

# Assembly instructions

## Replacing gear of rack and pinion drive ZTRS/ZTR/ZR



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### 1 General instructions

You can find information about replacing pinions for STÖBER rack and pinion drives in this document.

#### NOTICE

#### Material damage!

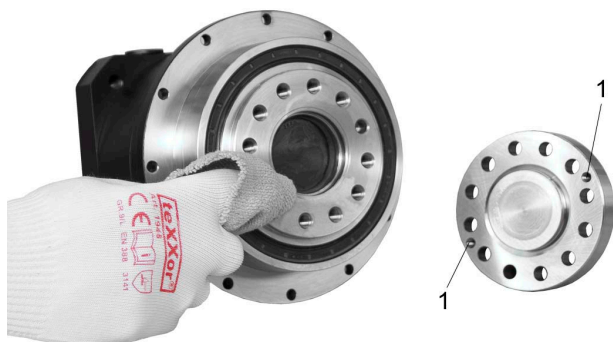
These assembly instructions apply for the replacement of pinions with a concentricity that has not been reduced.

- If you want to replace a pinion with a reduced concentricity, contact the STÖBER Service department.

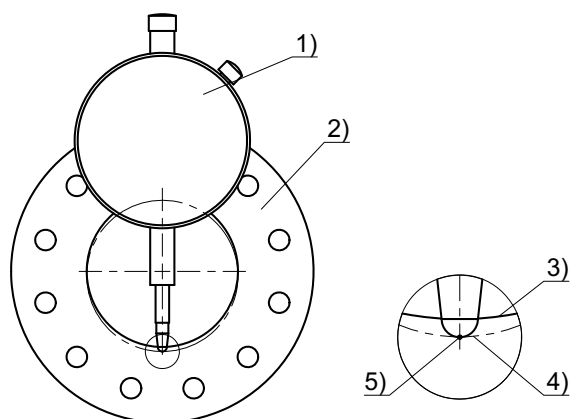
### 2 Replace pinion

**This is how to replace the pinion on your rack and pinion drive:**

1. Disassemble the old pinion from the gear unit flange. To do this, use the pushed-in holes (1) (except for ZR rack and pinion drives).
2. Check whether the type of the new pinion is the same as the old one.
3. Degrease the assembly surfaces on the gear unit flange and the new pinion.



4. (Does not apply for ZR rack and pinion drives.) Determine and mark the centered high point (5) of the flange shaft (2) with the aid of an appropriate dial gauge (1).



- 1) Dial gauge
- 2) Flange shaft
- 3) Theoretical contour of the flange shaft
- 4) Actual contour of the flange shaft
- 5) Centered high point

5. (Does not apply for ZR rack and pinion drives.) Position the pinion on the flange shaft so that the marking of the low point of the pinion (K) matches the marking of the high point of the flange shaft.



6. Mount the pinion with the cylinder head screws on the flange shaft. Tighten the cylinder head screws crosswise in several cycles. The tightening torques are specified in the following table.



Gear unit type	Ø Pinion pitch circle [mm]	Thread	Tightening torque [Nm]
PH(A)4	50	M6	18
PH(A)5	63	M6	18
PH(A)7	80	M8	43
PH(A)8	125	M10	84
PH(A)9/ PHV(A)9	140	M16	365
PH(A)10/ PHV(A)10	160	M20	710
PHQ10	166	M24	1220