

# Lubrication

## Grease lubrication

Standard lubrication practices for ball bearings also apply to the ball screws used in the EMC.

The advantage of grease lubrication is that the ball screw can run long distances on one supply of grease. As a result, a lubricating system is not required in many cases.

All commercially available high-quality ball bearing lubricating greases may be used. Read the lubricant manufacturer's specifications carefully! Never use greases with solid lubricant components (e.g. graphite or MoS<sub>2</sub>).

Greases in accordance with DIN 51825-K2K and, for higher loads, KP2K of NLGI Class 2 in accordance with DIN 51818 are recommended for the longest possible lubrication intervals. Tests have shown that greases of NLGI Class 00 achieve only about 50% of the running performance of Class 2 at higher loads.

The relubrication interval depends on many factors such as the degree of contamination, operating temperature, load, etc. The following values can thus serve only as a guide.

### Lubrication notes

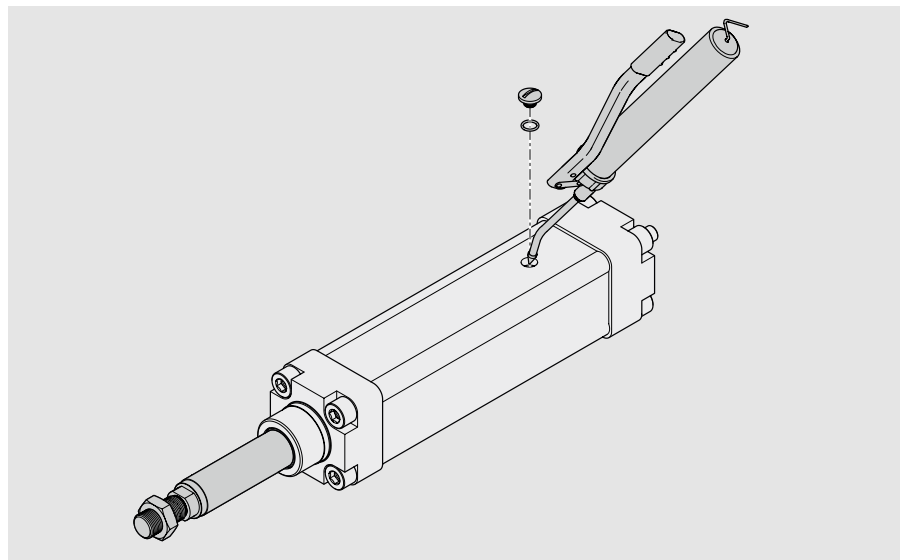
Basic lubrication is applied in-factory before shipment.

The EMC is designed for grease lubrication (using a manual grease gun with extension tube and nozzle).

The only maintenance required is lubrication of the ball screw assembly via the lube port.

For lubrication, retract the piston to the position S.

For more information, see "Mounting Instructions for EMC," R320103103



**Relubrication intervals for NLGI-2 greases**

Limit conditions:

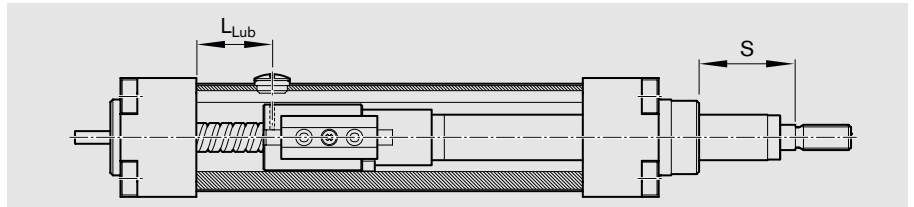
Load =  $\leq 0.2 C$

$n_{min}$  = 100 min<sup>-1</sup>

Orientation: any


Operating mode: no short strokes  
( $s_{max} < 100$  mm)

Sealing: standard



EMC size	Ball screw lead P (mm)	Revolutions U (mill.)	Stroke (km)	Grease relubricating quantity (g)	L <sub>Lub</sub> (mm)	S (mm)
32	5	50	250	0.30	25	30.0
	10		500	0.30		29.0
40	5	50	250	0.60	25	27.8
	10		500	0.80		27.5
	16		800	1.10		27.5
50	5	50	250	1.00	30	34.5
	10		500	1.40		34.5
	20		1000	2.20		34.5
63	5	50	250	1.40	30	34.5
	10		500	1.70		34.5
	25		1250	3.10		33.5
80	5	50	250	2.00	40	44.0
	10		500	2.80		46.5
	20		1000	3.20		46.5
	32		1600	4.90		46.5
100	5	50	250	2.70	40	39.5
	10		500	7.30		42.0
	20		1000	7.80		42.0
	40		2000	12.90		42.0

**Recommended lubricants**

 Do not use greases containing solid particles (e.g. graphite or MoS2)!

EMC size	Grease DIN 51825	Consistency class DIN 51818
32 - 100	KP2K	NLGI 2