Assembly instructions

for adjusting plate for rack and pinion drive

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STÖBER

1 General instructions

The backlash or axial distance between the pinion and gear rack must always be adjusted.
STÖBER Antriebstechnik offers a cost-effective and time-saving solution for this purpose: an adjustment plate that is mounted between the machine and the gear unit. The adjustment plate is delivered assembled together with the gear unit.
You can adjust the axial distance between the pinion and gear rack with four cylinder head screws or optionally with an adjustment bar.

Information
The installation dimensions of the adjustment plate can be found in the catalog for rack and pinion drives (ID 442225) or at http://cad.stoeber.de.

Information
You can use the optional adjustment bar to adjust the axial distance of the pinion from the gear rack faster and more easily than with the cylinder head screws.

2 Mounting the adjustment plate

WARNING!

Mounting the gear unit or motor that is attached to the adjustment plate improperly can result in hazards for persons and material damage!

- ▶ Therefore pay close attention when mounting the adjustment plate to the operating instructions of the attached gear unit or motor.

NOTICE

Faulty assembly or adjusting the adjustment plate may cause the gearing to fail due to wear or a broken cog!

- ▶ To ensure that the adjustment plate will function correctly, you must mount it so that its slotted holes are aligned at an angle of 90° to the position of the gear rack.
- ▶ Do not mount the pinion under pretension to the gear rack to achieve zero backlash.

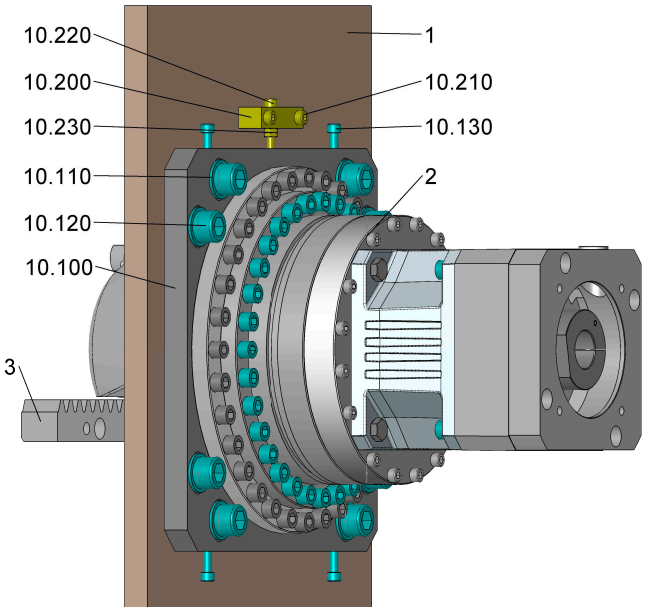

Fig. 2-1 Mounting the adjustment plate

Position	Description
1	Machine wall
2	Gear unit
3	Gear rack
10.100	Adjustment plate
10.110	Washer
10.120	Cylinder head screw
10.130	Cylinder head screw
10.200	Adjustment bar (optional)
10.210	Cylinder head screw (optional)
10.220	Cylinder head screw (optional)
10.230	Hexagonal nut (optional)

Follow these steps to mount the gear unit with the adjustment plate on the machine (see also Fig. 2-1):

1. Mount the gear rack on the machine.
2. (Without the optional adjustment bar). Unscrew all four cylinder head screws 10.130 out of the adjustment plate far enough so that they no longer protrude in the slotted hole.
3. (With the optional adjustment bar).
   3.1 Completely unscrew all four cylinder head screws 10.130 out of the adjustment plate. (They will no longer be needed in this case).

4. Mount the adjustment plate (with the gear unit and if applicable the motor already attached) on the machine wall using the cylinder head screws 10.120 and washers 10.110 included with delivery. Make certain as you do this that
   – the gear unit is mounted in the correct installation position (as specified in the order);
   – the pinion is correctly resting on the gear rack;
   – the pinion is not pretensioned to the gear rack;
   – the adjustment plate is not mounted in an inclined position.
   The cylinder head screws 10.120 should only be slightly tightened so that the position of the adjustment plate can still be adjusted.
5. (Without the optional adjustment bar). Use the four cylinder head screw 10.130 to adjust the distance of the pinion from the gear rack. Always turn the cylinder head screws the same number of revolutions in pairs so that the adjustment plate will not be mounted in an inclined position.
6. (With the optional adjustment bar).
   6.1 Screw the cylinder head screw 10.220 with the premounted adjustment bar into the adjustment plate on the side where the holes have been provided for the adjustment bar.
   6.2 Fasten the adjustment bar onto the machine wall with the cylinder head screws 10.210.
   6.3 Adjust the axial distance of the pinion from the gear rack with cylinder head screw 10.220.
7. Tighten the cylinder head screws 10.120 to the tightening torque indicated in the table below.
8. In case of high loads, check the alignment of the gear unit based on the contact pattern. Details can be found in the manufacturer's documentation for your gear rack.

Thread	Tightening torque M_A (Nm) for cylinder head screws according to DIN 912 - 12.9
M6	18
M8	43
M10	84
M12	145
M16	365
M20	710
M24	1220