

HSR-M1

LM Guide

B Product Specifications

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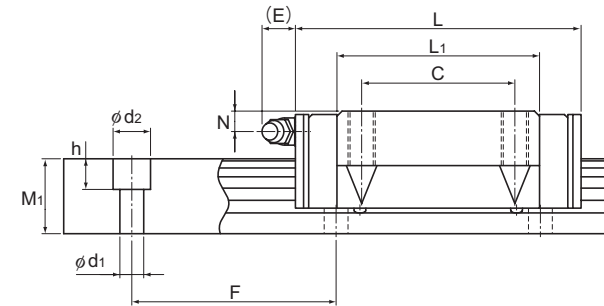
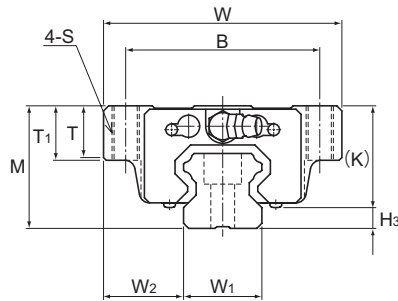
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Technical Descriptions

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* Please see the separate "A Technical Descriptions of the Products".

Models HSR-M1A and HSR-M1LA



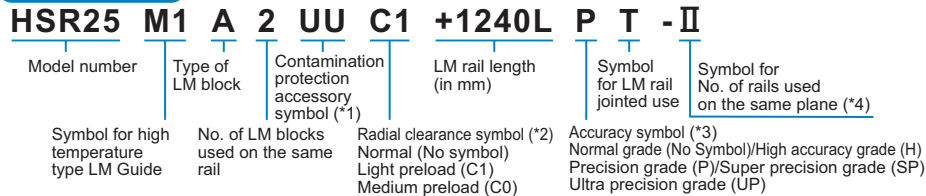
Unit: mm

Model No.	Outer dimensions			LM block dimensions										H ₃	LM rail dimensions					Basic load rating		Static permissible moment kN-m*					Mass		
	Height	Width	Length	B	C	S	L ₁	T	T ₁	K	N	E	Grease nipple		Width	Height	Pitch	Length*	C	C ₀	M _A		M _B		M _C	LM block	LM rail		
	M	W	L																		1 block	Double blocks	1 block	Double blocks	1 block			kg	kg/m
HSR 15M1A	24	47	59.6	38	30	M5	38.8	6.5	11	19.3	4.3	5.5	PB1021B	3.5	15	16	15	60	4.5×7.5×5.3	1240	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.2	1.5
HSR 20M1A HSR 20M1LA	30	63	76 92	53	40	M6	50.8 66.8	9.5	10	26	5	12	B-M6F	4	20	21.5	18	60	6×9.5×8.5	1500	13.8 21.3	23.8 31.8	0.19 0.323	1.04 1.66	0.19 0.323	1.04 1.66	0.201 0.27	0.35 0.47	2.3
HSR 25M1A HSR 25M1LA	36	70	83.9 103	57	45	M8	59.5 78.6	11	16	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7×11×9	1500	19.9 27.2	34.4 45.9	0.307 0.529	1.71 2.74	0.307 0.529	1.71 2.74	0.344 0.459	0.59 0.75	3.3
HSR 30M1A HSR 30M1LA	42	90	98.8 121.4	72	52	M10	70.4 93	9	18	35	7	12	B-M6F	7	28	31	26	80	9×14×12	1500	28 37.3	46.8 62.5	0.524 0.889	2.7 4.37	0.524 0.889	2.7 4.37	0.562 0.751	1.1 1.3	4.8
HSR 35M1A HSR 35M1LA	48	100	112 137.4	82	62	M10	80.4 105.8	12	21	40.5	8	12	B-M6F	7.5	34	33	29	80	9×14×12	1500	37.3 50.2	61.1 81.5	0.782 1.32	3.93 6.35	0.782 1.32	3.93 6.35	0.905 1.2	1.6 2	6.6

Note) The length L of the high temperature type LM Guide model HSR is longer than normal type of model HSR. (Dimension L₁ is the same.)

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-190.)
 Static permissible moment*: 1 block: static permissible moment value with 1 LM block
 Double blocks: static permissible moment value with 2 blocks closely contacting with each other

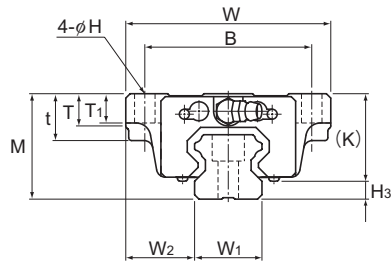
Model number coding



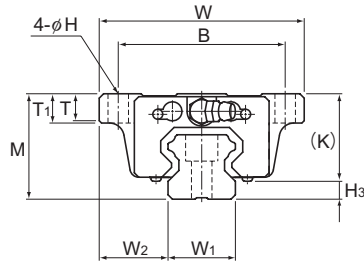
(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

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

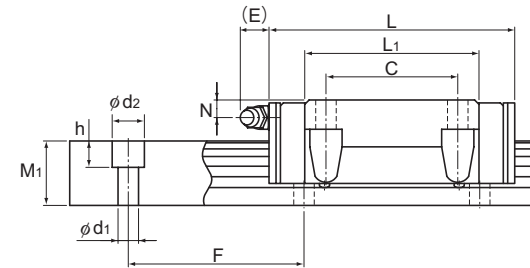
Models HSR-M1B and HSR-M1LB



Models HSR15, 25 to 35M1B/M1LB



Models HSR20M1B/M1LB



Unit: mm

Model No.	Outer dimensions			LM block dimensions										Grease nipple	H ₃	LM rail dimensions					Basic load rating		Static permissible moment kN-m*					Mass		
	Height	Width	Length	B	C	H	L ₁	t	T	T ₁	K	N	E			Width	Height	Pitch	Length*	C	C ₀	M _A		M _B		M _C	LM block	LM rail		
	M	W	L	B	C	H	L ₁	t	T	T ₁	K	N	E			W ₁ ±0.05	W ₂	M ₁	F	d ₁ × d ₂ × h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
HSR 15M1B	24	47	59.6	38	30	4.5	38.8	11	6.5	7	19.3	4.3	5.5	PB1021B	3.5	15	16	15	60	4.5 × 7.5 × 5.3	1240	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.2	1.5
HSR 20M1B HSR 20M1LB	30	63	76 92	53	40	6	50.8 66.8	—	9.5	10	26	5	12	B-M6F	4	20	21.5	18	60	6 × 9.5 × 8.5	1500	13.8 21.3	23.8 31.8	0.19 0.323	1.04 1.66	0.19 0.323	1.04 1.66	0.201 0.27	0.35 0.47	2.3
HSR 25M1B HSR 25M1LB	36	70	83.9 103	57	45	7	59.5 78.6	16	11	10	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7 × 11 × 9	1500	19.9 27.2	34.4 45.9	0.307 0.529	1.71 2.74	0.307 0.529	1.71 2.74	0.344 0.459	0.59 0.75	3.3
HSR 30M1B HSR 30M1LB	42	90	98.8 121.4	72	52	9	70.4 93	18	9	10	35	7	12	B-M6F	7	28	31	26	80	9 × 14 × 12	1500	28 37.3	46.8 62.5	0.524 0.889	2.7 4.37	0.524 0.889	2.7 4.37	0.562 0.751	1.1 1.3	4.8
HSR 35M1B HSR 35M1LB	48	100	112 137.4	82	62	9	80.4 105.8	21	12	13	40.5	8	12	B-M6F	7.5	34	33	29	80	9 × 14 × 12	1500	37.3 50.2	61.1 81.5	0.782 1.32	3.93 6.35	0.782 1.32	3.93 6.35	0.905 1.2	1.6 2	6.6

Note) The length L of the high temperature type LM Guide model HSR is longer than normal type of model HSR. (Dimension L₁ is the same.)

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-190.)
 Static permissible moment*: 1 block: static permissible moment value with 1 LM block
 Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Model number coding

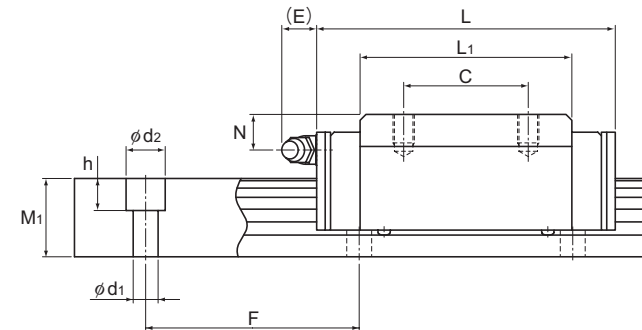
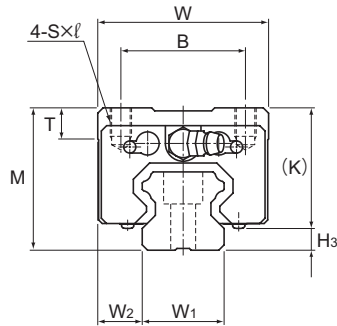
HSR20 M1 LB 2 UU C0 +1000L P T -II

Model number	Type of LM block	Contamination protection accessory symbol (*1)	LM rail length (in mm)	Symbol for LM rail jointed use	Symbol for No. of rails used on the same plane (*4)
Symbol for high temperature type LM Guide	No. of LM blocks used on the same rail	Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)	Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)		

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

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

Models HSR-M1R and HSR-M1LR



Unit: mm

Model No.	Outer dimensions			LM block dimensions									H ₃	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Height	Width	Length	B	C	S × l	L ₁	T	K	N	E	Grease nipple		Width	Height	Pitch	Length*	C	C ₀	M _a		M _b		M _c	LM block	LM rail		
	M	W	L											W ₁ ±0.05	W ₂	M ₁	F	d ₁ × d ₂ × h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
HSR 15M1R	28	34	59.6	26	26	M4 × 5	38.8	6	23.3	8.3	5.5	PB1021B	15	9.5	15	60	4.5 × 7.5 × 5.3	1240	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.2	1.5	
HSR 20M1R HSR 20M1LR	30	44	76 92	32	36 50	M5 × 6	50.8 66.8	8	26	5	12	B-M6F	20	12	18	60	6 × 9.5 × 8.5	1500	13.8 21.3	23.8 31.8	0.19 0.323	1.04 1.66	0.19 0.323	1.04 1.66	0.201 0.27	0.35 0.47	2.3	
HSR 25M1R HSR 25M1LR	40	48	83.9 103	35	35 50	M6 × 8	59.5 78.6	8	34.5	10	12	B-M6F	23	12.5	22	60	7 × 11 × 9	1500	19.9 27.2	34.4 45.9	0.307 0.529	1.71 2.74	0.307 0.529	1.71 2.74	0.344 0.459	0.59 0.75	3.3	
HSR 30M1R HSR 30M1LR	45	60	98.8 121.4	40	40 60	M8 × 10	70.4 93	8	38	10	12	B-M6F	28	16	26	80	9 × 14 × 12	1500	28 37.3	46.8 62.5	0.524 0.889	2.7 4.37	0.524 0.889	2.7 4.37	0.562 0.751	1.1 1.3	4.8	
HSR 35M1R HSR 35M1LR	55	70	112 137.4	50	50 72	M8 × 12	80.4 105.8	10	47.5	15	12	B-M6F	34	18	29	80	9 × 14 × 12	1500	37.3 50.2	61.1 81.5	0.782 1.32	3.93 6.35	0.782 1.32	3.93 6.35	0.905 1.2	1.6 2	6.6	

Note) The length L of the high temperature type LM Guide model HSR is longer than normal type of model HSR. (Dimension L₁ is the same.)

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-190.)
 Static permissible moment*: 1 block: static permissible moment value with 1 LM block
 Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Model number coding

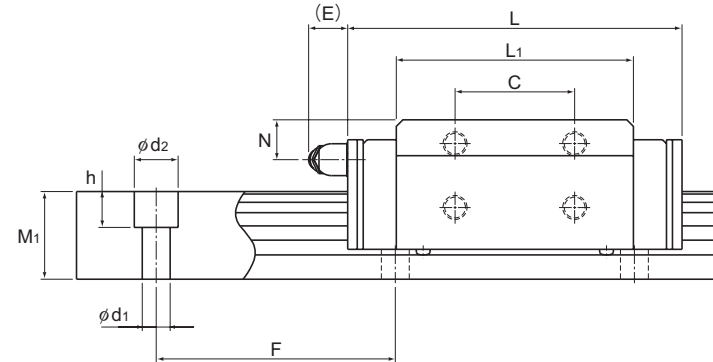
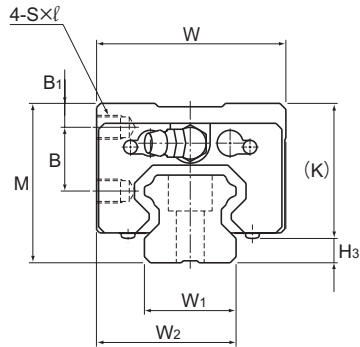
HSR35 M1 R 2 UU C0 +1080L P T -II

Model number	Type of LM block	Contamination protection accessory symbol (*1)	LM rail length (in mm)	Symbol for LM rail jointed use	Symbol for No. of rails used on the same plane (*4)
Symbol for high temperature type LM Guide	No. of LM blocks used on the same rail	Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)	Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)		

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

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

Model HSR-M1YR



Unit: mm

Model No.	Outer dimensions			LM block dimensions										Grease nipple	H ₃	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Height	Width	Length	B ₁	B	C	S × l	L ₁	K	N	E	Width	Height			Pitch	Length*	C	C ₀	M _A		M _B		M _C	LM block	LM rail				
	M	W	L																	W ₁ ±0.05	W ₂	M ₁	F	d ₁ × d ₂ × h			Max	kN	kN	1 block
HSR 15M1YR	28	33.5	59.6	4.3	11.5	18	M4 × 5	38.8	23.3	8.3	5.5	PB1021B	3.5	15	24	15	60	4.5 × 7.5 × 5.3	1240	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.2	1.5		
HSR 20M1YR	30	43.5	76	4	11.5	25	M5 × 6	50.8	26	5	12	B-M6F	4	20	31.5	18	60	6 × 9.5 × 8.5	1500	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.35	2.3		
HSR 25M1YR	40	47.5	83.9	6	16	30	M6 × 6	59.5	34.5	10	12	B-M6F	5.5	23	35	22	60	7 × 11 × 9	1500	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.59	3.3		
HSR 30M1YR	45	59.5	98.8	8	16	40	M6 × 9	70.4	38	10	12	B-M6F	7	28	43.5	26	80	9 × 14 × 12	1500	37.3	62.5	0.524	2.7	0.524	2.7	0.562	1.3	4.8		
HSR 35M1YR	55	69.5	112	8	23	43	M8 × 10	80.4	47	15	12	B-M6F	7.5	34	51.5	29	80	9 × 14 × 12	1500	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.6	6.6		

Note) The length L of the high temperature type LM Guide model HSR-YR is longer than normal type of model HSR-YR. (Dimension L₁ is the same.)

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-190.)
 Static permissible moment*: 1 block: static permissible moment value with 1 LM block
 Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Model number coding

HSR25 M1 YR 2 UU C0 +1200L P T -II

Model number	Type of LM block	Contamination protection accessory symbol (*1)	LM rail length (in mm)	Symbol for LM rail jointed use	Symbol for No. of rails used on the same plane (*4)
Symbol for high temperature type LM Guide	No. of LM blocks used on the same rail	Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)	Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)		

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

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

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model HSR-M1 variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details.

For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

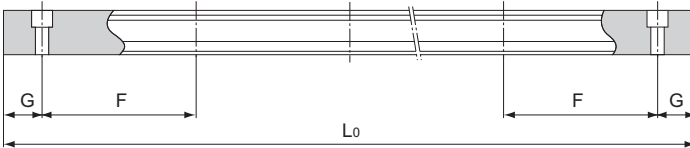


Table1 Standard Length and Maximum Length of the LM Rail for Model HSR-M1

Unit: mm

Model No.	HSR 15M1	HSR 20M1	HSR 25M1	HSR 30M1	HSR 35M1
LM rail standard length (L_0)	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	1180	1480	1480	
1180	1240	1240			
1240	1360	1300			
	1480	1360			
		1420			
		1480			
Standard pitch F	60	60	60	80	80
G	20	20	20	20	20
Max length	1240	1500	1500	1500	1500

Note1) The maximum length varies with accuracy grades. Contact THK for details.

Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

Note3) The values for HSR-M1 also apply to HSR-M1YR.