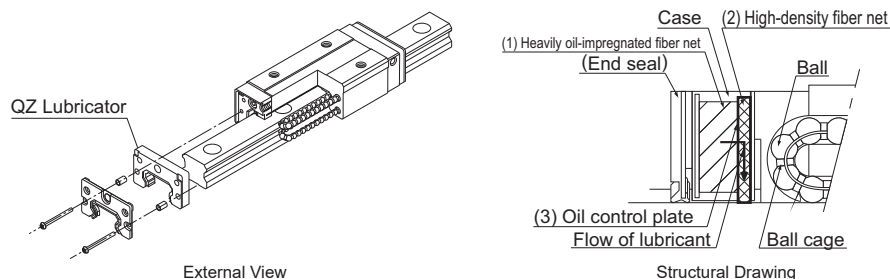


QZ Lubricator

- For the supported models, see the table of options by model number on [A1-508](#).
- For the LM block dimension (L dimension) with a QZ Lubricator attached, see [A1-543](#) to [A1-546](#).
- For details regarding the QZ Lubricator, see [A1-133](#).

The QZ Lubricator feeds the right amount of lubricant to the raceway on the LM rail. This allows an oil film to continuously form between the rolling element and the raceway, and it significantly extends the lubrication maintenance intervals.

The structure of the QZ Lubricator consists of three major components: (1) a heavily oil-impregnated fiber net (functions to store lubricant), (2) a high-density fiber net (functions to apply lubricant to the raceway) and (3) an oil-control plate (functions to adjust oil flow). The lubricant contained in the QZ Lubricator is primarily fed by capillary action, which is also used in devices such as felt-tip pens.



Features

- Since it compensates for oil loss, the lubrication maintenance interval can be significantly extended.
- Because it feeds the appropriate amount of lubricant directly to the ball raceway, it is an environmentally-friendly lubrication system that does not contaminate the surrounding area.

Symbol	Contamination protection accessories
QZUU	With end seal + QZ
QZSS	With end seal + side seal + inner seal ¹ + QZ
QZDD	With double seals + side seal + inner seal ¹ + QZ
QZZZ	With end seal + side seal + inner seal ¹ + metal scraper + QZ
QZKK	With double seals + side seal + inner seal ¹ + metal scraper + QZ
QZGG	With LiCS + QZ
QZPP	With LiCS + side seal + inner seal ¹ + QZ
QZSSH	With end seal + side seal + inner seal ¹ + LaCS + QZ
QZDDHH	With double seals + side seal + inner seal ¹ + LaCS + QZ
QZZZHH	With end seal + side seal + inner seal ¹ + metal scraper + LaCS + QZ
QZKKHH	With double seals + side seal + inner seal ¹ + metal scraper + LaCS + QZ
QZJJHH ²	With end seal + side seal + inner seal ¹ + LaCS + QZ + protector (serving also as metal scraper)
QZTTHH ²	With double seals + side seal + inner seal ¹ + LaCS + QZ + protector (serving also as metal scraper)

¹ Some models are not equipped with inner seals. (See [A1-508](#))

² QZJJHH and QZTTHH are only available for models SVR/SVS, NR-X/NRS-X, SRG, and HRX.

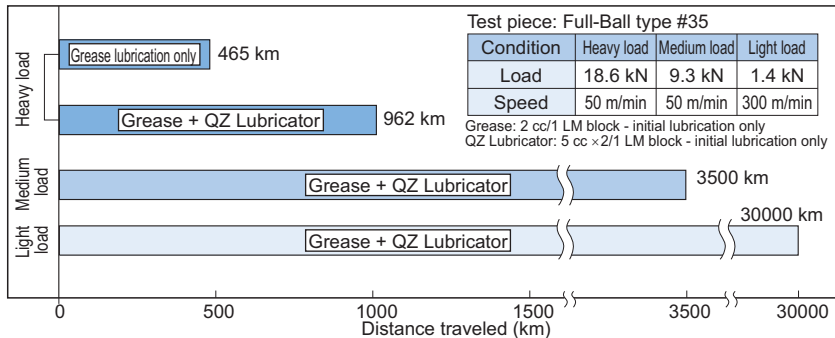
Notes: For models SVR/SVS, NR-X/NRS-X, SRG, and HRX with HH specifications (with LaCS), a protector ([A1-109](#)) can be installed.

Contact THK if you want to use the protector with other options.

Grease nipples are not installed when there is a QZ Lubricator. Contact THK if you want to use a grease nipple for a model with a QZ.

● Significantly Extended Maintenance Interval

Attaching QZ Lubricator helps extend the maintenance interval throughout the whole load range from the light load area to the heavy load area.

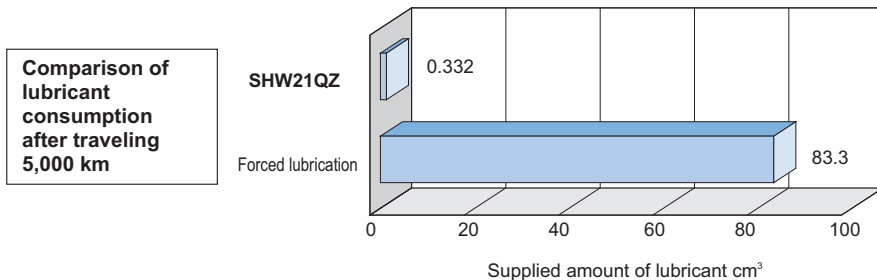


LM Guide Running Test without Replenishment of Lubricant

● Effective Use of Lubricant

Since the lubricator feeds the right amount of lubricant to the ball raceway, lubricant can be used efficiently.

Test speed: 300 m/min



Amount of oil contained in QZ Lubricator
0.166 cm³/ 2 units
(attached to both ends of the LM block)
= 0.332 cm³



Forced lubrication
0.03 cm³/6 min × 16667 min
= 83.3 cm³

Lubricant consumption is 1/250 that of forced lubrication

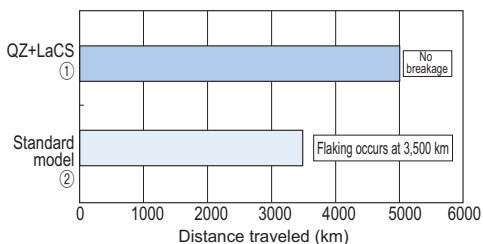
● Assists with Lubrication in Severe Environments

A 5,000 km durability test was conducted in severe environments (exposed to coolant and contaminants).

Test conditions

Model No.	① Caged Ball LM Guide #45	② Full-ball type #45
Load	8 kN	6 kN
Speed	60 m/min	
Coolant	Immersed 48 h, dried 96 h	
Foreign material	Foundry dust (125 μm or less)	
Lubrication	AFA Grease + QZ	Super Multi 68 Oiling cycle: 0.1 cc/shot Periodically lubricated every 16 min

Test results



Note: When using the LM System in a severe environment, use a combination of a QZ Lubricator and a Laminated Contact Scraper LaCS (see "Laminated Contact Scraper LaCS" on [B1-106](#)).

Lubrication Adapter

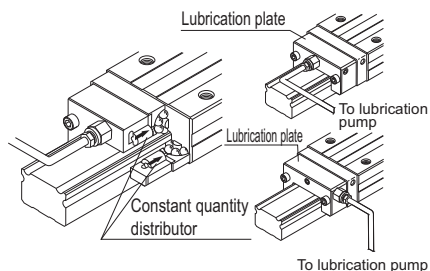
An oil-only lubrication adapter is available for models NR/NRS.

Even if the LM Guide is installed in an orientation where oil lubrication is difficult, such as a wall mount or inversed mount, the adapter is capable of feeding a constant quantity of lubricant to the four raceways.

Features

The dedicated lubrication adapter for models NR/NRS is built in with a constant quantity distributor. Therefore, the adapter can accurately feed a constant quantity of lubricant to each raceway regardless of the mounting orientation. The adapter is economical since it constantly feeds the optimum amount of lubricant and can eliminate the supply of surplus lubricant.

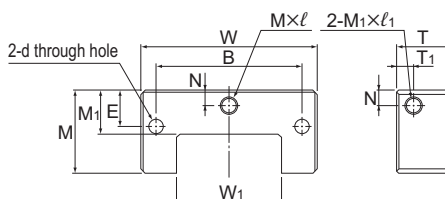
To provide pipe arrangement, simply connect an intermittent lubrication pump widely used for ordinary machine tools to the lubrication holes (M8) on the front and the side of the lubrication adapter.



Structural Drawing

Specifications

Viscosity range of lubricant used	32 to 64 mm ² /s recommended
Discharge	0.03×4, 0.06×4 cc/1shot
Diameter of pipe connected	φ 4, φ 6
Material	Aluminum alloy



Removing/Mounting Jig

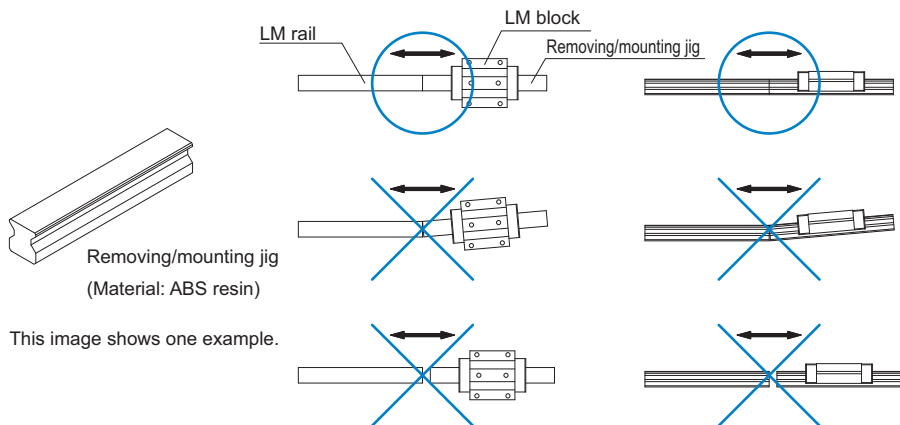
Do not remove the LM block from the LM rail during setup. If removing the LM block is inevitable due to the plate cover type or the assembly procedure, be sure to use the removing/mounting jig.

Mounting the LM block without using the removing/mounting jig may cause rolling elements to fall from the LM block due to contamination by foreign material, damage to internal components, or slight inclination. Mounting the LM block with some of the rolling elements missing may also cause premature damage to the LM block.

When using the removing/mounting jig, fit its end directly to the end of the LM rail and do not incline the jig.

If any of the rolling elements fall from the LM block, contact THK. Do not use the product in that condition.

Note that the removing/mounting jig is not included in the LM Guide package as standard. To obtain one, contact THK.



End Piece EP

If removing the end piece when using the LM Guide, be sure that the LM block will not overshoot the rail.

The end piece can also be used as a fixing jig for steel tape protectors, and can also be used on LM rails of models SSR, SR, and HSR.

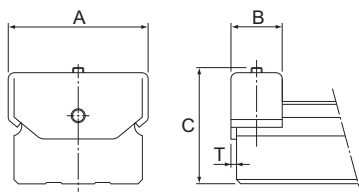


Fig. 1: End Piece EP for Models NR/NRS