

General Information for conical clamping sets

Technical Information

General Information on the use of stainless steel clamping sets:

Clamping connections are non-positive, detachable shaft-hub connections that are used on smooth shafts and hubs. They are an economical alternative to expensive parallel key connections. Because of the high fatigue strength, loosening of the joint can be ruled out, even under the harshest conditions. They have proven their reliability in a wide variety of applications such as:

- Shaft-mounted drives
- Wind turbines
- Gantry robots
- Packaging machinery
- Extruder systems
- Paper mills
- Pumps for the chemical and food processing sectors
- Food processing machinery
- Beverage and bottling plants

Typical properties of stainless steel clamping sets:

- Zero backlash torque transmission
- High corrosion resistance
- Flexibility
- Optimal concentricity
- Low surface pressures
- Self-centring versions
- Easy fitting and removal
- Wear and maintenance-free when catalogue values are observed

General information:

Both conical sleeves are slitted so that large tolerances can be accommodated.

We recommend the following tolerances on contact surfaces:

for 70-2 and 70-3

- h8 for the shaft,
- H8 for the hub bore D. for 70-1
- h9 for the shaft,
- H9 for the hub bore D.

The mean surface roughness R_z on the contact surfaces of shaft and hub should be $R_z \leq 16 \mu\text{m}$.

Assembly:

1. Loosen the clamping screws a few threads.
2. Unscrew as many clamping screw as there are extraction threads and screw them into the extraction holes.
3. Lightly oil the clamping element. Do not use oil with molybdenum disulfide or high-pressure additives and do not use grease.
4. Insert clamping element into the part to be clamped and push onto the shaft.
5. Remove the screws from the extraction threads and screw them back into the clamping holes.
6. Tighten the clamping screws by hand crosswise while aligning the hub.
7. Tighten the screws crosswise with a torque wrench to half the tightening torque. Then, tighten the screws crosswise to the full tightening torque.
8. Retighten the clamping screws in succession several times to the full tightening torque. The tightening process is complete when no more screws can be turned.

Disassembly:

1. Unscrew the clamping screws by several threads.
2. Unscrew as many clamping screw as there are extraction threads and screw them into the extraction holes.
3. Tighten the screws crosswise. This releases the clamping ring.

