

HR

LM Guide

B Product Specifications

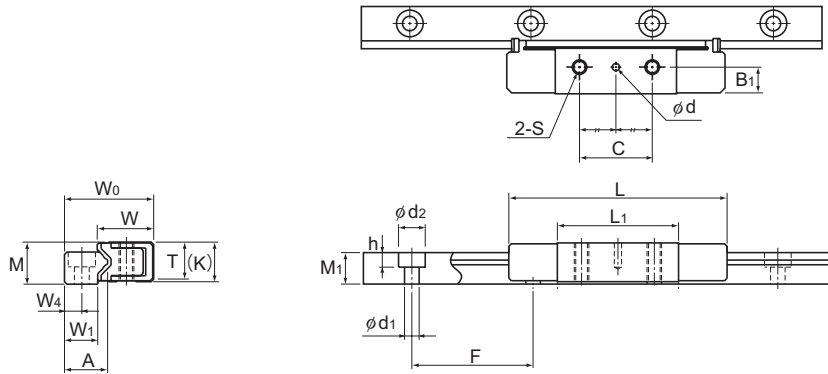
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A Technical Descriptions of the Products (Separate)

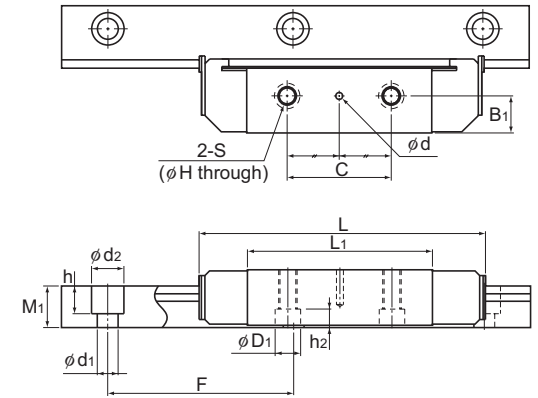
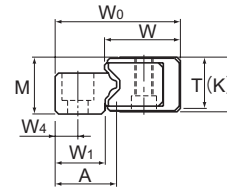
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* Please see the separate "A Technical Descriptions of the Products".

Models HR, HR-T, HR-M and HR-TM



Models HR918 and 918M



Models HR1123 to 2555M/T/TM

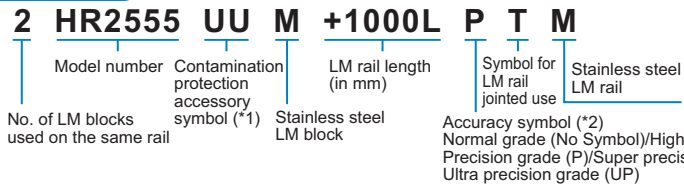
Unit: mm

Model No.	Outer dimensions				LM block dimensions										LM rail dimensions						Basic load rating		Static permissible moment kN-m*				Mass		
	Height	Width		Length									Greasing hole									C	C ₀	M _A		M _B		LM block	LM rail
	M	W	W ₀	L	B ₁	C	H	S	h ₂	L ₁	T	K	d	D ₁	W ₁	W ₄	A	M ₁	F	d ₁ × d ₂ × h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	kg	kg/m
HR 918 HR 918M	8.5	11.4	18	45	5.5	15	—	M3	—	25	7.5	8	1.5	—	6.7	3.5	8.7	6.5	25	3 × 5.5 × 3	300	1.57	3.04	0.0229	0.17	0.0229	0.17	0.01	0.3
HR 1123 HR 1123M	11	13.7	23	52	7	15	2.55	M3	3	30	9.5	10	2	5	9.5	5	11.6	8	40	3.5 × 6 × 4.5	500	2.35	4.31	0.0414	0.272	0.0414	0.272	0.03	0.5
HR 1530 HR 1530M	15	19.2	30	69	10	20	3.3	M4	3.5	40	13	14	2	6.5	10.7	6	13.5	11	60	3.5 × 6 × 4.5	1600	4.31	7.65	0.0982	0.641	0.0982	0.641	0.08	1
HR 2042 HR 2042M	20	26.3	42	91.6	13	35	5.3	M6	5.5	56.6	17.5	19	3	10	15.6	8	19.5	14.5	60	6 × 9.5 × 8.5	2200	9.9	17.2	0.308	1.91	0.308	1.91	0.13	1.8
HR 2042T HR 2042TM	20	26.3	42	110.7	13	50	5.3	M6	5.5	75.7	17.5	19	3	10	15.6	8	19.5	14.5	60	6 × 9.5 × 8.5	2200	13.6	22.9	0.53	2.99	0.53	2.99	0.26	1.8
HR 2555 HR 2555M	25	33.3	55	121	16	45	6.8	M8	7	80	22.5	24	3	11	22	10	27	18	80	9 × 14 × 12	2600	18.6	30.5	0.783	4.41	0.783	4.41	0.43	3.2
HR 2555T HR 2555TM	25	33.3	55	146.4	16	72	6.8	M8	7	105.4	22.5	24	3	11	22	10	27	18	80	9 × 14 × 12	2600	25.1	40.8	1.33	6.95	1.33	6.95	0.5	3.2

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.

Note) A moment in the direction M_c can be received if two rails are used in parallel. However, since it depends on the distance between the two rails, the moment in the direction M_c is omitted here.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-142.)
Static permissible moment*: Static permissible moment value with one set of model HR

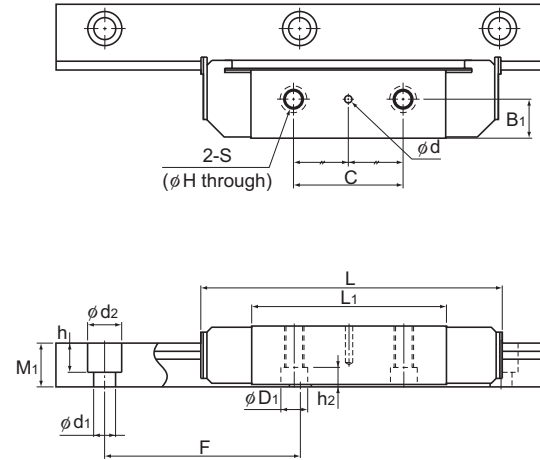
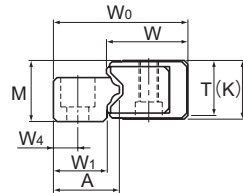
Model number coding



(*1) See contamination protection accessory on A-368. (*2) See A-123.

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

Models HR, HR-T, HR-M and HR-TM



Unit: mm

Model No.	Outer dimensions				LM block dimensions										LM rail dimensions						Basic load rating		Static permissible moment kN-m*				Mass		
	Height	Width		Length								Greasing hole										C	C ₀	M _A		M _B		LM block	LM rail
	M	W	W ₀	L	B ₁	C	H	S	h ₂	L ₁	T	K	d	D ₁	W ₁	W ₄	A	M ₁	F	d ₁ × d ₂ × h	Length*	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	kg
HR 3065 HR 3065T	30	40.3	65	145 173.5	19	50 80	8.6	M10	9	90 118.5	27.5	29	4	14	25	12	31.5	22.5	80	9 × 14 × 12	3000	24.2 32.1	38.6 51.6	1.11 1.89	6.72 10.4	1.11 1.89	6.72 10.4	0.7 0.9	4.6
HR 3575 HR 3575T	35	44.9	75	154.8 182.5	21.5	60 92.5	10.5	M12	12	103.8 131.5	32	34	4	18	30.5	14.5	37	26	105	11 × 17.5 × 14	3000	30 40.2	47.8 63.6	1.53 2.59	8.84 13.5	1.53 2.59	8.84 13.5	1.05 1.4	6.4
HR 4085 HR 4085T	40	50.4	85	177.8 215.9	24	70 110	12.5	M14	13	120.8 158.9	36	38	4	20	35	16	42.5	29	120	14 × 20 × 17	3000	44.1 59.5	68.6 91.7	2.64 4.48	14.4 23	2.64 4.48	14.4 23	1.53 1.7	8
HR 50105 HR 50105T	50	63.4	105	227 274.5	30	85 130	14.5	M16	15.5	150 197.5	45	48	5	23	42	20	51.5	37	150	18 × 26 × 22	3000	70.7 96	107 143	5.15 8.74	28.9 45.7	5.15 8.74	28.9 45.7	3.06 3.5	12.1
HR 60125	60	74.4	125	329	35	160	18	M20	18	236	55	58	5	26	51	25	65	45	180	22 × 32 × 25	3000	141	206	14.3	79.6	14.3	79.6	7.5	19.3

Model number coding

2 HR4085T UU +1500L P T

2: No. of LM blocks used on the same rail
 HR4085T: Model number
 UU: Contamination protection accessory symbol (*1)
 +1500L: LM rail length (in mm)
 P: Accuracy symbol (*2)
 T: Symbol for LM rail jointed use

Accuracy symbol (*2)
 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-123.

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

Note) A moment in the direction M_c can be received if two rails are used in parallel. However, since it depends on the distance between the two rails, the moment in the direction M_c is omitted here.
 The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-142.)
 Static permissible moment*: Static permissible moment value with one set of model HR

Standard Length and Maximum Length of the LM Rail

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

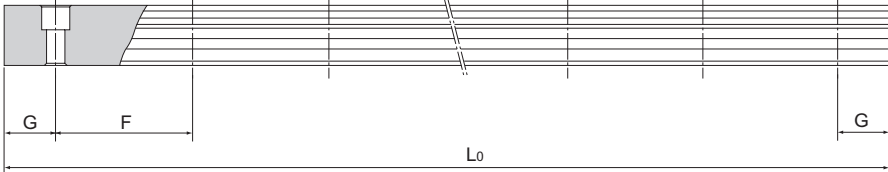


Table1 Standard Length and Maximum Length of the LM Rail for Model HR

Unit: mm

Model No.	HR 918	HR 1123	HR 1530	HR 2042	HR 2555	HR 3065	HR 3575	HR 4085	HR 50105	HR 60125
LM rail standard length (L ₀)	70	110	160	220	280	280	570	780	1270	1530
	120	230	280	280	440	440	885	1020	1570	1890
	220	310	340	340	600	600	1200	1260	2020	2250
	295	390	460	460	760	760	1620	1500	2620	2610
			580	640	1000	1000	2040	1980		
					1240	1240	2460	2580		
Standard pitch F	25	40	60	60	80	80	105	120	150	180
G	10	15	20	20	20	20	22.5	30	35	45
Max length	300	500	1600	2200	2600	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.

Accessories

[Dedicated Mounting Bolt]

Normally, when mounting the LM block to adjust a clearance, use the tapped hole provided on the LM block to secure it as shown in Fig.1.

The holes of the bolt (d_1 and D_1) must be machined so that they are greater by the adjustment allowance.

If it is inevitable to use the mounting method as indicated by Fig.2 for a structural reason, the dedicated mounting bolt as shown in Fig.3 is required for securing the LM block. Be sure to specify that the dedicated mounting bolt is required when ordering the LM Guide.

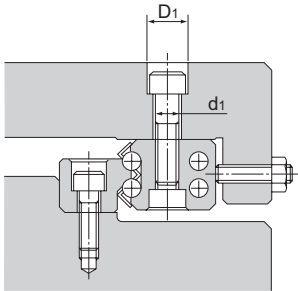


Fig.1

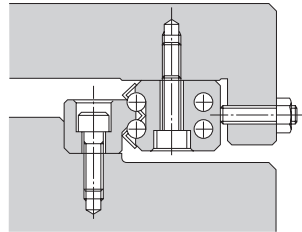


Fig.2

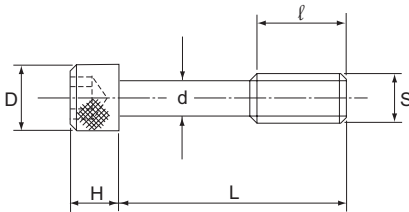


Fig.3

Table2 Dedicated Mounting Bolt

Unit: mm

Model No.	S	d	D	H	L	ℓ	Supported model number
B 3	M3	2.4	5.5	3	17	5	HR 1530
B 5	M5	4.1	8.5	5	22	7	HR 2042
B 6	M6	4.9	10	6	28	9	HR 2555
B 8	M8	6.6	13	8	34	12	HR 3065
B 10	M10	8.3	16	10	39	15	HR 3575
B 12	M12	10.1	18	12	45	18	HR 4085
B 14	M14	11.8	21	14	55	21	HR 50105
B 16	M16	13.8	24	16	66	24	HR 60125