

2. Precautions on Using the LM Roller

Handling

- (1) Disassembling components may cause dust to enter the system or degrade mounting accuracy of parts. Do not disassemble the product.
- (2) Dropping or hitting the LM Roller may damage it. Giving an impact to the LM Roller could also cause damage to its function even if the product looks intact.

Dust Prevention and Lubrication

With the LM Roller, once foreign matter enters the raceway due to poor dust prevention, it cannot be removed easily and tends to severely damage the raceway or the LM rollers. Therefore, use much care in dust prevention.

Fixture for the LM Roller models SE and SEB each have a special rubber wiper with double lips to achieve a high dust prevention effect. Feeding grease between the double lips when attaching the fixture, as shown in Fig. 1, will further increase the effect.

For locations subject to cutting chips or welding spatter, it is necessary to use a dust prevention cover such as a bellows and a telescopic cover, or a wiper reinforced with a metal plate as indicated in Fig. 2.

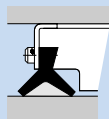


Fig. 1 Wiper of Fixture Models SE and SEB

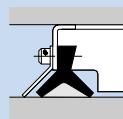


Fig. 2 Reinforced Wiper

For dust prevention of the side faces, items as shown in Fig. 3 are available.

The required quantity of lubricant is much smaller than sliding guides, making the lubrication control easy.

As for the lubricant, the same type of grease or lubricant as that of ordinary bearings will be adequately effective. To achieve a high level of grease retention, it is preferable to use lithium-soap group grease No. 1 or 2, or slightly viscous sliding surface oil or turbine oil.

To replenish the lubricant to the LM Roller, drop the lubricant from the greasing hole provided on the back of the retainer as necessary, or directly drop it to the raceway. If the LM Roller is not used frequently, it is also possible to apply grease to the rollers of the product.

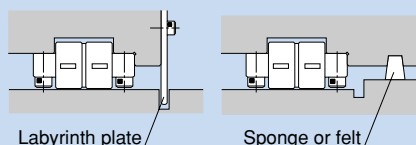


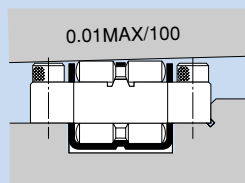
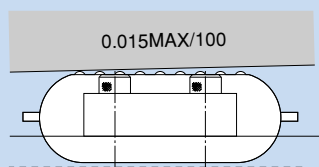
Fig. 3

Mounting Reference Surface

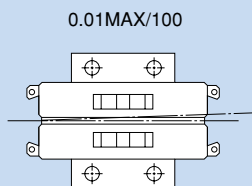
To help correctly mount the LM Roller in the traveling direction, it has a mounting reference surface on the side face of the raceway base. The reference surface is on the opposite side of the THK logo.

Mounting Accuracy

To maximize the performance of the LM Roller, it is necessary to distribute the load as evenly as possible when mounting the product. For the parallelism between the roller and the raceway indicated in Fig. 4, we recommend 0.015 mm or less against 100 mm. For the allowable tilt of the roller in the longitudinal direction, 0.01 mm or less against 100 mm is recommended.



Ⓐ Parallelism between the LM Roller and the raceway Ⓑ Allowable tilt of the roller in the longitudinal direction



Ⓒ Parallelism between the LM Roller and the raceway in the horizontal direction

Fig. 4 LM Roller and Mounting Accuracy

Precautions on Use

- (1) If foreign matter such as dust or cutting chips adheres to the product, replenish the lubricant after cleaning the product with pure white kerosene.
- (2) Do not use the resin retainer for LM Roller model LR (A, B)-Z and seals (including SE and SEB) in an atmosphere at temperature of 80°C or higher.
- (3) When using the product in locations exposed to constant vibrations or in special environments such as clean rooms, vacuum and low/high temperature, contact THK in advance.

Storage

When storing the LM Roller, enclose it in a package designated by THK and store it while avoiding high temperature, low temperature and high humidity.