

Assembly instructions

for rack and pinion drive mounting bracket



1 General instructions

STÖBER Antriebstechnik offers an inexpensive and time-saving solution for fastening rack and pinion drives: A mounting bracket that can be installed on the machine wall. The mounting bracket is delivered assembled together with the gear unit.

You can also use the optional adjustment block to adjust the axial distance between the pinion and gear rack quickly and easily.



Information

The installation dimensions of the mounting bracket can be found in the catalog for rack and pinion drives (ID 442225) or at <http://cad.stoerber.de>.

2 Installation of the mounting bracket



WARNING!

Installing the gear unit or motor that is attached to the mounting bracket improperly can result in hazards for persons and material damage!

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

NOTICE

Faulty assembly of the mounting bracket may cause the gearing to fail due to wear or a broken cog!

- ▶ You should align the mounting bracket and pinion axis at right angles to the gear rack and use cylinder head screws with quality DIN 912 - 12.9 to install the mounting bracket.
- ▶ Do not mount the pinion under pretension to the gear rack to achieve zero backlash.



Information

To align the mounting bracket to the machine wall, you can use either the feather keys included with delivery or the stop edges on all four sides of the mounting bracket.



Information

The feather keys are mounted on the mounting bracket differently for transport by the manufacturer than is required for operation.



Information

You can use the optional adjustment block to adjust the axial distance between the pinion and gear rack depending on the installation situation.

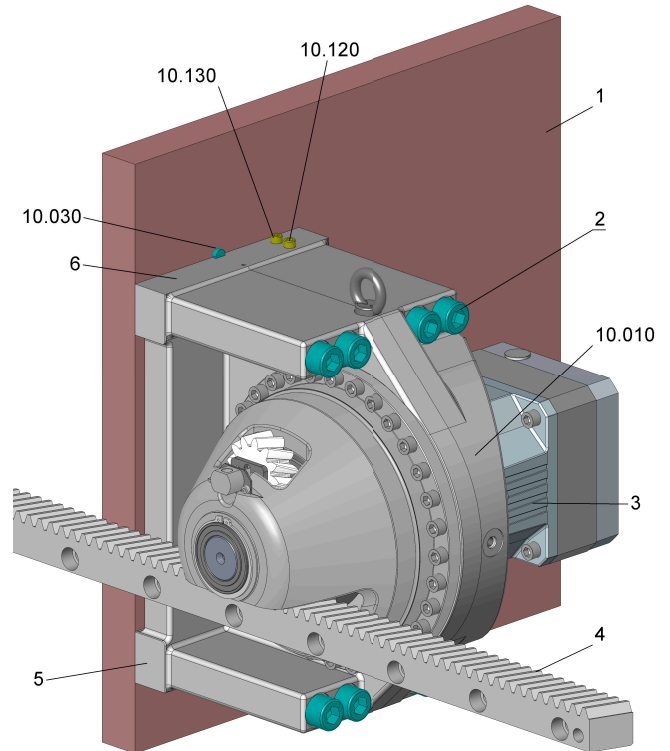


Fig. 2-1 Installation of the mounting bracket

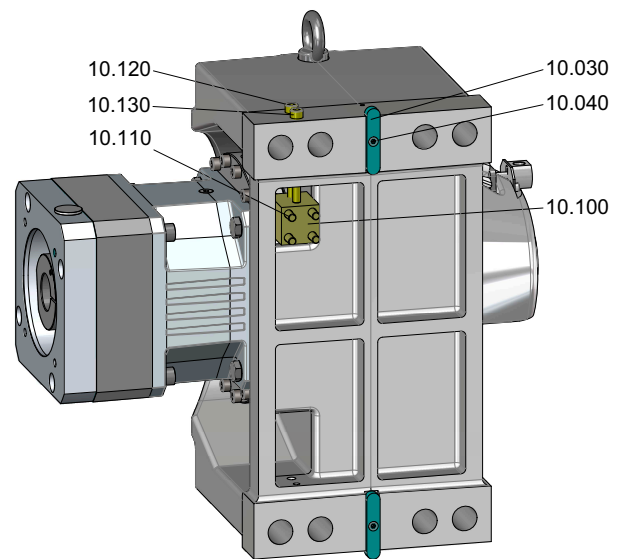


Fig. 2-2 Installing the Adjustment block (optional)

Item	Description
1	Machine wall
2	Cylinder head screw
3	Gear units (with motor adapter)
4	Gear rack
5	Stop edge
6	Stop edge

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Item	Description
10.010	Mounting bracket
10.030	Feather key
10.040	Cylinder head screw
10.100	Adjustment block (optional)
10.110	Hexagonal screw (optional)
10.120	Cylinder head screw (optional)
10.130	Cylinder head screw (optional)

Follow these steps to install the gear unit with the mounting bracket on the machine (see also Fig. 2-1 and Fig. 2-2):

1. Mount the gear rack on the machine.
2. If you will be using feather keys 10.030 to align the mounting bracket, remove it from its transport position and install it on the mounting bracket with screws 10.040 as shown in the illustration above.
3. (With optional adjustment block)
 - 3.1 Unscrew the cylinder head screws 10.120 and 10.130 from the mounting bracket and remove the adjustment block from the mounting bracket.
 - 3.2 Mount the adjustment block 10.100 on the machine wall with hexagonal screws 10.110. Make certain as you do this that the adjustment block is aligned correctly. (It must be possible to screw the cylinder head screw 10.120 through the mounting bracket and into the tapped holes of the adjustment block).
4. Install the mounting bracket (with the gear unit and if applicable the motor already attached) on the machine wall using the cylinder head screws with quality DIN 912 - 12.9. 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;
 - both feather keys 10.030 are running in the groove of the machine wall or the stop edges on the mounting bracket of the machine wall.
 (With optional adjustment block): the cylinder head screws 1 should only be slightly tightened so that the position of the mounting bracket can still be adjusted.
5. (With optional adjustment block). (The description below refers to the illustrations above. Depending on the location and installation position of the mounting bracket, you will have to screw in the cylinder head screws 10.130 and 10.130 respectively the other way around to increase or reduce the axial distance of the pinion from the gear rack).
 - 5.1 Turn the (shorter) cylinder head screw 10.130 into the tapped hole of the mounting bracket to increase the axial distance between the gear rack and the pinion. (Unscrew the longer cylinder head screw somewhat if the adjustment block is jammed).
 - 5.2 Turn the (longer) cylinder head screw 10.120 through the mounting bracket and into the tapped hole in the adjustment block to reduce the axial distance between the gear rack and the pinion. (Unscrew the shorter cylinder head screw somewhat if the adjustment block is jammed).
 - 5.3 After you have adjusted the axial distance, screw the cylinder head screws 10.120 or 10.130 that are still loose in until the adjustment block is clamped in place.
6. Tighten the cylinder head screws 1 to the tightening torque indicated in the table below.
7. 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