

## Lubrication Methods

There are roughly three methods of lubricating LM systems: manual lubrication using a grease gun or manual pump; forced oiling with the aid of an automatic pump; and oil-bath lubrication.

To achieve efficient lubrication, it is necessary to mount the grease nipple or the piping joint according to the installation direction.

(If the installation direction of the LM Guide is other than horizontal installation, the lubricant may not reach the raceway completely. Be sure to let THK know the mounting orientation and the exact position in each LM block where the grease nipple or the piping joint should be attached. For the mounting position of the LM Guide, see **A1-12**.)

### Manual Lubrication

Generally, grease is replenished periodically, fed through a grease nipple provided on the LM system, using a grease gun. (Fig.1)

For systems that have many locations to be lubricated, establish a centralized piping system and periodically provide grease from a single point using a manual pump. (Fig.2)

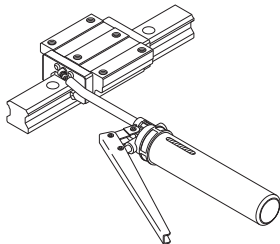


Fig.1 Lubrication Using a Grease Gun

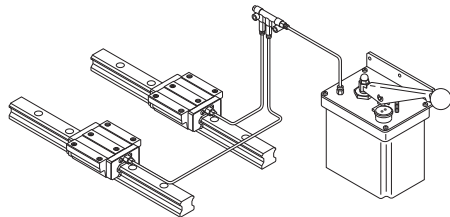


Fig.2 Lubrication through a Centralized Piping System

Note) When a centralized piping system is used, lubricant may not reach the pipe end due to the viscous resistance inside the pipe. Select the right type of grease while taking into account the consistency of the grease and the pipe diameter.

### Forced Lubrication Method

In this method, a given amount of lubricant is forcibly fed at a given interval. Normally, the lubricant is not collected after use. (Fig.3)

Although a special lubrication system using a piping or the like needs to be designed, this method reduces the likelihood of forgetting to replenish lubricant.

This method is used mainly for oil lubrication. If using grease, it is necessary to examine the appropriate piping diameter and the required grease consistency.

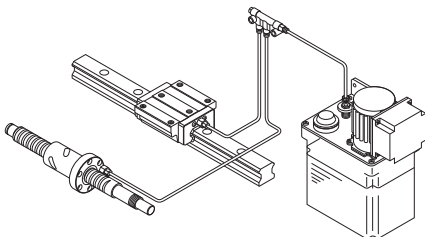


Fig.3 Forced Lubrication Method