

## Precautions on Use

## LM Guide Actuator

### [Handling]

- (1) Do not disassemble the parts. This will result in loss of functionality.
- (2) Take care not to drop or strike the parts. Doing so may cause injury or damage. Striking it could also cause damage to its function even if the product looks intact.
- (3) When handling the product, wear protective gloves, safety shoes, etc. as necessary to ensure safety.

### [Precautions on Use]

- (1) Prevent foreign material, such as cutting chips or coolant, from entering the product. Failure to do so may cause damage.
- (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) If foreign material such as cutting chips adheres to the product, replenish the lubricant after cleaning the product.
- (4) The service temperature range of this product is 0 to 40°C (no freezing or condensation). If you consider using this product outside the service temperature range, contact THK.
- (5) Exceeding the critical velocity may lead the components to be damaged or cause an accident. Be sure to use the product within the specification range designated by THK.
- (6) Very small strokes can inhibit the formation of an oil film between the raceways and the area of contact for 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. It is also recommended that a stroke movement corresponding to the length of the nut block be made on a regular basis to make sure an oil film is formed between the raceway and rolling element.
- (7) Do not use undue force when inserting parts (a pin, key, etc.) into the product. This may permanently deform the raceway, leading to loss of functionality.
- (8) If the product is operating or in the ready state, do not touch any moving parts. In addition, do not enter the operating area of the actuator.
- (9) If performing a task involving multiple people, confirm how to perform the work, what signals will be used, and how to handle problems before beginning, and assign another person to monitor the work.
- (10) Insufficient rigidity or accuracy of mounting members causes the bearing load to concentrate on one point, and the bearing performance will drop significantly. Accordingly, give sufficient consideration to the rigidity/accuracy of the housing and base and strength of the fixing bolts.
- (11) In applications where this product will be moved or transferred, the conditions of use may cause inertia from the motor's mass to result in damage to the motor attachment (Housing A) or other parts. Please contact THK before using in this manner.

**[Lubrication]**

- (1) Thoroughly wipe off the anti-rust oil before using the product.
- (2) Lubrication is needed to let the models SKR/KR demonstrate their functions fully. Using the product without sufficient lubrication may increase wear of the rolling elements or shorten the service life. Note the standard grease used in the product as follows.

Model KR15	THK AFF Grease
Models SKR20, SKR26, KR20, KR26	THK AFA Grease
Models SKR33, SKR46, SKR55, SKR65, KR30H, KR33, KR45H, KR46, KR55, KR65	THK AFB-LF Grease

- (3) Do not mix different lubricants. Mixing greases using the same type of thickening agent may still cause adverse interaction between the two greases if they use different additives, etc.
- (4) When using the product in locations exposed to constant vibrations or in special environments such as clean rooms, vacuum and low/high temperatures, use the grease appropriate for the specification/environment.
- (5) When adopting oil lubrication method, contact THK.
- (6) Because the intervals between greasing vary depending on the conditions of product use, it is recommended that the greasing interval be determined through an initial inspection. Although the lubrication interval may vary according to use conditions and the service environment, lubrication should be performed approximately every 100 km in travel distance (three to six months). Set the final lubrication interval/amount based on the actual machine.
- (7) The consistency of grease changes according to the temperature. Take note that the slide resistance of the models SKR/KR also changes as the consistency of grease changes.
- (8) After lubrication, the slide resistance of the models SKR/KR may increase due to the agitation resistance of grease. Be sure to perform a break-in operation to let the grease spread fully before operating the machine.
- (9) Excess grease may spatter immediately after lubrication, so wipe off spattered grease as necessary.
- (10) The properties of grease deteriorate and its lubrication performance drops over time, so grease must be checked and added properly according to the machine's frequency of use.

**[Storage]**

When storing the models SKR/KR, enclose them in a package designated by THK and store them in a room in a horizontal orientation while avoiding high temperatures, low temperatures, and high humidity.

After the product has been in storage for an extended period of time, the lubricant inside may have deteriorated, so add new lubricant before use.

**[Disposal]**

Dispose of the product properly as industrial waste.

**[Instruction Manual]**

You can download the "LM Guide Actuator Models SKR/KR -- Instruction Manual" from the THK technical support website.

Technical support website: <https://tech.thk.com/>

