Installation with spindle

The ball screw spindle must be installed radially stress-free: While you tighten the bearings, move the carriage back and forth on the corresponding side.

Lubrication instructions

Befor commisioning, be sure to lubricate the spindle over the entire length of the thread using the nut.
You can use standard rolling bearing oils and greases (sodium soap greases) as lubrications, but avoid lubricants with graphit and MOS additives.
Due to the axial movement between nut and spindle, the loss of lubricant is greater than with rolling bearings, so that lifetime lubrication ist not possible.

- oil lubrication

At high spindle speeds (>500 min^{-1}), heating is lower with oil lubrication than with grease. On the other hand, the maintenance intervals are shorter. Depending on the operating conditions, you should relubricate every 40 to 60 operating hours.

ordering-no.: 299 020

- grease lubrication

Grease lubriction offers the advantages of an independent instalation position and long lubrication intervals (300 to 700 operating hours) up to a speed of approx. 800 min^{-1}. If possible, use sodium soap greases KP 2 K according to DIN 51 825.

Protective measure

Protect the lubricated ball screw from dust, chips and moisture.

Oil viscosity classes according to DIN 51517 T3 CLP ISO-VG for spindle ⌀ 16 mm		
Average speed (min^{-1})	Recommended ISO viscosity class at 40 °C	Required viscosity at operating temperature approx. 30 °C (cST)
20	ISO VG 460	approx. 875
100	ISO VG 220	approx. 360
500	ISO VG 46	approx. 66
1000	ISO VG 22	approx. 36
1500	ISO VG 15	approx. 28

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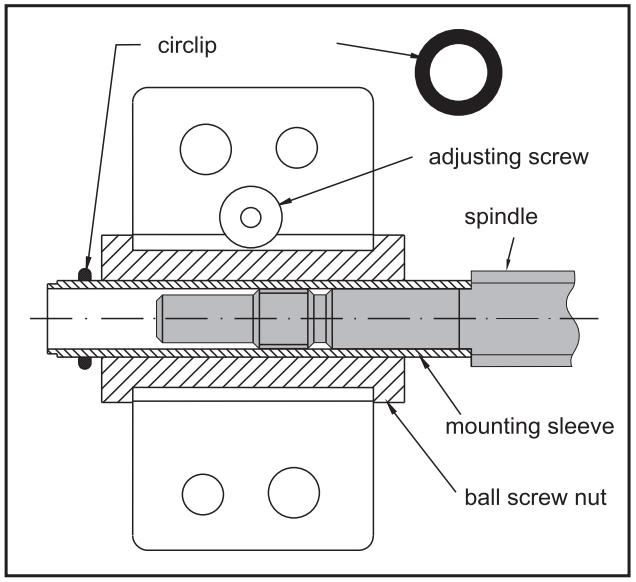
The delivery of the ball screw nut with assembly sleeve (ready for assembly) and the spindle is protected against corrosion. The ball screws are not mounted. Nut and spindle with the same pitch can be freely exchanged.



⚠ The ball screws are precision parts and must be handled with extreme cleanliness and care. The ball screw nut is packed ready for assembly. Please remove the ball screw froms ist packaging immediately before assembly.

Assembly

1. Clean the spindle thoroghly to the bottom of the thread.
2. Remove the circlip on the non-stepped side of the mounting sleeve.
3. Slide the nut with mounting sleeve over the machined shaft end (place it centrically on the spindle axis, see picture) and turn the ball screw nut carefully and completely onto the spindle.

   Do not remove the mounting sleeve until the assembly is complete.
4. The **running clearance** between nut and spindle is adjusted with the adjusting screw (see picture). The spindle must be able to move easily in both directions. Check the clearance at several points along the entire spindle length by holding the spindle and moving the nut axially, there must be no clearance (axial clearance is achieved before radial claming).

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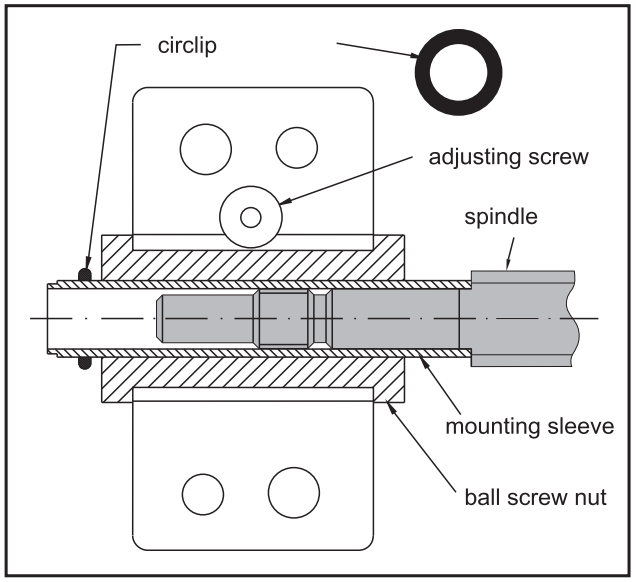

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