Precautions on Use

- **Handling**
  - Pull out the LM block from the LM rail will cause balls to fall. When removing the LM block from the LM rail and then replacing the block, an LM block removing/mounting jig is available. Contact THK for details.
  - Do not disassemble the parts. Doing so may cause entrance of dust or a functional loss.
  - Tilting the LM block or the LM rail may cause it to fall by its own weight.
  - Do not drop or hit the LM Guide. Doing so may cause injury. It may also cause failure or breakage. Applying an impact to the product may cause a functional loss even if it may look intact.
  - The product is provided with moisture-proof packaging after thoroughly degreased and cleaned. Unpack the product immediately before use whenever it is possible.
  - After unpacking the product, store it in a clean dry container together with a desiccant (e.g., silica gel). Do not apply antocorrosive oil or use volatile corrosion inhibitor paper (agent).
  - When handling the product, use vinyl gloves or the like in a clean place.

- **Service temperature range**
  - The maximum service temperature of the product is 200°C. If the product is in an environment at temperature exceeding 100°C, be sure to take into account the temperature coefficient when calculating the rated life and the static safety factor. See the general catalog for details.

- **Service environment and lubrication**
  - Use the product in a clean place under an environment at pressure from atmosphere pressure to vacuum (10^{-3} Pa).
  - This product contains a lubricant dedicated for Medium-to-Low Vacuum. Do not mix lubricants of different properties when using the product.
  - This product does not have a grease nipple or an oil hole for greasing (replenishment of grease is not allowed). The product must be handled with the initially supplied lubricant. Contact THK for details.

- **Storage**
  - When storing the LM Guide, enclose it in a package designated by THK and store it in a horizontal orientation in a place controlled to a constant environment while avoiding high temperature, low temperature and high humidity.

- **Handling**
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*“LM GUIDE” and “” are registered trademarks of THK CO., LTD.*
LM Guide for Medium-to-Low Vacuum

**Features**
- Operable in various environments at pressure between atmospheric pressure and vacuum ($10^{-3}$ Pa).
- Capable of withstanding baking temperature up to 200°C.
- Use of a newly developed labyrinth end seal dedicated for Medium-to-Low Vacuum increases grease retention and allows extended use in vacuum.
- Use of grease designed for Medium-to-Low Vacuum achieves a stable rolling resistance.

*If the baking temperature exceeds 100°C, multiply the basic load rating with the temperature coefficient.*

**Achievable vacuum level**
The LM Guide for Medium-to-Low Vacuum demonstrates an excellent achievable vacuum level.

**Rolling resistance**
The grease used in the LM Guide for Medium-to-Low Vacuum has a smaller rolling resistance than conventional fluorine grease and ensures stable rolling motion.

---

### Model HSR15M1R-VV

**Dimensional table for model HSR15M1R-VV**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Outer dimensions</th>
<th>LM block dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSR15M1R-VV</td>
<td>Height (M) 28</td>
<td>Width (W) 34</td>
</tr>
<tr>
<td></td>
<td>Length (L) 75</td>
<td>B 26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C 26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S 38.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>K 23.7</td>
</tr>
</tbody>
</table>

**LM rail dimensions**
- Width (W1) ±0.05
- Height (M1) 15

**Basic load rating**
- Static permissible moment [kN-m] 60
- Static permissible moment [kN] 8.33
- Static permissible moment [kN] 0.0805
- Static permissible moment [kN] 0.457
- Static permissible moment [kN] 0.0844
- Static permissible moment [kN] 0.27
- Static permissible moment [kg-m] 1.5

**LM rail length (mm)**
- HSR15M1R-VV 75

**Note**
- If you desire a product other than the model numbers indicated above, contact THK.

---

### Grease
- Specimen: HSR15M1RVV
- Temperature: 25°C (±5°C)
- Pressure: atmospheric pressure

**Grease**
- HSR15M1R-VV: Grease for Medium-to-Low Vacuum
- HSR15R (for reference): AFB-LF Grease

**Seal**
- HSR15M1R-VV: Labyrinth end seal dedicated for Medium-to-Low Vacuum
- HSR15R (for reference): None

**End plate**
- HSR15M1R-VV: Stainless steel
- HSR15R (for reference): Resin

---

### Example of model number coding

<table>
<thead>
<tr>
<th>Model number</th>
<th>Radial clearance symbol</th>
<th>Number of LM blocks on one rail</th>
<th>Number of rails used on the same plane</th>
<th>Accuracy symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSR15M1R-VV 1 VV C1 + 400L P - II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* This symbol in this example represents use of a labyrinth end seal for Medium-to-Low Vacuum + a labyrinth side seal.

---

**Note**
- The radial clearance, maximum LM rail length and accuracy class are equal to that of model HSR. See the general catalog for details.
- Note 2: With this model, a single-rail unit constitutes one set (i.e., the required number of sets when 2 rails are used in parallel is 2).
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<td>34</td>
</tr>
</tbody>
</table>

**Unit**: mm

**Notes**
- If you desire a product other than the model numbers indicated above, contact THK.
- Static permissible moment: 1 block: static permissible moment value with 1 LM block
  - Double blocks: static permissible moment value with 2 LM blocks closely contacting with each other

---

### Example of model number coding

- **HSR15M1R VV 1**
- **1 VV C1 + 400L P - I**

- Model number
- Radial clearance symbol
- Number of LM blocks on one rail
- LM rail length (mm)
- Accuracy symbol

*This symbol in this example represents use of a labyrinth end seal for Medium-to-Low Vacuum + a labyrinth side seal.*

**Note 1:** The radial clearance, maximum LM rail length and accuracy class are equal to that of model HSR. See the general catalog for details.

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- The photo may differ slightly in appearance from the actual product.

For export of THK products as single items, contact THK in advance.

새로 개발됨: 사용 중 발생하는 공기의 압력이 제품의 최적의 압력 (10^-3 Pa)의 경우, 사용 후 압력이 감소할 수 있습니다. 사용 중 발생하는 공기의 압력이 제품의 최적의 압력 (10^-3 Pa)의 경우, 사용 후 압력이 감소할 수 있습니다. 사용 중 발생하는 공기의 압력이 제품의 최적의 압력 (10^-3 Pa)의 경우, 사용 후 압력이 감소할 수 있습니다.

NEW

LM Guide for Medium-to-Low Vacuum

Achieves a stable rolling resistance in an environment at pressure from atmospheric pressure to vacuum (10^-3 Pa)

NEW: Uses a labyrinth end seal dedicated for Medium-to-Low Vacuum

NEW: Contains grease designed for Medium-to-Low Vacuum