## Lubrication

Correct lubrication is important is order that the ball screw achieves its calculated service life, to prevent excessive heating and to guarantee smooth, quiet running. KGT uses the same lubricants as are used for roller bearings.

## Oil mist lubrication

If central lubrication using oil mist is in operation, make sure that only ball screw nuts without wipers are used.

## Oil lubrication

The oil quantities that are supplied must not exceed the application losses at the wipers (otherwise the result is circulating oil lubrication).
Type of oil: Viscosity 25 to 100 mm²/s at 100 °C.

## Grease lubrication

For ball screws, lubrication intervals depend on the pitch and the spindle diameter: Lubrication is determined by whether grease is emerging from the wipers (under normal operating conditions every $2.5 \cdot 10^7$ overrollings*). Because the grease does escape, we find by experience that a lifetime fill of lubrication is not sufficient.

Types of grease:
Roller bearing grease without any element of solid lubricant
The first filling must be with KLÜBERPLEX BE31-102 NLGI2 roller bearing grease to DIN 51818.
Detailed data on the amounts of grease and lubrication intervals can be found in the “Installation and Maintenance Manual” as well as on the Internet under www.hsb-automation.de.

* ≙ Revolutions of the spindle

| KGT-Type | Lubrication amount [ml] | |
|---|---|---|
| | *Standard* | *Long* |
| ***1205*** | 0,6 | - |
| ***1210*** | 0,6 | - |
| ***1605*** | 1,7 | - |
| ***1610*** | 1,8 | - |
| ***1620*** | 1,7 | - |
| ***1640*** | 2,3 | - |
| ***2005*** | 2,0 | - |
| ***2010*** | 2,1 | - |
| ***2020*** | 2,3 | 4,5 |
| ***2050*** | 4,5 | - |
| ***2505*** | 2,6 | 3,9 |
| ***2510*** | 3,4 | 5,1 |
| ***2525*** | 3,1 | 5,4 |
| ***2550*** | 4,8 | - |
| ***3205*** | 4,2 | - |
| ***3210*** | 5,6 | - |
| ***3220*** | 4,6 | - |
| ***3240*** | 3,0 | - |
| ***3260*** | 3,9 | - |
| ***4010*** | 10 | - |
| ***4020*** | 12 | 15 |
| ***4040*** | 15 | - |

## Operating temperature

The permissible operating temperature range for ball screws is between 0 °C and +80 °C. A minimum temperature of -20 °C and a maximum temperature of +110 °C are permissible for brief periods. This always assumes lubrication has been carried out correctly.
At temperatures of -20 °C, the torque can increase by a factor of up to 10.