

### 3.1.3 Lubrication Methods

Methods for lubricating linear motion systems are divided into: 1) manual greasing with the aid of a grease gun, manual pump, and the like; 2) forced oiling with the aid of an automatic pump; and 3) lubrication with the aid of an oil bath.

#### Manual greasing

Normally grease is replenished periodically, fed through the grease nipple provided on a linear motion system, with the aid of a grease gun (Fig. 5).

For systems that have many locations to be greased, integrated piping is used so that grease can be fed at one location with a manual pump at a certain time interval (Fig. 6).

Note 1: When integrated greasing is used, some types of grease cannot reach the ends of the piping because of the viscous resistance on the piping interior. Select the right type of grease for your system, considering the consistency of the grease and the pipe diameters.

#### Forced oiling

In this method a given amount of lubricant is forcibly fed to certain locations with the aid of an automatic pump at a given time interval. Normally the lubricant is not collected after use (Fig. 7).

Although a special design for the piping is required, this method reduces the likelihood that lubricant will not be replenished in time.

While forced oiling is used chiefly for lubrication with oil, it can be applied also to lubrication with grease. When using grease, it is necessary to consider the piping diameter and grease consistency.

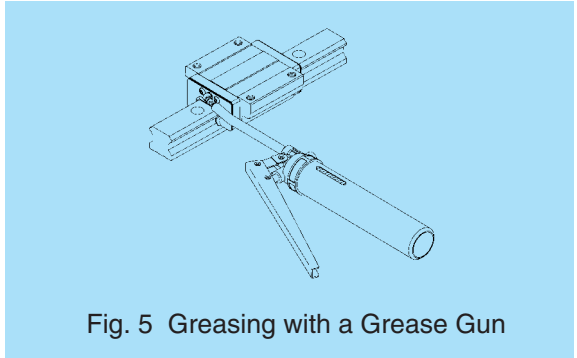


Fig. 5 Greasing with a Grease Gun

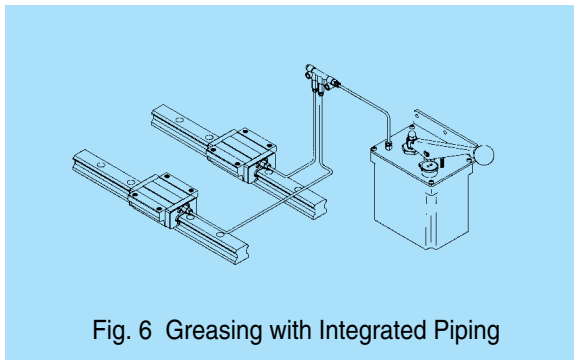


Fig. 6 Greasing with Integrated Piping

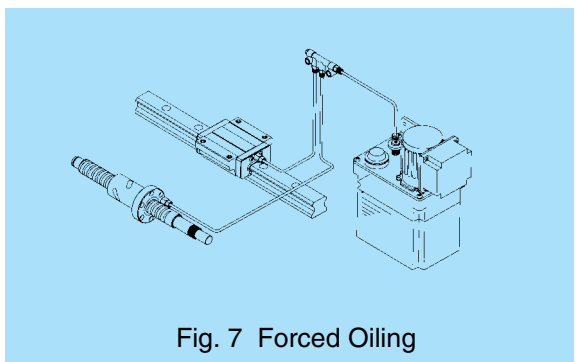


Fig. 7 Forced Oiling