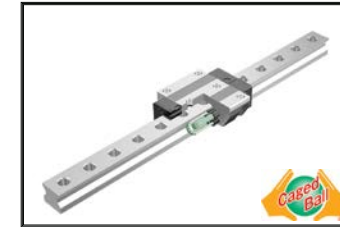


LM Guide-Light: Hollow Rail

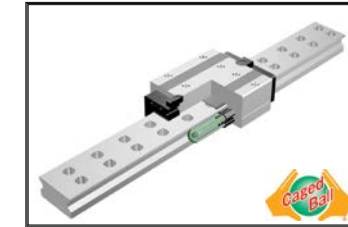
Caged-Roller Linear Motion Guides:



SRG: Roller

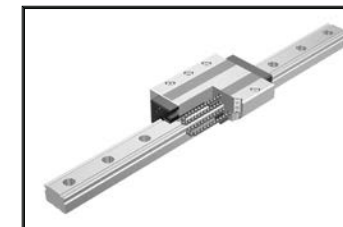


SRN: Roller-Low Center of Gravity



SRW: Roller-Ultra High Rigidity

Full-Ball Linear Motion Guides:



NR-X/NRS-X: Ultra Heavy Load



JR: Structural Member



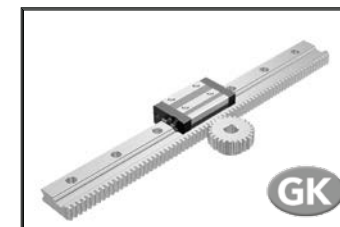
HCR: Curved Rail



HMG: Straight + Curved



HR: Separate



GSR-R: With Rack-Pinion



MX: Miniature-Cross



RSR: Micro LM Guide



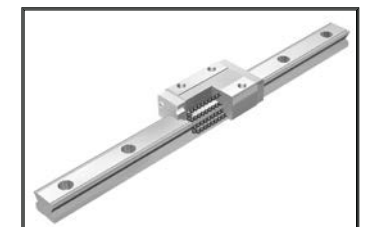
High Temperature



High Corrosion



Mid to Low Vacuum



Oil-Free

Contact THK or check general catalog for product details.



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