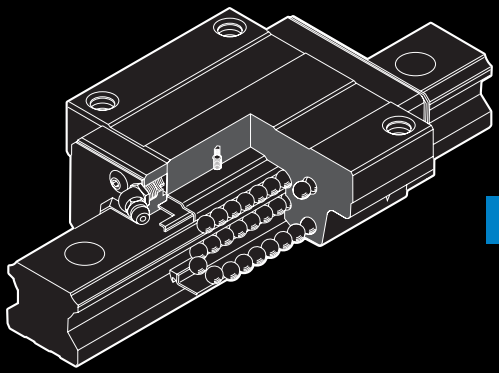


HSR

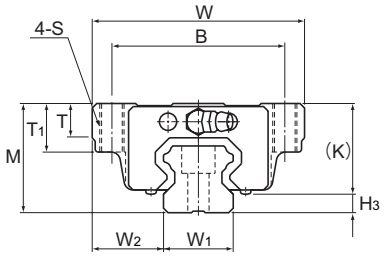
LM Guide

B Product Specifications

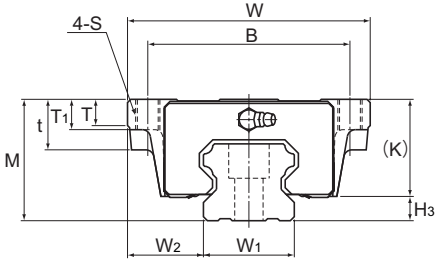
A Technical Descriptions of the Products (Separate)

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

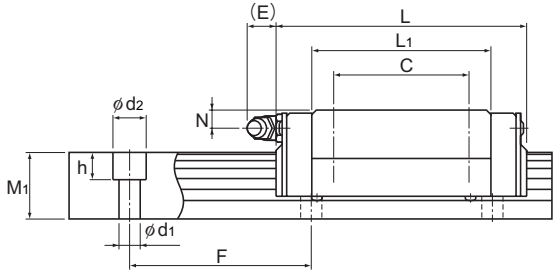
Models HSR-A and HSR-AM, Models HSR-LA and HSR-LAM



Models HSR15 to 35A/LA/AM/LAM



Models HSR45 to 85A/LA



Unit: mm

Model No.	Outer dimensions			LM block dimensions											LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Height	Width	Length											Grease nipple		Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C		LM block	LM rail
	M	W	L	B	C	S	L_1	t	T	T_1	K	N	E		H_3	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
HSR 15A HSR 15AM	24	47	56.6	38	30	M5	38.8	—	7	11	19.3	4.3	5.5	PB1021B	3.5	15	16	15	60	4.5×7.5×5.3	3000 (1240)	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844		0.2	1.5
HSR 20A HSR 20AM	30	63	74	53	40	M6	50.8	—	10	9.5	26	5	12	B-M6F	4	20	21.5	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201		0.35	2.3
HSR 20LA HSR 20LAM	30	63	90	53	40	M6	66.8	—	10	9.5	26	5	12	B-M6F	4	20	21.5	18	60	6×9.5×8.5	3000 (1480)	21.3	31.8	0.323	1.66	0.323	1.66	0.27		0.47	2.3
HSR 25A HSR 25AM	36	70	83.1	57	45	M8	59.5	—	11	16	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344		0.59	3.3
HSR 25LA HSR 25LAM	36	70	102.2	57	45	M8	78.6	—	11	16	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7×11×9	3000 (2020)	27.2	45.9	0.529	2.74	0.529	2.74	0.459		0.75	3.3
HSR 30A HSR 30AM	42	90	98	72	52	M10	70.4	—	9	18	35	7	12	B-M6F	7	28	31	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562		1.1	4.8
HSR 30LA HSR 30LAM	42	90	120.6	72	52	M10	93	—	9	18	35	7	12	B-M6F	7	28	31	26	80	9×14×12	3000 (2520)	37.3	62.5	0.889	4.37	0.889	4.37	0.751		1.3	4.8
HSR 35A HSR 35AM	48	100	109.4	82	62	M10	80.4	—	12	21	40.5	8	12	B-M6F	7.5	34	33	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905		1.6	6.6
HSR 35LA HSR 35LAM	48	100	134.8	82	62	M10	105.8	—	12	21	40.5	8	12	B-M6F	7.5	34	33	29	80	9×14×12	3000 (2520)	50.2	81.5	1.32	6.35	1.32	6.35	1.2		2	6.6
HSR 45A HSR 45LA	60	120	139 170.8	100	80	M12	98 129.8	25	13	15	50	10	16	B-PT1/8	10	45	37.5	38	105	14×20×17	3090	60 80.4	95.6 127	1.42 2.44	7.92 12.6	1.42 2.44	7.92 12.6	1.83 2.43		2.8 3.3	11
HSR 55A HSR 55LA	70	140	163 201.1	116	95	M14	118 156.1	29	13.5	17	57	11	16	B-PT1/8	13	53	43.5	44	120	16×23×20	3060	88.5 119	137 183	2.45 4.22	13.2 21.3	2.45 4.22	13.2 21.3	3.2 4.28		4.5 5.7	15.1
HSR 65A HSR 65LA	90	170	186 245.5	142	110	M16	147 206.5	37	21.5	23	76	19	16	B-PT1/8	14	63	53.5	53	150	18×26×22	3000	141 192	215 286	4.8 8.72	23.5 40.5	4.8 8.72	23.5 40.5	5.82 7.7		8.5 10.7	22.5
HSR 85A HSR 85LA	110	215	245.6 303	185	140	M20	178.6 236	55	28	30	94	23	16	B-PT1/8	16	85	65	65	180	24×35×28	3000	210 282	310 412	8.31 14.2	45.6 72.5	8.31 14.2	45.6 72.5	11 14.7		17 23	35.2

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
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 A 2 QZ UU C0 M +1200L P T M -II

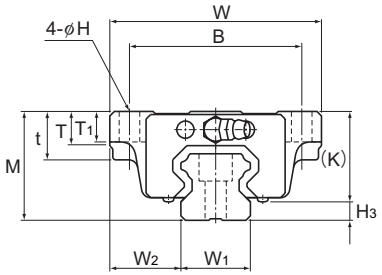
- HSR25: Model number
- A: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

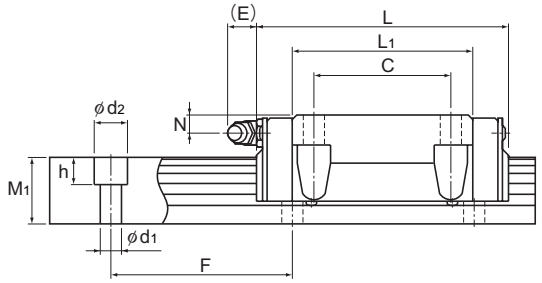
(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

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.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-B, HSR-BM, HSR-LB and HSR-LBM





Unit: mm

Model No.	Outer dimensions			LM block dimensions											LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Height	Width	Length												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	Grease nipple	H_3	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
HSR 15B HSR 15BM	24	47	56.6	38	30	4.5	38.8	11	7	7	19.3	4.3	5.5	PB1021B	3.5	15	16	15	60	4.5×7.5×5.3	3000 (1240)	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844		0.2	1.5
HSR 20B HSR 20BM	30	63	74	53	40	6	50.8	10	9.5	10	26	5	12	B-M6F	4	20	21.5	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201		0.35	2.3
HSR 20LB HSR 20LBM	30	63	90	53	40	6	66.8	10	9.5	10	26	5	12	B-M6F	4	20	21.5	18	60	6×9.5×8.5	3000 (1480)	21.3	31.8	0.323	1.66	0.323	1.66	0.27		0.47	2.3
HSR 25B HSR 25BM	36	70	83.1	57	45	7	59.5	16	11	10	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344		0.59	3.3
HSR 25LB HSR 25LBM	36	70	102.2	57	45	7	78.6	16	11	10	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7×11×9	3000 (2020)	27.2	45.9	0.529	2.74	0.529	2.74	0.459		0.75	3.3
HSR 30B HSR 30BM	42	90	98	72	52	9	70.4	18	9	10	35	7	12	B-M6F	7	28	31	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562		1.1	4.8
HSR 30LB HSR 30LBM	42	90	120.6	72	52	9	93	18	9	10	35	7	12	B-M6F	7	28	31	26	80	9×14×12	3000 (2520)	37.3	62.5	0.889	4.37	0.889	4.37	0.751		1.3	4.8
HSR 35B HSR 35BM	48	100	109.4	82	62	9	80.4	21	12	13	40.5	8	12	B-M6F	7.5	34	33	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905		1.6	6.6
HSR 35LB HSR 35LBM	48	100	134.8	82	62	9	105.8	21	12	13	40.5	8	12	B-M6F	7.5	34	33	29	80	9×14×12	3000 (2520)	50.2	81.5	1.32	6.35	1.32	6.35	1.2		2	6.6
HSR 45B HSR 45LB	60	120	139 170.8	100	80	11	98 129.8	25	13	15	50	10	16	B-PT1/8	10	45	37.5	38	105	14×20×17	3090	60 80.4	95.6 127	1.42 2.44	7.92 12.6	1.42 2.44	7.92 12.6	1.83 2.43		2.8 3.3	11
HSR 55B HSR 55LB	70	140	163 201.1	116	95	14	118 156.1	29	13.5	17	57	11	16	B-PT1/8	13	53	43.5	44	120	16×23×20	3060	88.5 119	137 183	2.45 4.22	13.2 21.3	2.45 4.22	13.2 21.3	3.2 4.28		4.5 5.7	15.1
HSR 65B HSR 65LB	90	170	186 245.5	142	110	16	147 206.5	37	21.5	23	76	19	16	B-PT1/8	14	63	53.5	53	150	18×26×22	3000	141 192	215 286	4.8 8.72	23.5 40.5	4.8 8.72	23.5 40.5	5.82 7.7		8.5 10.7	22.5
HSR 85B HSR 85LB	110	215	245.6 303	185	140	18	178.6 236	55	28	30	94	23	16	B-PT1/8	16	85	65	65	180	24×35×28	3000	210 282	310 412	8.31 14.2	45.6 72.5	8.31 14.2	45.6 72.5	11 14.7		17 23	35.2

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
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 B 2 QZ UU C0 M +1200L P T M -II

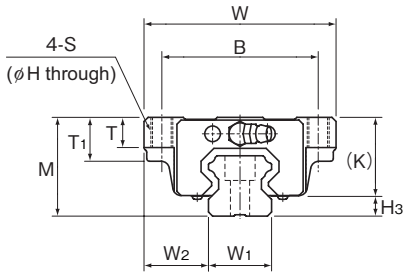
- HSR25: Model number
- B: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- M: Stainless steel LM block
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

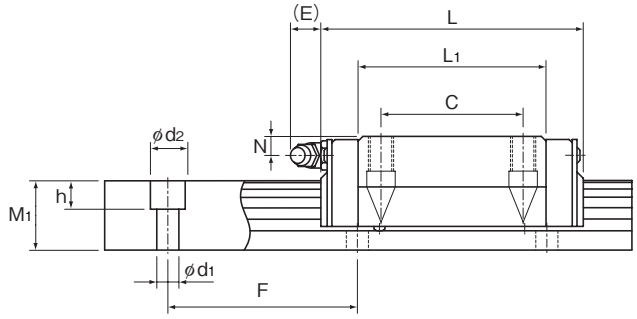
(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

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.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Model HSR-C Grade Ct





Unit: mm

Model No.	Outer dimensions			LM block dimensions											LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Height	Width	Length											Grease nipple		Width		Height	Pitch		Length *	C	C0	MA		MB		MC	LM block	LM rail
	M	W	L	B	C	S	H	L1	T	T1	K	N	E		H3	W1 ±0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
HSR 15C (Ct)	24	47	56.6	38	30	M5	4.4	38.8	7	11	19.3	4.3	5.5	PB1021B	3.5	15	16	15	60	4.5×7.5×5.3	3000	8.33	13.5	0.0805	0.457	0.085	0.457	0.0844	0.2	1.5
HSR 20C (Ct)	30	63	74	53	40	M6	5.4	50.8	10	9.5	26	5	12	B-M6F	4	20	21.5	18	60	6×9.5×8.5	3000	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.35	2.3
HSR 25C (Ct)	36	70	83.1	57	45	M8	6.8	59.5	11	16	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7×11×9	3000	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.59	3.3
HSR 30C (Ct)	42	90	98	72	52	M10	8.5	70.4	9	18	35	7	12	B-M6F	7	28	31	26	80	9×14×12	3000	28	46.8	0.524	2.7	0.524	2.7	0.562	1.1	4.8
HSR 35C (Ct)	48	100	109.4	82	62	M10	8.5	80.4	12	21	40.5	8	12	B-M6F	7.5	34	33	29	80	9×14×12	3000	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.6	6.6

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (see B-82)
Static permissible moment*: static permissible moment value with 1 LM block

Model number coding

Block: HSR25 C 1 SS Ct BLOCK

- HSR25: Model number
- C: Type of LM block
- 1: This variant: 1
- SS: Contamination protection accessory symbol (*1)
- Ct: Accuracy symbol Indicates Ct Class
- BLOCK: Block symbol

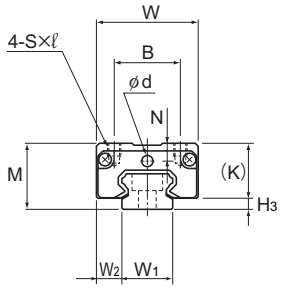
Rail: HSR25 -3000L Ct7 RAIL

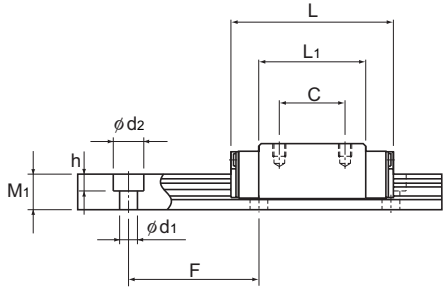
- -3000L: LM rail length (in mm)
- Ct7: Accuracy symbol Ct 7 Class (Ct7) / Ct 5 Class (Ct5)
- RAIL: Rail symbol

(*1) See contamination protection accessory on A-368.

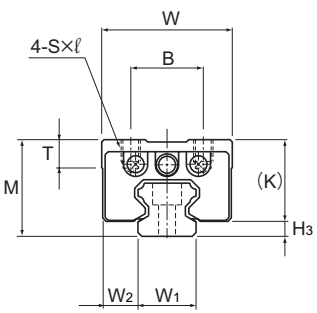
Description of Each Option ⇒A-351 Dimensions⇒B-223

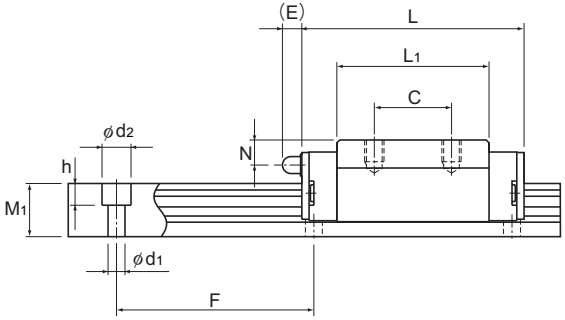
Model HSR-RM





Models HSR8RM and 10RM





Model HSR12RM

Unit: mm

Model No.	Outer dimensions			LM block dimensions										LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Height	Width	Length									Grease nipple	H_3	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	M	W	L	B	C	S×ℓ	L_1	T	K	N	E	d		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 8RM	11	16	24	10	10	M2×2.5	15	—	8.9	2.6	—	2.2	—	2.1	8	4	6	20	2.4×4.2×2.3	(275)	1.08	2.16	0.00492	0.0319	0.00492	0.0319	0.00727	0.012	0.3
HSR 10RM	13	20	31	13	12	M2.6×2.5	20.1	—	10.8	3.5	—	2.5	—	2.2	10	5	7	25	3.5×6×3.3	(470)	1.96	3.82	0.0123	0.0716	0.0123	0.0716	0.0162	0.025	0.45
HSR 12RM	20	27	45	15	15	M4×4.5	30.5	6	16.9	5.2	4	—	PB107	3.1	12	7.5	11	40	3.5×6×4.5	(670)	4.7	8.53	0.0409	0.228	0.0409	0.228	0.0445	0.08	0.83

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
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

HSR12 R 2 UU C1 M +670L H T M -II

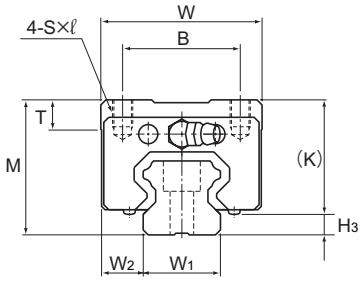
- HSR12: Model number
- R: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1)
- M: Stainless steel LM block
- +670L: LM rail length (in mm)
- H: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

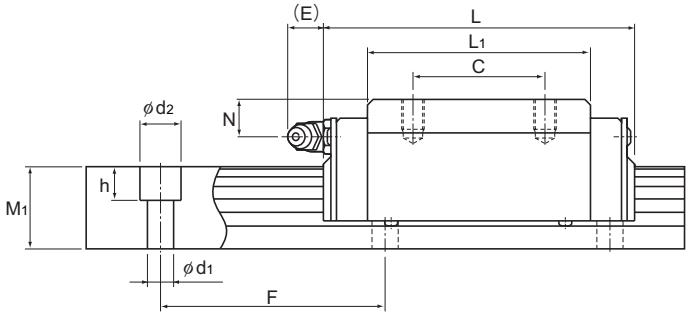
(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

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.)

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-R, HSR-RM, HSR-LR and HSR-LRM





Unit: mm

Model No.	Outer dimensions			LM block dimensions									LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Height	Width	Length										Width		Height	Pitch		Length*	C	C0	MA		MB		MC		LM block	LM rail
	M	W	L	B	C	S×ℓ	L1	T	K	N	E	Grease nipple	H3	W1 ±0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
HSR 15R HSR 15RM	28	34	56.6	26	26	M4×5	38.8	6	23.3	8.3	5.5	PB1021B	3.5	15	9.5	15	60	4.5×7.5×5.3	3000 (1240)	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.18	1.5
HSR 20R HSR 20RM	30	44	74	32	36	M5×6	50.8	8	26	5	12	B-M6F	4	20	12	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.25	2.3
HSR 20LR HSR 20LRM	30	44	90	32	50	M5×6	66.8	8	26	5	12	B-M6F	4	20	12	18	60	6×9.5×8.5	3000 (1480)	21.3	31.8	0.323	1.66	0.323	1.66	0.27	0.35	2.3
HSR 25R HSR 25RM	40	48	83.1	35	35	M6×8	59.5	9	34.5	10	12	B-M6F	5.5	23	12.5	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.54	3.3
HSR 25LR HSR 25LRM	40	48	102.2	35	50	M6×8	78.6	9	34.5	10	12	B-M6F	5.5	23	12.5	22	60	7×11×9	3000 (2020)	27.2	45.9	0.529	2.74	0.529	2.74	0.459	0.67	3.3
HSR 30R HSR 30RM	45	60	98	40	40	M8×10	70.4	9	38	10	12	B-M6F	7	28	16	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562	0.9	4.8
HSR 30LR HSR 30LRM	45	60	120.6	40	60	M8×10	93	9	38	10	12	B-M6F	7	28	16	26	80	9×14×12	3000 (2520)	37.3	62.5	0.889	4.37	0.889	4.37	0.751	1.1	4.8
HSR 35R HSR 35RM	55	70	109.4	50	50	M8×12	80.4	11.7	47.5	15	12	B-M6F	7.5	34	18	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.5	6.6
HSR 35LR HSR 35LRM	55	70	134.8	50	72	M8×12	105.8	11.7	47.5	15	12	B-M6F	7.5	34	18	29	80	9×14×12	3000 (2520)	50.2	81.5	1.32	6.35	1.32	6.35	1.2	2	6.6
HSR 45R HSR 45LR	70	86	139 170.8	60	60 80	M10×17	98 129.8	15	60	20	16	B-PT1/8	10	45	20.5	38	105	14×20×17	3090	60 80.4	95.6 127	1.42 2.44	7.92 12.6	1.42 2.44	7.92 12.6	1.83 2.43	2.6 3.1	11
HSR 55R HSR 55LR	80	100	163 201.1	75	75 95	M12×18	118 156.1	20.5	67	21	16	B-PT1/8	13	53	23.5	44	120	16×23×20	3060	88.5 119	137 183	2.45 4.22	13.2 21.3	2.45 4.22	13.2 21.3	3.2 4.28	4.3 5.4	15.1
HSR 65R HSR 65LR	90	126	186 245.5	76	70 120	M16×20	147 206.5	23	76	19	16	B-PT1/8	14	63	31.5	53	150	18×26×22	3000	141 192	215 286	4.8 8.72	23.5 40.5	4.8 8.72	23.5 40.5	5.82 7.7	7.3 9.3	22.5
HSR 85R HSR 85LR	110	156	245.6 303	100	80 140	M18×25	178.6 236	29	94	23	16	B-PT1/8	16	85	35.5	65	180	24×35×28	3000	210 282	310 412	8.31 14.2	45.6 72.5	8.31 14.2	45.6 72.5	11 14.7	13 16	35.2

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
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 R 2 QZ SS C0 M +1400L P T M -II

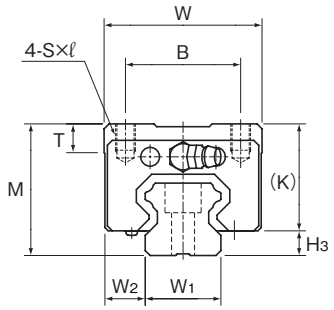
- HSR35: Model number
- R: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- SS: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +1400L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

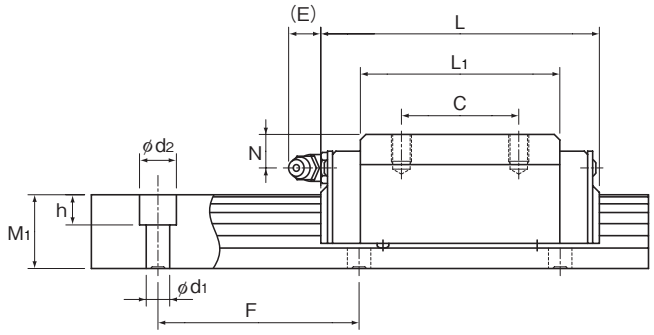
(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

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.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Model HSR-R Grade Ct





Unit: mm

Model No.	Outer dimensions			LM block dimensions									LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Height	Width	Length										Width		Height	Pitch		Length *	C	C_0	M_A		M_B		M_C		LM block	LM rail
	M	W	L	B	C	S×ℓ	L_1	T	K	N	E	Grease nipple	H_3	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 15R (Ct)	28	34	56.6	26	26	M4×5	38.8	6	23.3	8.3	5.5	PB1021B	3.5	15	9.5	15	60	4.5×7.5×5.3	3000	8.33	13.5	0.0805	0.457	0.085	0.457	0.0844	0.18	1.5
HSR 20R (Ct)	30	44	74	32	36	M5×6	50.8	8	26	5	12	B-M6F	4	20	12	18	60	6×9.5×8.5	3000	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.25	2.3
HSR 25R (Ct)	40	48	83.1	35	35	M6×8	59.5	9	34.5	10	12	B-M6F	5.5	23	12.5	22	60	7×11×9	3000	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.54	3.3
HSR 30R (Ct)	45	60	98	40	40	M8×10	70.4	9	38	10	12	B-M6F	7	28	16	26	80	9×14×12	3000	28	46.8	0.524	2.7	0.524	2.7	0.562	0.9	4.8
HSR 35R (Ct)	55	70	109.4	50	50	M8×12	80.4	11.7	47.5	15	12	B-M6F	7.5	34	18	29	80	9×14×12	3000	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.5	6.6

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (see B-82)
Static permissible moment*: static permissible moment value with 1 LM block

Model number coding

Block: HSR35 R 1 SS Ct BLOCK

- HSR35: Model number
- R: Type of LM block
- 1: This variant: 1
- SS: Contamination protection accessory symbol (*1)
- Ct: Accuracy symbol Indicates Ct Class
- BLOCK: Block symbol

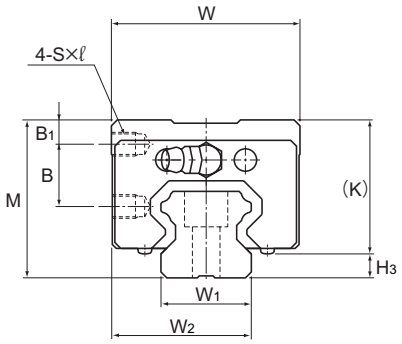
Rail: HSR25 -3000L Ct5 RAIL

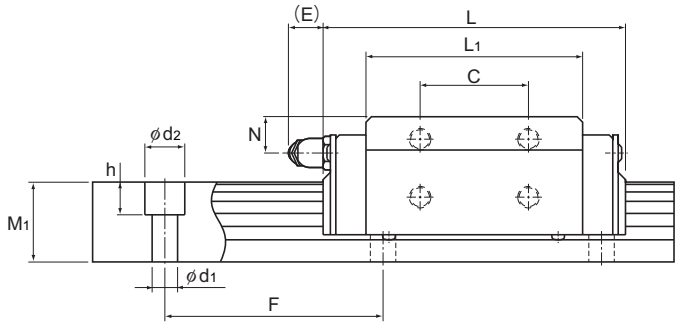
- -3000L: LM rail length (in mm)
- Ct5: Accuracy symbol Ct 7 Class (Ct7) / Ct 5 Class (Ct5)
- RAIL: Rail symbol

(*1) See contamination protection accessory on A-368.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-YR and HSR-YRM





Unit: mm

Model No.	Outer dimensions			LM block dimensions									LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Height	Width	Length										Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	M	W	L	B_1	B	C	S×ℓ	L_1	K	N	E	Grease nipple	H_3	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 15YR HSR 15YRM	28	33.5	56.6	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	3000 (1240)	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.18	1.5
HSR 20YR HSR 20YRM	30	43.5	74	4	11.5	25	M5×6	50.8	26	5	12	B-M6F	4	20	31.5	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.25	2.3
HSR 25YR HSR 25YRM	40	47.5	83.1	6	16	30	M6×6	59.5	34.5	10	12	B-M6F	5.5	23	35	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.54	3.3
HSR 30YR HSR 30YRM	45	59.5	98	8	16	40	M6×9	70.4	38	10	12	B-M6F	7	28	43.5	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562	0.9	4.8
HSR 35YR HSR 35YRM	55	69.5	109.4	8	23	43	M8×10	80.4	47	15	12	B-M6F	7.5	34	51.5	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.5	6.6
HSR 45YR	70	85.5	139	10	30	55	M10×14	98	60	20	16	B-PT1/8	10	45	65	38	105	14×20×17	3090	60	95.6	1.42	7.92	1.42	7.92	1.83	2.6	11
HSR 55YR	80	99.5	163	12	32	70	M12×15	118	67	21	16	B-PT1/8	13	53	76	44	120	16×23×20	3060	88.5	137	2.45	13.2	2.45	13.2	3.2	4.3	15.1
HSR 65YR	90	124.5	186	12	35	85	M16×22	147	76	19	16	B-PT1/8	14	63	93	53	150	18×26×22	3000	141	215	4.8	23.5	4.8	23.5	5.82	7.3	22.5

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
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 YR 2 UU C0 M +1200L P T M -II

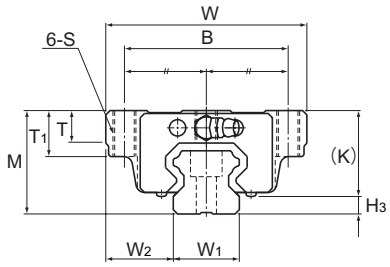
- HSR25: Model number
- YR: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- M: Stainless steel LM block
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

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

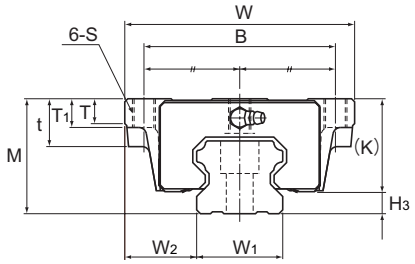
Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)

Description of Each Option ⇒A-351 Dimensions⇒B-223

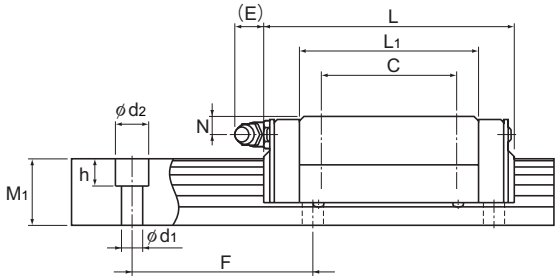
Models HSR-CA, HSR-CAM, HSR-HA and HSR-HAM



Models HSR20 to 35CA/HA/CAM/HAM



Models HSR45 to 85CA/HA



Unit: mm

Model No.	Outer dimensions			LM block dimensions											H3	LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Height	Width	Length											Grease nipple		Width		Height	Pitch		Length*	C	C0	MA		MB		MC		LM block	LM rail
	M	W	L	B	C	S	L1	t	T	T1	K	N	E			W1 ±0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
HSR 20CA HSR 20CAM	30	63	74	53	40	M6	50.8	—	9.5	10	26	5	12	B-M6F	4	20	21.5	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201		0.35	2.3
HSR 20HA HSR 20HAM	30	63	90	53	40	M6	66.8	—	9.5	10	26	5	12	B-M6F	4	20	21.5	18	60	6×9.5×8.5	3000 (1480)	21.3	31.8	0.323	1.66	0.323	1.66	0.27		0.47	2.3
HSR 25CA HSR 25CAM	36	70	83.1	57	45	M8	59.5	—	11	16	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344		0.59	3.3
HSR 25HA HSR 25HAM	36	70	102.2	57	45	M8	78.6	—	11	16	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7×11×9	3000 (2020)	27.2	45.9	0.529	2.74	0.529	2.74	0.459		0.75	3.3
HSR 30CA HSR 30CAM	42	90	98	72	52	M10	70.4	—	9	18	35	7	12	B-M6F	7	28	31	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562		1.1	4.8
HSR 30HA HSR 30HAM	42	90	120.6	72	52	M10	93	—	9	18	35	7	12	B-M6F	7	28	31	26	80	9×14×12	3000 (2520)	37.3	62.5	0.889	4.37	0.889	4.37	0.751		1.3	4.8
HSR 35CA HSR 35CAM	48	100	109.4	82	62	M10	80.4	—	12	21	40.5	8	12	B-M6F	7.5	34	33	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905		1.6	6.6
HSR 35HA HSR 35HAM	48	100	134.8	82	62	M10	105.8	—	12	21	40.5	8	12	B-M6F	7.5	34	33	29	80	9×14×12	3000 (2520)	50.2	81.5	1.32	6.35	1.32	6.35	1.2		2	6.6
HSR 45CA HSR 45HA	60	120	139 170.8	100	80	M12	98 129.8	25	13	15	50	10	16	B-PT1/8	10	45	37.5	38	105	14×20×17	3090	60 80.4	95.6 127	1.42 2.44	7.92 12.6	1.42 2.44	7.92 12.6	1.83 2.43		2.8 3.3	11
HSR 55CA HSR 55HA	70	140	163 201.1	116	95	M14	118 156.1	29	13.5	17	57	11	16	B-PT1/8	13	53	43.5	44	120	16×23×20	3060	88.5 119	137 183	2.45 4.22	13.2 21.3	2.45 4.22	13.2 21.3	3.2 4.28		4.5 5.7	15.1
HSR 65CA HSR 65HA	90	170	186 245.5	142	110	M16	147 206.5	37	21.5	23	76	19	16	B-PT1/8	14	63	53.5	53	150	18×26×22	3000	141 192	215 286	4.8 8.72	23.5 40.5	4.8 8.72	23.5 40.5	5.82 7.7		8.5 10.7	22.5
HSR 85CA HSR 85HA	110	215	245.6 303	185	140	M20	178.6 236	55	28	30	94	23	16	B-PT1/8	16	85	65	65	180	24×35×28	3000	210 282	310 412	8.31 14.2	45.6 72.5	8.31 14.2	45.6 72.5	11 14.7		17 23	35.2

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
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 HA 2 QZ KKHH C0 M +1300L P T M -II

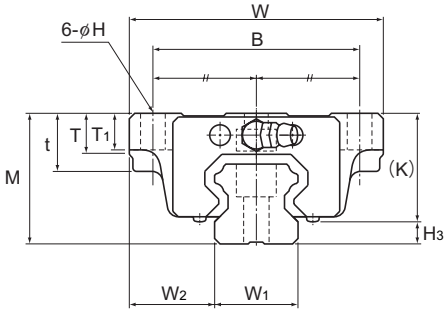
- HSR25: Model number
- HA: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +1300L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol) High accuracy grade (H) Precision grade (P) Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

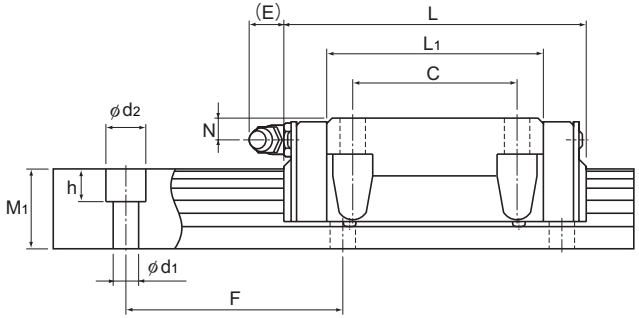
(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

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.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-CB, HSR-CBM, HSR-HB and HSR-HBM





Unit: mm

Model No.	Outer dimensions			LM block dimensions											LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Height	Width	Length											Grease nipple		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		H_3	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
HSR 20CB HSR 20CBM	30	63	74	53	40	6	50.8	10	9.5	10	26	5	12	B-M6F	4	20	21.5	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.35	2.3
HSR 20HB HSR 20HBM	30	63	90	53	40	6	66.8	10	9.5	10	26	5	12	B-M6F	4	20	21.5	18	60	6×9.5×8.5	3000 (1480)	21.3	31.8	0.323	1.66	0.323	1.66	0.27	0.47	2.3
HSR 25CB HSR 25CBM	36	70	83.1	57	45	7	59.5	16	11	10	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.59	3.3
HSR 25HB HSR 25HBM	36	70	102.2	57	45	7	78.6	16	11	10	30.5	6	12	B-M6F	5.5	23	23.5	22	60	7×11×9	3000 (2020)	27.2	45.9	0.529	2.74	0.529	2.74	0.459	0.75	3.3
HSR 30CB HSR 30CBM	42	90	98	72	52	9	70.4	18	9	10	35	7	12	B-M6F	7	28	31	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562	1.1	4.8
HSR 30HB HSR 30HBM	42	90	120.6	72	52	9	93	18	9	10	35	7	12	B-M6F	7	28	31	26	80	9×14×12	3000 (2520)	37.3	62.5	0.889	4.37	0.889	4.37	0.751	1.3	4.8
HSR 35CB HSR 35CBM	48	100	109.4	82	62	9	80.4	21	12	13	40	8	12	B-M6F	7.5	34	33	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.6	6.6
HSR 35HB HSR 35HBM	48	100	134.8	82	62	9	105.8	21	12	13	40	8	12	B-M6F	7.5	34	33	29	80	9×14×12	3000 (2520)	50.2	81.5	1.32	6.35	1.32	6.35	1.2	2	6.6
HSR 45CB HSR 45HB	60	120	139 170.8	100	80	11	98 129.8	25	13	15	50	10	16	B-PT1/8	10	45	37.5	38	105	14×20×17	3090	60 80.4	95.6 127	1.42 2.44	7.92 12.6	1.42 2.44	7.92 12.6	1.83 2.43	2.8 3.3	11
HSR 55CB HSR 55HB	70	140	163 201.1	116	95	14	118 156.1	29	13.5	17	57	11	16	B-PT1/8	13	53	43.5	44	120	16×23×20	3060	88.5 119	137 183	2.45 4.22	13.2 21.3	2.45 4.22	13.2 21.3	3.2 4.28	4.5 5.7	15.1
HSR 65CB HSR 65HB	90	170	186 245.5	142	110	16	147 206.5	37	21.5	23	76	19	16	B-PT1/8	14	63	53.5	53	150	18×26×22	3000	141 192	215 286	4.8 8.72	23.5 40.5	4.8 8.72	23.5 40.5	5.82 7.7	8.5 10.7	22.5
HSR 85CB HSR 85HB	110	215 110	245.6 303	185	140	18	178.6 236	55	28	30	94	23	16	B-PT1/8	16	85	65	65	180	24×35×28	3000	210 282	310 412	8.31 14.2	45.6 72.5	8.31 14.2	45.6 72.5	11 14.7	17 23	35.2

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
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 CB 2 QZ ZZHH C0 M +1400L P T M -II

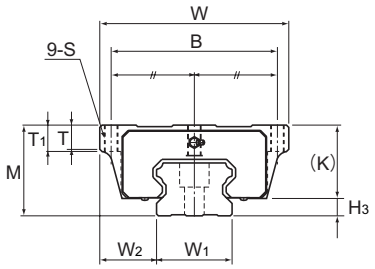
- HSR35: Model number
- CB: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- ZZHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +1400L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol) High accuracy grade (H) Precision grade (P) Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

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

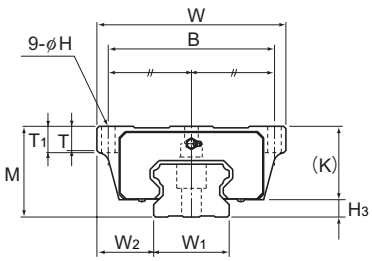
Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

Description of Each Option ⇒A-351 Dimensions⇒B-223

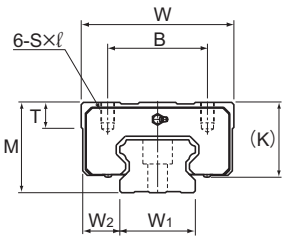
Models HSR-HA, HSR-HB and HSR-HR



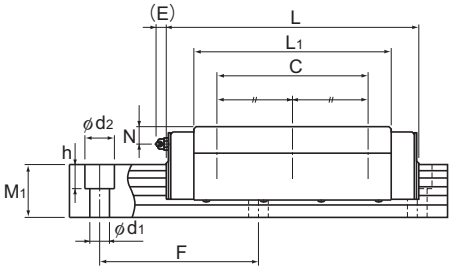
Models HSR100 to 150HA



Models HSR100 to 150HB



Models HSR100 to 150HR



Unit: mm

Model No.	Outer dimensions			LM block dimensions											LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Height	Width	Length											Grease nipple		Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	M	W	L	B	C	H	S×ℓ	L_1	T	T_1	K	N	E		H_3	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 100HA	120	250	334	220	200	—	M18*	261	32	35	100	23	16	B-PT1/4	20.5	100	75	70	210	26×39×32	3000	351	506	19.4	98.2	19.4	98.2	22.4	32	49
HSR 100HB		250		220		20	—		32	35							75												
HSR 100HR		200		130		—	M18×27		33	—							50												
HSR 120HA	130	290	365	250	210	—	M20*	287	34	38	110	26.5	16	B-PT1/4	20	114	88	75	230	33×48×43	3000	429	612	25.9	129	25.9	129	31.1	43	61
HSR 120HB		290		250		22	—		34	38							88												
HSR 120HR		220		146		—	M20×30		33.7	—							53												
HSR 150HA	145	350	396	300	230	—	M24*	314	36	40	123	29	16	B-PT1/4	22.5	144	103	85	250	39×58×46	3000	518	728	33.6	167	33.6	167	45.2	62	87
HSR 150HB		350		300		26	—		36	40							103												
HSR 150HR		266		180		—	M24×35		33	—							61												

Note) "*" indicates a through hole.

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
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

HSR150 HR 2 UU C1 +2350L H T -II

- HSR150: Model number
- HR: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +2350L: LM rail length (in mm)
- H: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on 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.)

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model HSR 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.

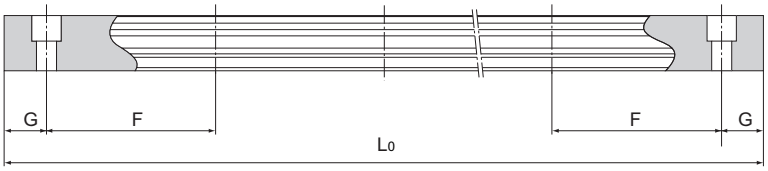


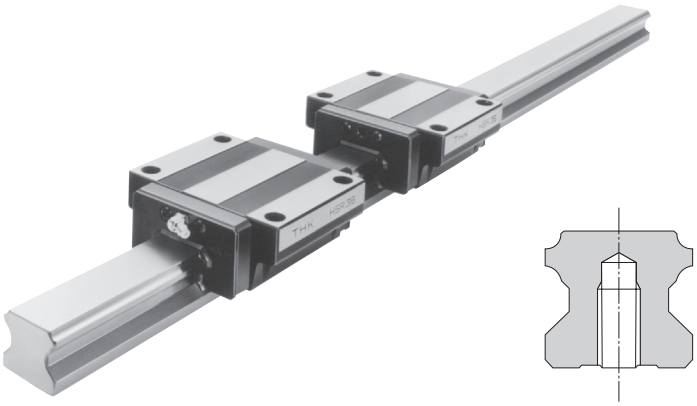
Table1 Standard Length and Maximum Length of the LM Rail for Model HSR Unit: mm

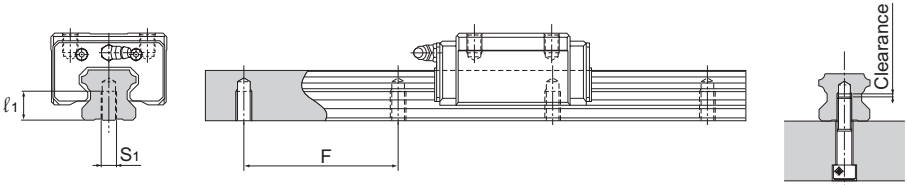
Model No.	HSR 8	HSR 10	HSR 12	HSR 15	HSR 20	HSR 25	HSR 30	HSR 35	HSR 45	HSR 55	HSR 65	HSR 85	HSR 100	HSR 120	HSR 150
LM rail standard length (L_0)	35 55 75 95 115 135 155 175 195 215 235 255 275	45 70 95 120 145 170 195 220 245 270 295 320 345 370 395 420 445 470	70 110 150 190 230 270 310 350 390 430 470 510 550 590 630 670	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600 1720 1840 1960 2080 2200	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1720 1840 1960 2080 2200 2320 2440	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620	1530 1890 2250 2610	1340 1760 2180 2600	1470 1930 2390	1600 2100 2350
Standard pitch F	20	25	40	60	60	60	80	80	105	120	150	180	210	230	250
G	7.5	10	15	20	20	20	20	20	22.5	30	35	45	40	45	50
Max length	(275)	(470)	(670)	3000 (1240)	3000 (1480)	3000 (2020)	3000 (2520)	3000 (2520)	3090	3060	3000	3000	3000	3000	3000

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 figures in the parentheses indicate the maximum lengths of stainless steel made models.
Note4) Ct7 and Ct5 grades are not applicable where the LM rail standard length appears in dimmed type for models HSR 15 to HSR 35.

Tapped-hole LM Rail Type of Model HSR

The model HSR variations include a type with its LM rail bottom tapped. This type is useful when desiring to mount the LM Guide from the bottom of the base and when desiring to increase the contamination protection effect.





(1) Determine the bolt length so that a clearance of 2 to 5 mm is secured between the bolt end and the bottom of the tap (effective tap depth). (See figure above.)
(2) A tapped-hole LM rail type is available also for model HSR-YR.
(3) For standard pitches of the taps, see Table1 on B-82.

Table2 Dimensions of the LM Rail Tap

Unit: mm

Model No.	S_1	Effective tap depth ℓ_1
HSR 15	M5	8
HSR 20	M6	10
HSR 25	M6	12
HSR 30	M8	15
HSR 35	M8	17
HSR 45	M12	24
HSR 55	M14	24
HSR 65	M20	30

Model number coding

HSR30 A2UU +1000LH K

Symbol for tapped-hole LM rail type

Note) Ct7 and Ct5 grades are not applicable.