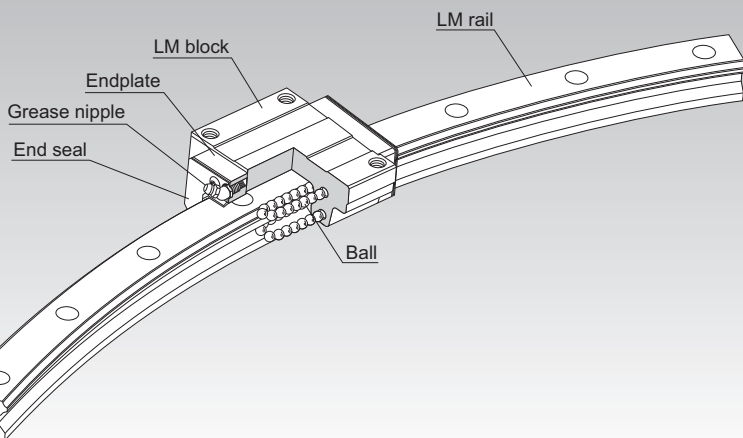


HCR

LM Guide R Guide Model HCR



Point of Selection **A1-10**

Point of Design **A1-436**

Options **A1-459**

Model No. **A1-524**

Precautions on Use **A1-530**

Accessories for Lubrication **A24-1**

Mounting Procedure and Maintenance **B1-89**

Equivalent moment factor **A1-43**

Rated Loads in All Directions **A1-58**

Equivalent factor in each direction **A1-60**

Radial Clearance **A1-72**

Accuracy Standards **A1-78**

Shoulder Height of the Mounting Base and the Corner Radius **A1-447**

Dimensions of Each Model with an Option Attached **A1-472**

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 Loads in All Directions]

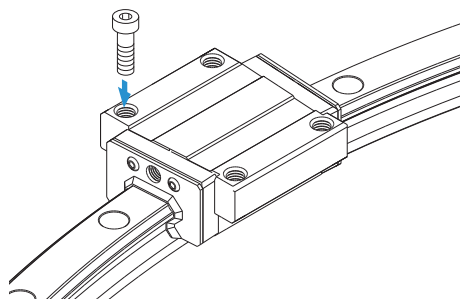
This model is capable of receiving loads in all directions since it has a structure that is basically the same as model HSR.

Types and Features

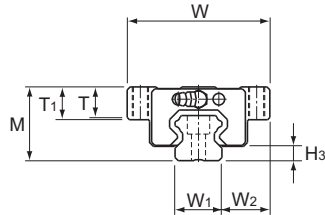
Model HCR

Specification Table → **A1-318**

The flange of its LM block has tapped holes.



R Guide Model HCR



| Model No. | Outer dimensions | | | LM block dimensions | | | | | | | | | H ₃ |
|------------------|------------------|-------|--------|---------------------|-----|-----|----------------|------|----------------|-----|-----|---------------|----------------|
| | Height | Width | Length | B | C | S | L ₁ | T | T ₁ | N | E | Grease nipple | |
| | 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 | 24 | M5 | 38.8 | 10.3 | 11 | 4.5 | 5.5 | PB1021B | 4.8 |
| HCR 15A+60/300R | | | 55.5 | | | | | | | | | | |
| HCR 15A+60/400R | 36 | 70 | 81.6 | 57 | 45 | M8 | 59.5 | 14.9 | 16 | 6 | 12 | B-M6F | 7 |
| HCR 25A+60/500R | | | 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

No. of LM blocks used on the same rail

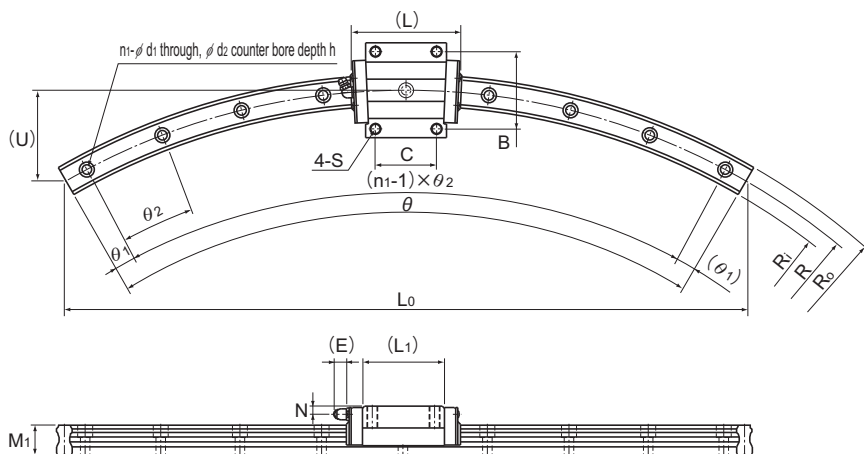
Radial clearance symbol (*2)
Normal (No symbol)
Light preload (C1)

Accuracy symbol (*3)
Normal grade (No Symbol)
High accuracy grade (H)

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

(*1) See **A1-496** (contamination protection accessories). (*2) See **A1-72**. (*3) See **A1-78**.

(*4) Number of LM rails used on one arc. For details, contact THK.



Unit: mm

| LM rail dimensions | | | | | | | | | | | | | | Basic load rating | | Static permissible moment kN-m* | | | | | Mass | |
|--------------------|----------------|----------------|----------------|------|----------------|----------------|--------|-------------------------------------|----------------|----|------------------|------------------|------|-------------------|----------------|---------------------------------|----------------|---------------|----------------|----------------|-----------------|--|
| R | R ₀ | R _i | L ₀ | U | Width | | Height | d ₁ × d ₂ × h | n ₁ | θ° | θ ₁ ° | θ ₂ ° | C | C ₀ | M _A | | M _B | | M _C | LM block kg | LM rail kg/m | |
| | | | | | W ₁ | W ₂ | | | | | | | | | 1 block | Double blocks | 1 block | Double blocks | 1 block | | | |
| 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 | | | | | | | | | | | | | | | | | | |
| 300 | 307.5 | 292.5 | 300 | 40 | 15 | 16 | 15 | 4.5×7.5×5.3 | 5 | 60 | 6 | 12 | 6.66 | 10.8 | 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) LM rail radiuses other than the radiuses in the above table are also available. Contact THK for details.

The R-Guide center angles in the table are maximum manufacturing angles. To obtain angles greater than them, rails must be additionally connected. Contact THK for details.

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