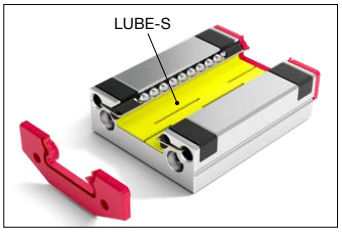
8 MINIRAIL Options

8.1 LUBE-S (LS) Long-term Lubrication

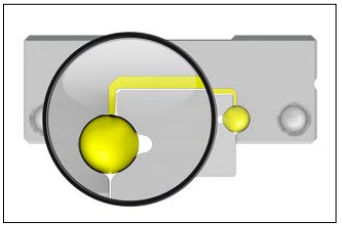


LUBE-S is integrated in the carriage and easily replaceable

All types of MINIRAIL carriages can be ordered with optional LUBE-S lubricant.

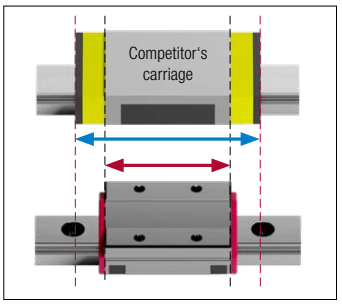
The ingenious long-term lubrication LUBE-S is a lubricant reservoir. It applies the lubricant externally in all orientations directly to the ball recirculation tracks by means of the capillary effect. LUBE-S is integrated into the inside of the carriage and lubricates all ball bearings that are directly under load. LUBE-S ensures lubrication even during short-stroke applications (see chapter 6.6.2).

Carriages equipped with LUBE-S are delivered with clearance wipers (see chapter 9.2.1).


LUBE-S applies lubricant to all ball bearings directly under load

Using the long-term lubrication LUBE-S:

- Maintenance-free for 20,000 km under normal environmental conditions and the corresponding load
- The carriage length remains unchanged and does not affect the maximum stroke
- LUBE-S is the optimal lubricant for all short-stroke applications
- LUBE-S lubricates the ball bearings which are directly under load
- The smoothness, push force and service life are maintained long-term thanks to LUBE-S
- Maintenance costs are reduced substantially
- The minimal consumption of lubricant is good for the environment



The carriage length remains unchanged with LUBE-S
The travel distances are therefore not affected

A compact solution
The external dimensions of the carriages remain the same. The maximum stroke is therefore not affected.

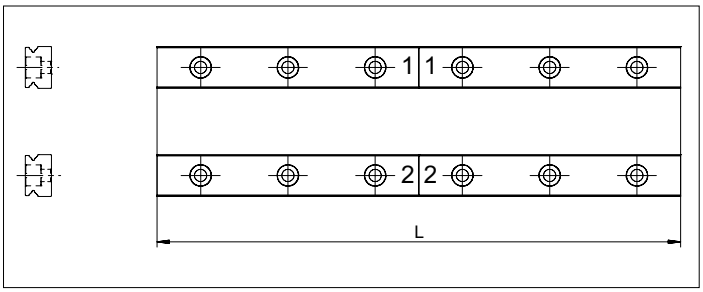
Smoothness
The LUBE-S oil reservoir contacts the ball bearings at a single point. The push forces of the carriages are therefore not affected and the smoothness of the MINIRAIL system is maintained at a high level.

The MINIRAIL guideways should be lubricated during installation. (see also chapter 16.3.3).

8.2 Multi-part Guideways for MINIRAIL (ZG)

If the desired total length of the guideway is longer than the maximum length listed in the catalogue, individual guideways can be joined together with precision butt joints. For this configuration, the ends of the guideways are precision ground. The offset between the individual guideways should not exceed 0.002 mm.

Take note of the numbered guideways at the butt joints during installation.



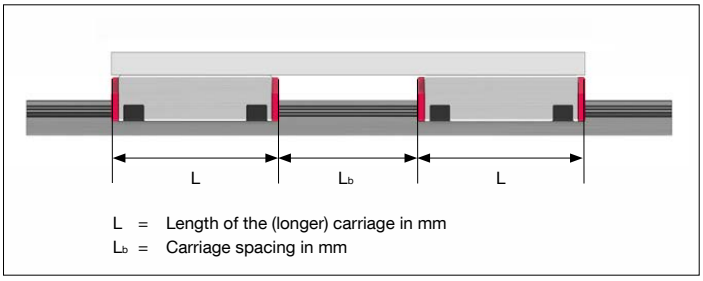
Multi-part guideways are numbered at the butt joint

8.3 Push Force Defined (VD)

Demanding applications may only be possible if the guideway has a defined push force. These parameters can be defined by SCHNEEBERGER according to customer specifications. Carriages and guideways are then matched and delivered as a set.

8.4 Height-matched Carriages (HA)

In accuracy class G1, the maximum height deviation of the carriages is ±10 µm. This tolerance can be too large for certain configurations, for example when the distances among the individual carriages are too small, i.e. when the carriage spacing L_b is smaller than the carriage length L. In such cases, the tolerances can be reduced on a customer-specific basis.



L = Length of the (longer) carriage in mm
L_b = Carriage spacing in mm

8.5 Customer-specific Lubrication (KB)

The fundamentals of lubrication are described in chapter 12. Special lubricants are used for specific purposes. For example lubricants for use with vacuums, different temperatures, high speeds, heavy loads or high stroke frequencies.

SCHNEEBERGER can supply the guideways with the appropriate lubricant for all of these applications.

8.6 Cleaned and Vacuum-packed (US)

Guideways operated in a vacuum must be cleaned and packaged accordingly. Cleaning takes place in our cleanroom. The packaging consists of an inner, airtight layer and an outer protective layer.

Please state your required cleanroom class (ISO 7 or ISO 6) when making enquiries.

MINIRAIL cleaned and vacuum-packed