

Linear Guideways - H Series



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Oil refilling rate

Table 2-1-11

| Size | Refilling rate (cm ³ /hr) | Size | Refilling rate (cm ³ /hr) |
|------|--------------------------------------|------|--------------------------------------|
| H15 | 0.2 | H35 | 0.3 |
| H20 | 0.2 | H45 | 0.4 |
| H25 | 0.3 | H55 | 0.5 |
| H30 | 0.3 | H65 | 0.6 |

2-1-8 Dust Proof Accessories

(1) Codes of standard dust proof accessories

If the following accessories are needed, please add the code followed by the model number.

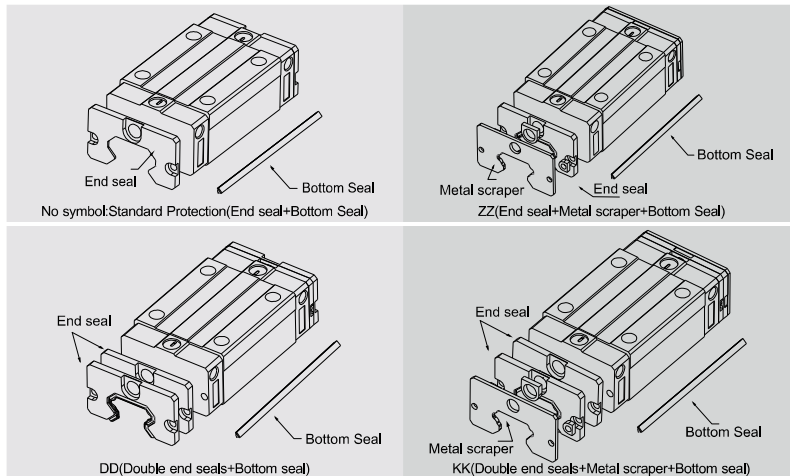


Table 2-1-12

| Size | Overall block length (L) | | | |
|------|--------------------------|-------|-------|-------|
| | SS | ZZ | DD | KK |
| H15C | 60.5 | 64.1 | 65.5 | 69.1 |
| H20C | 76.7 | 80.3 | 82.5 | 86.1 |
| H20H | 91.4 | 95 | 97.2 | 100.8 |
| H25C | 84 | 87.6 | 90 | 93.6 |
| H25H | 104.6 | 108.2 | 110.6 | 114.2 |
| H30C | 98.4 | 102 | 104.6 | 108.2 |
| H30H | 121.4 | 125 | 127.6 | 131.2 |
| H35C | 112.4 | 116 | 118.8 | 122.4 |
| H35H | 138.2 | 141.8 | 144.6 | 148.2 |
| H45C | 137.4 | 141 | 145.4 | 149 |
| H45H | 169.2 | 172.8 | 177.2 | 180.8 |

unit:mm

(4) Fuction of dust proof accessories

End seal and bottom seal

To prevent life reduction caused by iron chips or dust entering the block.

Double seals

Enhances the wiping effect, foreign matter can be completely wiped off.

Table 2-1-13 Dimensions of end seal

| Size | Thickness (t1) (mm) | Size | Thickness (t1) (mm) |
|--------|---------------------|--------|---------------------|
| H15 ES | 3 | H35 ES | 3.2 |
| H20 ES | 3.5 | H45 ES | 4.5 |
| H25 ES | 3.5 | H55 ES | 4.5 |
| H30 ES | 3.2 | H65 ES | 6 |

Scraper

The scraper removes high-temperature iron chips and larger foreign objects.

Table 2-1-14 Dimensions of scraper

| Size | Thickness (t2) (mm) | Size | Thickness (t2) (mm) |
|--------|---------------------|--------|---------------------|
| H15 SC | 1.5 | H35 SC | 1.5 |
| H20 SC | 1.5 | H45 SC | 1.5 |
| H25 SC | 1.5 | H55 SC | 1.5 |
| H30 SC | 1.5 | H65 SC | 1.5 |

Top Seal

Top seal can efficiently avoid dust from the surface of rail or tapping hole getting inside the block.

Bolt caps for rail mounting holes

Caps are used to cover the mounting holes to prevent chips or other foreign objects from collecting in the holes. The caps will be enclosed in each rail package.

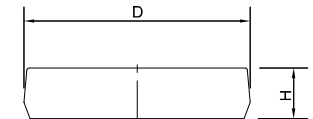
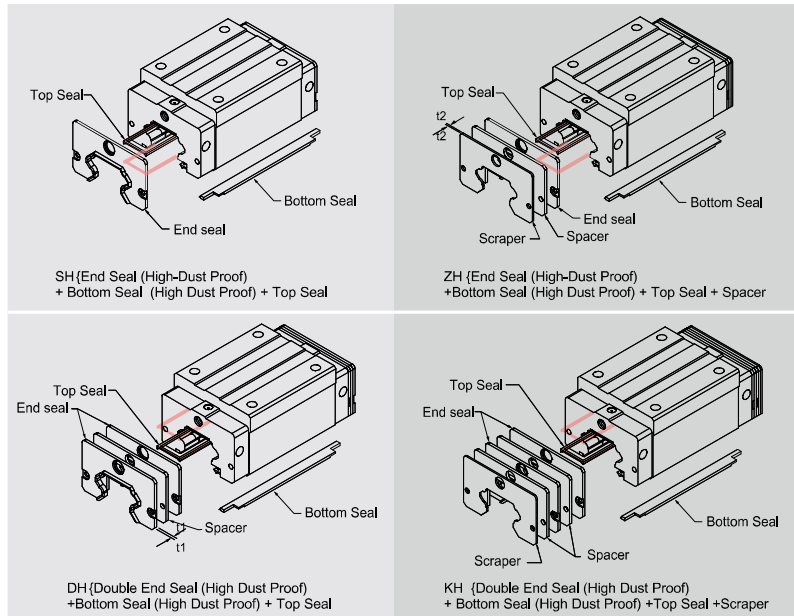


Table 2-1-15 Dimensions of Bolt Caps for Rail Mounting Holes

| Rail size | Bolt size | Diameter(D) (mm) | Thickness(H) (mm) | Rail size | Bolt size | Diameter(D) (mm) | Thickness(H) (mm) |
|-----------|-----------|------------------|-------------------|-----------|-----------|------------------|-------------------|
| HR15 | M4 | 7.65 | 1.1 | HR35 | M8 | 14.25 | 3.3 |
| HR20 | M5 | 9.65 | 2.2 | HR45 | M12 | 20.25 | 4.6 |
| HR25 | M6 | 11.2 | 2.5 | HR55 | M14 | 23.5 | 5.5 |
| HR30 | M8 | 14.25 | 3.3 | HR65 | M16 | 26.6 | 5.5 |

(2) Codes of high-dust proof accessories

LIMON develops many kinds of dust proof accessories for different application and working environment to avoid dust or debris. If the following accessories are needed, please add the code followed by the model number.



Note: 1. The available size for high dust proof accessories are HH20(C/H), 25(C/H), 30(C/H), 35(C/H) and 45C.
2. The value of friction force will increase 0.6~1.2 kgf.

2-1-9 Friction

The maximum value of resistance per end seal are as shown in the table.

Table 2-1-16 Seal Resistance

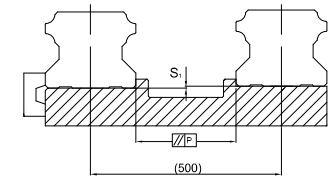
| Size | Resistance N (kgf) | Size | Resistance N (kgf) |
|------|--------------------|------|--------------------|
| H15 | 1 (0.1) | H35 | 3 (0.31) |
| H20 | 1.7 (0.1) | H45 | 4 (0.41) |
| H25 | 2 (0.2) | H55 | 5 (0.51) |
| H30 | 2.6 (0.27) | H65 | 6 (0.61) |

Note: 1kgf=9.81N

2-1-10 The Accuracy Tolerance of Mounting Surface

(1) The accuracy tolerance of rail-mounting surface
Because of the Circular-arc contact design, the H linear guideway can compensate for some surface-error on installation and still maintain smooth linear motion.

As long as the accuracy requirements for the mounting surface are followed, high accuracy and rigidity of linear motion of the guideway can be obtained without any difficulty. In order to satisfy the needs of fast installation and smooth movement, LIMON offers the normal clearance type of preload to customers of its high absorption ability of the deviation in mounting surface accuracy.



(2) The parallelism tolerance of reference surface (P)

Table 2-1-17 Max. Parallelism Tolerance (P)

unit: μm

| Size | Preload classes | | |
|------|-----------------|----|----|
| | Z0 | ZA | ZB |
| H15 | 25 | 18 | 13 |
| H20 | 25 | 20 | 18 |
| H25 | 30 | 22 | 20 |
| H30 | 40 | 30 | 27 |
| H35 | 50 | 35 | 30 |
| H45 | 60 | 40 | 35 |
| H55 | 70 | 50 | 45 |
| H65 | 80 | 60 | 55 |

(3) The accuracy tolerance of reference surface height

Table 2-1-18 Max. Tolerance of Reference Surface Height (S₁)

unit: μm

| Size | Preload classes | | |
|------|-----------------|-----|-----|
| | Z0 | ZA | ZB |
| H15 | 130 | 85 | 35 |
| H20 | 130 | 85 | 50 |
| H25 | 130 | 85 | 70 |
| H30 | 170 | 110 | 90 |
| H35 | 210 | 150 | 120 |
| H45 | 250 | 170 | 140 |
| H55 | 300 | 210 | 170 |
| H65 | 350 | 250 | 200 |