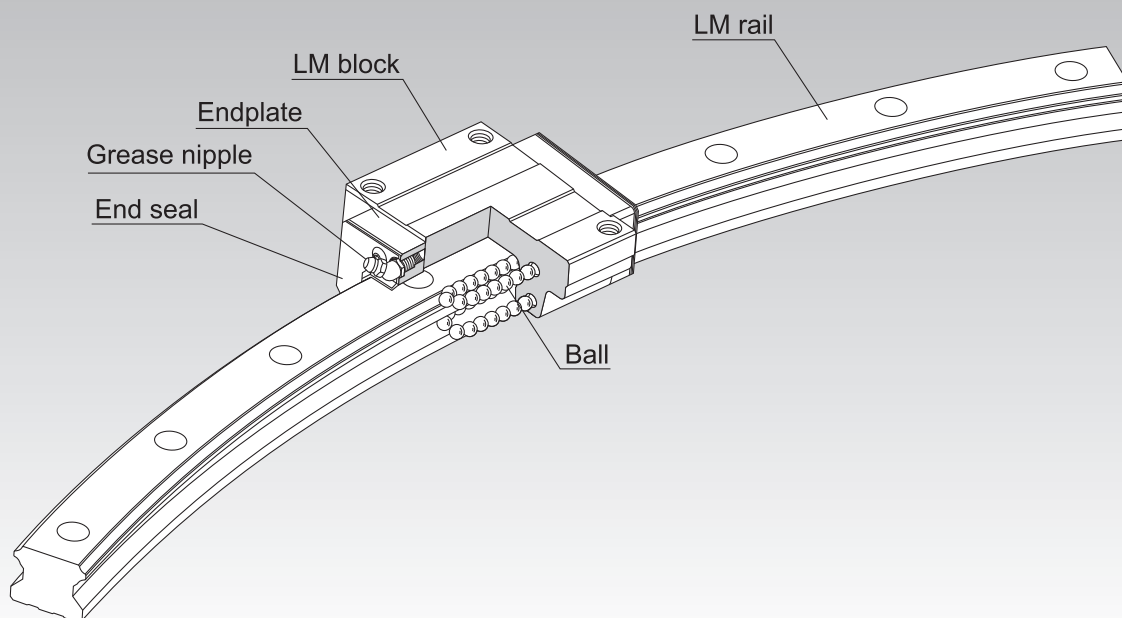


HCR

LM Guide R Guide Model HCR



Point of Selection **A1-10**

Point of Design **A1-460**

Options **A1-485**

Model No. **A1-551**

Precautions on Use **A1-557**

Accessories for Lubrication **A24-1**

Mounting Procedure and Maintenance **B1-89**

Equivalent Moment Factor **A1-43**

Rated Loads in All Directions **A1-60**

Equivalent Factor in Each Direction **A1-62**

Radial Clearance **A1-74**

Accuracy Standards **A1-80**

Shoulder Height of the Mounting Base and the Corner Radius **A1-471**

Dimensions of Each Model with Options Attached **A1-499**

A1-332 THK

Structure and Features

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.

With a structure that is basically the same as four-way equal load type LM Guide model HSR, which has a proven track record, this R Guide is a new concept product that allows highly accurate circular motion.

[Freedom of Design]

Multiple LM blocks can individually move on the same rail. By arranging LM blocks on the load points, efficient structural design is achieved.

[Shortened Assembly Time]

This model allows clearance-free, highly accurate circular motion as opposed to sliding guides or cam followers. You can easily assemble this model simply by mounting the LM rail and LM blocks with bolts.

[Allows Circular Motion of 5m or Longer]

It allows circular motion of 5 m or longer, which is impossible with swivel bearings.

In addition, use of this model makes it easy to assemble, disassemble and reassemble equipment that circularly moves.

[Capable of Receiving a Load in Any Direction]

This model is capable of receiving loads in all directions since it has a structure that is basically the same as model HSR.

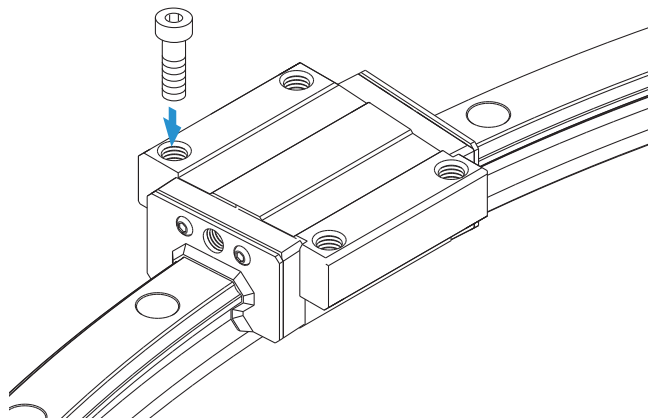
THK A1-333

Types and Features

Model HCR

Specification Table⇒ **A1-336**

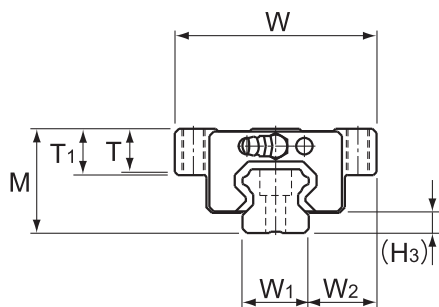
The flange of its LM block has tapped holes.



A1-334 **THK**

THK A1-335

R Guide Model HCR



| Model No. | Outer dimensions | | | LM block dimensions | | | | | | | | | Grease nipple | H ₃ |
|------------------|------------------|-------|--------|---------------------|-----|-----|----------------|------|----------------|-----|-----|---------|---------------|----------------|
| | Height | Width | Length | B | C | S | L ₁ | T | T ₁ | N | E | | | |
| | M | W | L | | | | | | | | | | | |
| HCR 12A+60/100R | 18 | 39 | 44.6 | 32 | 18 | M4 | 30.5 | 4.5 | 5 | 3.4 | 3.5 | PB107 | 3.1 | |
| HCR 15A+60/150R | 24 | 47 | 54.5 | 38 | 28 | M5 | 38.8 | 10.3 | 11 | 4.5 | 5.5 | PB1021B | 4.8 | |
| HCR 15A+60/300R | | | 55.5 | | | | | | | | | | | |
| HCR 15A+60/400R | | | 55.8 | | | | | | | | | | | |
| HCR 25A+60/500R | 36 | 70 | 81.6 | 57 | 45 | M8 | 59.5 | 14.9 | 16 | 6 | 12 | B-M6F | 7 | |
| HCR 25A+60/750R | | | 82.3 | | | | | | | | | | | |
| HCR 25A+60/1000R | | | 82.5 | | | | | | | | | | | |
| HCR 35A+60/600R | 48 | 100 | 107.2 | 82 | 58 | M10 | 80.4 | 19.9 | 21 | 8 | 12 | B-M6F | 8.5 | |
| HCR 35A+60/800R | | | 107.5 | | | | | | | | | | | |
| HCR 35A+60/1000R | | | 108.2 | | | | | | | | | | | |
| HCR 35A+60/1300R | | | 108.5 | | | | | | | | | | | |
| HCR 45A+60/800R | 60 | 120 | 136.7 | 100 | 70 | M12 | 98 | 23.9 | 25 | 10 | 16 | B-PT1/8 | 11.5 | |
| HCR 45A+60/1000R | | | 137.3 | | | | | | | | | | | |
| HCR 45A+60/1200R | | | 137.3 | | | | | | | | | | | |
| HCR 45A+60/1600R | | | 138 | | | | | | | | | | | |
| HCR 65A+60/1000R | 90 | 170 | 193.8 | 142 | 106 | M16 | 147 | 34.9 | 37 | 19 | 16 | B-PT1/8 | 15 | |
| HCR 65A+60/1500R | | | 195.4 | | | | | | | | | | | |
| HCR 65A+45/2000R | | | 195.9 | | | | | | | | | | | |
| HCR 65A+45/2500R | | | 196.5 | | | | | | | | | | | |
| HCR 65A+30/3000R | | | 196.5 | | | | | | | | | | | |

Model number coding

HCR25A 2 UU C1 +60 / 1000R H 6 T

Model number

Contamination protection accessory symbol (*1)

R-Guide center angle

LM rail radius (in mm)

Symbol for LM rail jointed use (*5)

No. of LM blocks used on the same rail

Normal (No symbol)
Light preload (C1)

Normal grade (No Symbol)
High accuracy grade (H)

Number of LM rail joints used on one axis (*4)

(*1) See **A1-524** (contamination protection accessories). (*2) See **A1-74**. (*3) See **A1-80**.

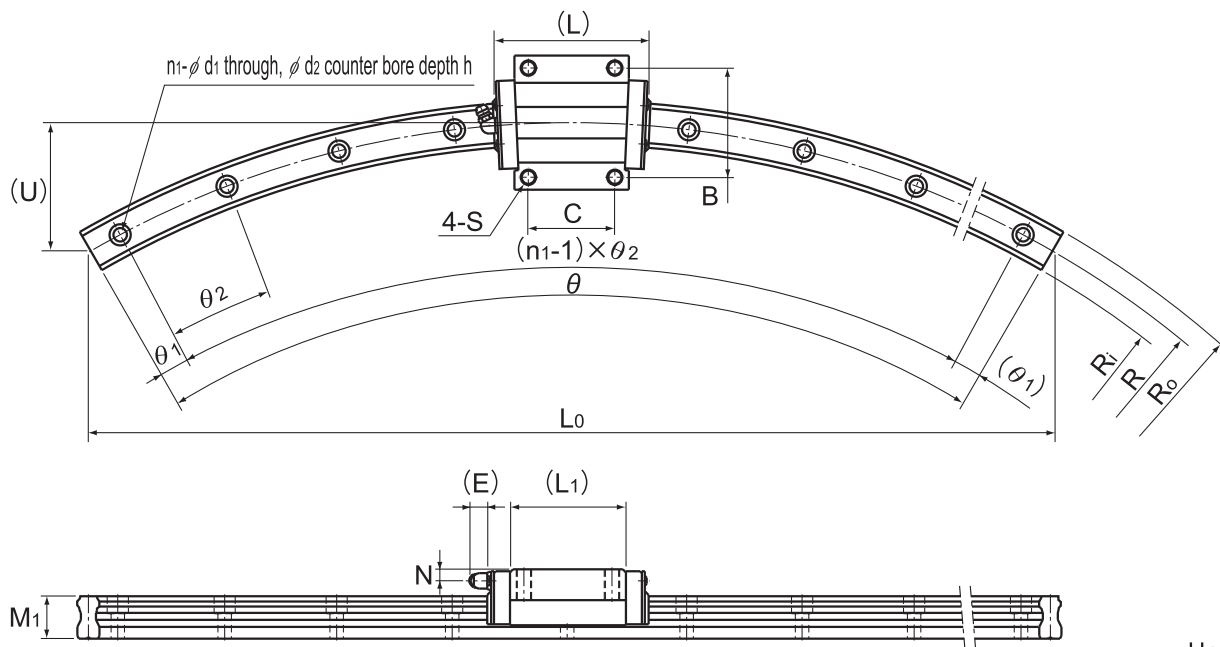
(*4) Number of LM rails used for one arc. Contact THK for details.

(*5) When using jointed LM rails for models HCR15 to 65, the dust-proofing seal must be a low-resistance end seal (contamination protection accessory symbol: LL).

A1-336 THK

Download data by searching for the corresponding model number on the Technical Support site.

<https://tech.thk.com>



Unit: mm

| LM rail dimensions | | | | | | | | | | | | | Basic load rating | | Static permissible moment kN·m* | | | | | Mass | |
|--------------------|----------------|----------------|----------------|------|----------------|----------------|----------------|-----------------------------------|----------------|----|------------------|------------------|-------------------|----------------|---------------------------------|---------------|----------------|---------------|----------------|----------|---------|
| R | R ₀ | R _i | L ₀ | U | Width | Height | | | | | | | C | C ₀ | M _A | | M _B | | M _C | LM block | LM rail |
| | | | | | W ₁ | W ₂ | M ₁ | d ₁ ×d ₂ ×h | n ₁ | θ° | θ _i ° | θ ₂ ° | kN | kN | 1 block | Double blocks | 1 block | Double blocks | 1 block | kg | kg/m |
| 100 | 106 | 94 | 100 | 13.4 | 12 | 13.5 | 11 | 3.5×6×5 | 3 | 60 | 7 | 23 | 4.7 | 8.53 | 0.0409 | 0.228 | 0.0409 | 0.228 | 0.0445 | 0.08 | 0.83 |
| 150 | 157.5 | 142.5 | 150 | 20.1 | | | | | 3 | | 7 | 23 | 6.66 | 10.8 | | | | | | | |
| 300 | 307.5 | 292.5 | 300 | 40 | 15 | 16 | 15 | 4.5×7.5×5.3 | 5 | 60 | 6 | 12 | 8.33 | 13.5 | 0.0805 | 0.457 | 0.0805 | 0.457 | 0.0844 | 0.2 | 1.5 |
| 400 | 407.5 | 392.5 | 400 | 54 | | | | | 7 | | 3 | 9 | 8.33 | 13.5 | | | | | | | |
| 500 | 511.5 | 488.5 | 500 | 67 | | | | | 9 | | 2 | 7 | | | | | | | | | |
| 750 | 761.5 | 738.5 | 750 | 100 | 23 | 23.5 | 22 | 7×11×9 | 12 | 60 | 2.5 | 5 | 19.9 | 34.4 | 0.307 | 1.71 | 0.307 | 1.71 | 0.344 | 0.59 | 3.3 |
| 1000 | 1011.5 | 988.5 | 1000 | 134 | | | | | 15 | | 2 | 4 | | | | | | | | | |
| 600 | 617 | 583 | 600 | 80 | | | | | 7 | | 3 | 9 | | | | | | | | | |
| 800 | 817 | 783 | 800 | 107 | 34 | 33 | 29 | 9×14×12 | 11 | 60 | 2.5 | 5.5 | 37.3 | 61.1 | 0.782 | 3.93 | 0.782 | 3.93 | 0.905 | 1.6 | 6.6 |
| 1000 | 1017 | 983 | 1000 | 134 | | | | | 12 | | 2.5 | 5 | | | | | | | | | |
| 1300 | 1317 | 1283 | 1300 | 174 | | | | | 17 | | 2 | 3.5 | | | | | | | | | |
| 800 | 822.5 | 777.5 | 800 | 107 | | | | | 8 | | 2 | 8 | | | | | | | | | |
| 1000 | 1022.5 | 977.5 | 1000 | 134 | 45 | 37.5 | 38 | 14×20×17 | 10 | 60 | 3 | 6 | 60 | 95.6 | 1.42 | 7.92 | 1.42 | 7.92 | 1.83 | 2.8 | 11.0 |
| 1200 | 1222.5 | 1177.5 | 1200 | 161 | | | | | 12 | | 2.5 | 5 | | | | | | | | | |
| 1600 | 1622.5 | 1577.5 | 1600 | 214 | | | | | 15 | | 2 | 4 | | | | | | | | | |
| 1000 | 1031.5 | 968.5 | 1000 | 134 | | | | | 8 | 60 | 2 | 8 | | | | | | | | | |
| 1500 | 1531.5 | 1468.5 | 1500 | 201 | | | | | 10 | 60 | 3 | 6 | | | | | | | | | |
| 2000 | 2031.5 | 1968.5 | 1531 | 152 | 63 | 53.5 | 53 | 18×26×22 | 12 | 45 | 0.5 | 4 | 141 | 215 | 4.8 | 23.5 | 4.8 | 23.5 | 5.82 | 8.5 | 22.5 |
| 2500 | 2531.5 | 2468.5 | 1913 | 190 | | | | | 13 | 45 | 1.5 | 3.5 | | | | | | | | | |
| 3000 | 3031.5 | 2968.5 | 1553 | 102 | | | | | 10 | 30 | 1.5 | 3 | | | | | | | | | |

Note) Static permissible moment*

Total block length L

1 block: the static permissible moment with one LM block
 Double blocks: static permissible moment when two LM blocks are in close contact with each other
 : The total block length L shown in the table is the length with the dust proof parts, code UU or SS.
 If other contamination protection accessories or lubricant equipment are installed, the total block length will increase.
 (See **A1-499** or **A1-520**)

Please be aware that balls will fall out if the LM block is removed from the LM rail.

LM rail radii other than those shown in the table are also available. Contact THK for details.

The θ° in the table represents the maximum manufacturing angle. Exceeding this angle is normally done by using a joint; however, some parts may have LM rails that exceed the maximum manufacturing angle. Contact THK for details.

Options⇒ **A1-485****THK A1-337**