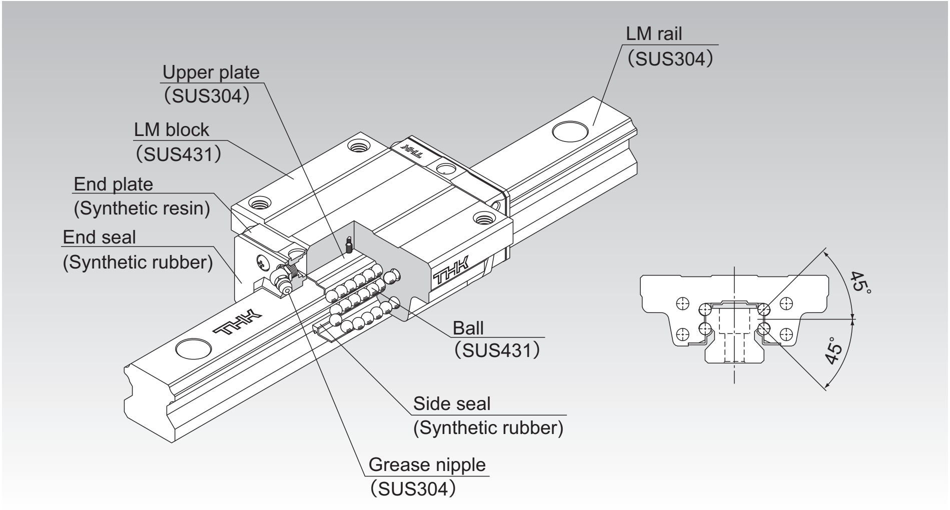
HSR-M2

Corrosion-Resistant LM Guide Model HSR-M2



Structure and Features

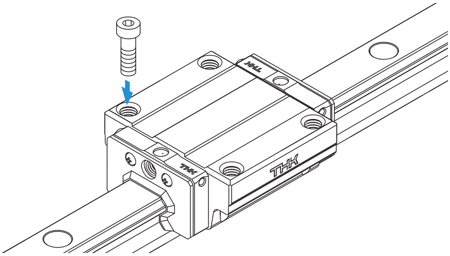
Balls roll in four rows of raceways precision-ground on an LM rail and an LM block, and end plates incorporated in the LM block allow the balls to circulate.
Each row of balls is placed at a contact angle of 45° so that the rated loads applied to the LM block are uniform in the four directions (radial,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

Types and Features

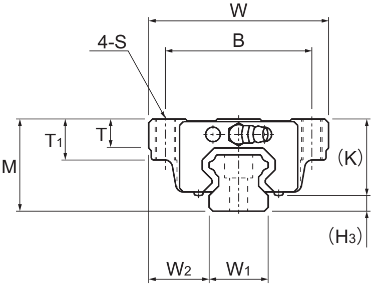
Model HSR-M2A

Dimensional Table⇒A1-402

The flange of its LM block has tapped holes.



Model HSR-M2A



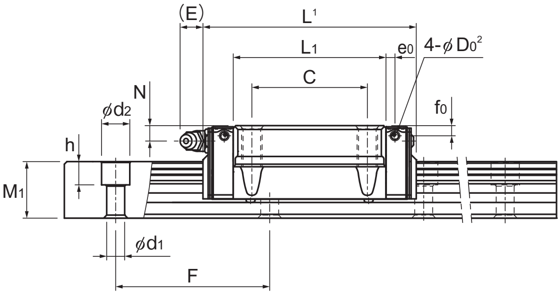
Model No.	Outer dimensions			LM block dimensions										Pilot hole for side nipple			
	Height M	Width W	Length[1] L	B	C	S	L_1	T	T_1	K	N	E	Grease nipple	e_0	f_0	D_0[2]	H_3
HSR 15M2A	24	47	56.6	38	30	M5	38.8	6.5	11	19.3	4.3	5.5	PB1021B	3.2	3.9	3	4.7
HSR 20M2A	30	63	74	53	40	M6	50.8	9.5	10	26	5	12	B-M6F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

Model number coding

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

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

Notes: This model number indicates that a single-rail unit constitutes one set (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum).
See **A1-547** for contamination protection accessories, see **A1-75** for radial clearance symbol. See **A1-79** for accuracy symbol. See **A1-13** for symbol for number of rails used on the same plane.



Unit: mm

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

[1] Length L shown in the table is the length with the contamination protection accessories, code UU or SS.
[2] The side nipple pilot holes will not be through holes. For grease nipple mount machining, contact THK.
[3] The maximum length indicates the standard maximum length of an LM rail. (See **A1-404**.)
[4] Please be aware that the basic load rating of the corrosion-resistant LM Guide is smaller than ordinary stainless steel models of LM Guide.
[5] Static permissible moment 1 block: the static permissible moment with one LM block
2 blocks: the static permissible moment with two LM blocks in close contact with each other

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

Options⇒A1-507

Standard Lengths and Maximum Lengths of LM Rails

Table 1 shows the standard lengths and the maximum lengths of model HSR-M2 variations. If the maximum length of the desired LM rail exceeds these values, jointed rails will be used. Contact THK for details.

For special rail lengths, it is recommended to use a value corresponding to the G and g dimensions from the table. As the G and g dimensions increase, this portion becomes less stable, and the accuracy performance is severely impacted.

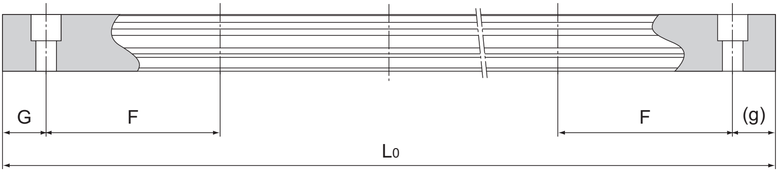


Table 1: Standard Lengths and Maximum Lengths of LM Rails for Model HSR-M2

Unit: mm

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

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