

## LM Guide Handling Precautions

### Handling

- (1) Please use at least two people to move any product weighing 20 kg or more, or use a cart or another method of conveyance. Otherwise, it may cause injury or damage the unit.
- (2) Do not disassemble the parts. This will result in loss of functionality.
- (3) Tilting an LM block or LM rail may cause it to fall by its own weight.
- (4) Take care not to drop or strike the LM Guide. Otherwise, it may cause injury or damage the unit. Even if there is no outward indication of damage, a sudden impact could prevent the unit from functioning properly.
- (5) When installing the LM Guide, be sure not to remove the LM block from the LM rail.
- (6) Placing a hand inside the LM rail mounting hole may lead to the hand being caught between the block and rail and cause injury.
- (7) Wear appropriate safety gear, such as protective gloves and safety shoes, when handling the product.

### Precautions on Use

- (1) Prevent foreign material, such as cutting chips or coolant, from entering the product. Failure to do so could damage the product.
- (2) If the product is used in an environment where cutting chips, coolant, corrosive solvents, water, etc., may enter the product, use bellows, covers, etc., to prevent them from entering the product.
- (3) Do not use the product at temperatures of 80°C or higher. Unless the unit is specially designed to be heat-resistant, exposure to such temperatures may deform or damage plastic and rubber parts.
- (4) If foreign materials such as cutting chips adhere to the product, replenish the lubricant after cleaning the product.
- (5) Very small strokes can inhibit the formation of an oil film between the raceways and the areas of contact on the rolling elements, resulting in fretting. Therefore, be sure to use a type of grease with high fretting resistance properties if the stroke will be small. We recommend periodically allowing the nut to stroke a distance roughly equal to its length to help ensure that a film forms between the raceways and rolling elements.
- (6) Do not forcibly drive a pin, key, or other positioning device into the product. This could create indentations on the raceway and impair the product's function.
- (7) If the operation requires the LM block to be removed from the LM rail, please use a removing/mounting jig. (The removing/mounting jig is not provided as standard. To obtain one, contact THK.)
- (8) When using a removing/mounting jig, align the ends of the LM rail and the jig and mount the block when the jig and rail are parallel.
- (9) Take care to keep the LM block straight. Loading the block at an angle can introduce foreign matter, damage internal components, or cause balls to fall out.
- (10) The LM block must contain all its internal rolling elements when mounted on the LM rail. Using a block with any balls or rollers removed may result in premature damage.
- (11) If any of the rolling elements fall from the LM block, contact THK. Do not use the product in that condition.

- (12) If the LM Guide breaks due to an accident or other cause, the block may come off of the rail and fall. For the safe use of these products, take precautions such as adding a mechanism to prevent the block from falling.
- (13) For the bolt length, select a length that will leave a clearance at the bolt tip in relation to the effective tap depth.
- (14) If the mounting material lacks sufficient rigidity or accuracy, the bearing load may be focused in one area, and bearing functionality will dramatically decrease. Therefore, carefully consider the rigidity and accuracy of the housing and base, and the strength of the securing bolts.
- (15) When removing the LM block from the LM rail and then replacing the block, an LM block mounting/removing jig that facilitates such installation is available. Contact THK for details.

### Lubrication

- (1) Thoroughly remove anti-rust oil and apply lubricant before using the product.
- (2) Do not mix different lubricants. Even greases containing the same type of thickening agent may, if mixed, interact negatively due to disparate additives or other ingredients.
- (3) When using the product in locations exposed to constant vibrations or in special environments such as clean rooms, vacuums, and extreme heat or cold, use a lubricant suitable for its use/environment.
- (4) When lubricating the product having no grease nipple or lubrication hole, apply grease directly on the raceway and stroke the product several times to let the grease spread inside.
- (5) The consistency of grease changes according to the temperature. Take note that the slide resistance of the LM Guide may be affected by changes in viscosity.
- (6) After lubrication, the slide resistance of the LM Guide may increase due to the stirring resistance of the grease. Be sure to perform a warm-up operation and allow the grease to break in sufficiently before operating the machinery.
- (7) Excess grease may spatter after lubrication. Wipe off spattered grease as necessary.
- (8) Grease deteriorates over time, which decreases the lubricity, so perform regular grease inspections and replenish grease based on frequency of use.
- (9) Although the lubrication interval may vary according to operating conditions and the service environment, lubrication should be performed approximately every 100 km in travel distance (three to six months). The final greasing interval/amount should be set at the actual machine.
- (10) The lubricant may not reach the raceway if the LM Guide is not installed in a horizontal orientation. For the mounting orientation and the lubrication, see **B 1-28** and **B 24-2**, respectively.
- (11) When using oil lubrication, the lubricant may not be distributed throughout the LM block due to the mounting orientation of the block. Contact THK in advance for details.

### Storage

When storing the LM Guide, pack it as designated by THK and store it indoors in a horizontal position away from high or low temperatures and high humidity.

Please note that if the product has been kept in storage for an extended period, the lubricant inside may have deteriorated. Please ensure that you replenish the lubricant before use.

### Disposal

The product should be treated as industrial waste and disposed of appropriately.