maxon

maxon «Spindle Drive»
GP 6/8/16/22/32 S

IT IS ESSENTIAL THAT YOU READ / UNDERSTAND / FOLLOW THE INFORMATION BELOW

THE BALL SCREW NUT MUST NOT BE REMOVED. IT CANNOT BE REASSEMBLED.

ECCENTRICITY, ANGLE ERROR, AND RADIAL LOAD THAT EXCEED THE SPECIFIED VALUES WILL RESULT IN SUBSTANTIAL REDUCTION OF SERVICE LIFE.

MAKE SURE THAT THE SPINDLE CANNOT JAM DURING OPERATION. IF NOT OBSERVED, THE UNIT WILL SUFFER PERMANENT DAMAGE.

ANY CLAIM UNDER GUARANTEE WILL BE VOID, …

A) IF YOU SHOULD DISASSEMBLE ANY COMPONENT (SUCH AS GEAR, SPINDLE NUT, SPINDLE) WITHOUT MAXON'S PRIOR WRITTEN PERMISSION,

B) IF ANY SPECIFIED TECHNICAL DATA OR ANY PRE-DETERMINED AND AGREED DESIGN PARAMETER (SUCH AS SPEED, LOAD, DUTY CYCLE, ENVIRONMENTAL CONDITIONS) HAVE BEEN EXCEEDED.

1 ASSEMBLY

Reduced Service Life / Failure
Non-observance of the instructions can lead to reduced service life and/or can result in failure of the unit.

1.1 General Conditions

- If possible, use the flange's front face centering collar for alignment (Figure 1; detail "A").
- For fixation, use only screws that penetrate the front face mounting threads (dimensions; Table 1) in full length.
- Special length spindles and/or high speed operation require an additional bearing at the free spindle end (Figure 1; option "SPIN02").
- Assembly of a maxon spindle drive with ball screw and flange nut through a bore will require the optionally available mounting flange (see maxon Catalog, option "SPIN06").
- Depending on the installation setup, you will need to subtract certain axial dimensions from the total length of the spindle (Figure 1). The maximal permitted stroke calculates as follows:
  $Stroke = L - (L_N + X + Y + StrokeReserve)$

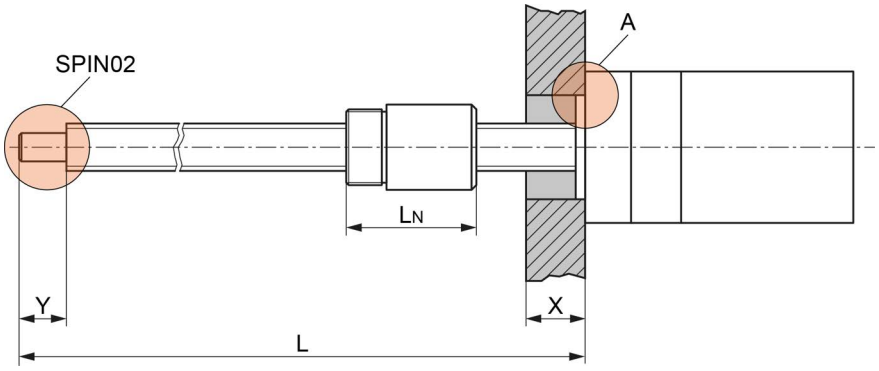

Figure 1 Option SPIN02 / Stroke / Centering

1.2 Installation

1) Mount all fastening screws.
2) Carefully tighten all fastening screws, then slightly loosen them again.
3) Align the spindle drive without any load or tension.
4) In case of load distribution to multiple parallel arranged spindle drives: Make sure their strokes are perfectly equal.
5) Tighten all fastening screws with the torque indicated in Table 1.
6) Verify that the spindle drive is still in alignment and without tension.

Mounting Threads	GP 6 S	GP 8 S	GP 16 S	GP 22 S	GP 32 S
Thread	M6 x 0.5	M8 x 0.5	M2	M2	M3
Depth of thread / screw-on length [mm]	2.4	3.2	3	4	4
Maximal tightening torque [Ncm]	34	60	13	13.5	49

Table 1 Mounting Threads

2 OPERATION

Note
Stiff movement and/or fluctuation of motor current point out misalignment.

1) After about 4 to 6 operating hours: Retighten the fastening screws with the torque indicated in Table 1.
2) Lubricate the spindle drive as to chapter “3 Maintenance” on page 3.

3 MAINTENANCE

As a rule, maxon spindle drives are delivered with initial lubrication. For special applications (such as in vacuum or in cleanroom technology) others or, under certain circumstances, no lubricants will be employed. Consult maxon if you are not sure about the lubrication in use.

To ensure trouble-free operation and to maintain functionality throughout the entire spindle drive’s service life, you will need to check for adequate and renewed lubrication in recommended intervals (Table 2).

1) Inspect the spindle assembly for defilement.
2) If required:
   a) Clean and degrease the spindle using cleaner's naphtha.
   b) Immediately dry all parts and proceed with step 3 without delay.
3) Apply lubricant to spindle with clean, dry brush.

Type	Spindle	Interval [1]	Lubricant [2]
GP 6 S	M2.5 x 0.45	1.2	Turmogrease Highspeed L 251 ASL
GP 8 S	M3 x 0.5	1.2	Turmogrease Highspeed L 251 ASL
GP 16 S	KGT 5 x 2 M6 x 1	12.5 1.2	Klüber Microlube GBU Y 131 Turmogrease Highspeed L 251 ASL
GP 22 S	KGT 6 x 2 M6 x 1	12.5 1.2	Klüber Staburags NBU 12/300 KP BP Oil Maccurat D220 / Castrol Magna SW D 220
GP 32 S	KGT 10 x 2 M10 x 1 Tr10 x 2	12.5 1.2 1.2	Klüber Staburags NBU 12/300 KP BP Oil Maccurat D220 / Castrol Magna SW D 220 BP Oil Maccurat D220 / Castrol Magna SW D 220

[1] Recommended lubrication interval in millions of revolutions.
[2] Indicated brand names may be protected by copyright laws

Table 2 Lubricant and Intervals

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