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|--|--|---|---------------|
|  | KTR Kupplungstechnik<br>GmbH<br>D-48407 Rheine | <b>CLAMPEX® KTR 400</b><br><b>mounting instructions</b> | KTR-N 40818 E |
|  |  |   | sheet: 1      |
|  |  |   | edition: 2    |

The **CLAMPEX®** clamping set is a frictionally engaged, detachable shaft - hub connection for cylindrical shafts and bores without feather key.

### General Hints

Please read through these mounting instructions carefully before assembling the clamping set.

Please pay special attention to the safety instructions!

The mounting instructions are part of your product. Please keep them carefully and close to the clamping set.

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### Safety and Advice Hints



**DANGER !**

**Danger of injury to persons.**



**CAUTION !**

**Damages on the machine possible.**



**ATTENTION !**

**Pointing to important items.**

### General Hints to Danger



**DANGER !**

**With assembly and disassembly of the clamping set it has to be made sure that the entire drive train is protected against unintentional engagement. You can be seriously hurt by rotating parts. Please make absolutely sure to read through and observe the following safety instructions.**

- All operations on and with the clamping set have to be performed taking into account "safety first".
- Please make sure to disengage the power pack before you perform your work at the clamping set.
- Protect the power pack against unintentional engagement, e. g. by providing hints at the place of engagement or removing the fuse for current supply.
- Do not touch the operation area of the machine as long as it is in operation.
- Please protect the rotating drive parts against unintentional touch. Please provide for the necessary protection devices and caps.

### Proper Use

You may only assemble and disassemble the clamping set if you

- have carefully read through the mounting instructions and understood them
- and if you are authorized and have proper skills

The clamping set may only be used in accordance with the technical data (see **CLAMPEX®** catalogue). Unauthorized modifications on the clamping set are not admissible. We do not take any warranty for resulting damages. To further develop the product we reserve the right for technical modifications. The **CLAMPEX®** clamping set described in here corresponds to the technical status at the time of printing of these mounting instructions.

|                              |                             |                         |           |   |   |    |  |  |   |
|------------------------------|-----------------------------|-------------------------|-----------|---|---|----|--|--|---|
| Urheberrecht<br>gemäß DIN 34 | Gezeichnet: 06.09.01 Sha/Hg | Ersatz für: KTR-N 40840 | Verteiler |   |   |    |  |  |   |
|                              | Geprüft: 06.09.01 Sha       | Ersetzt durch:          | W         | K | V | VA |  |  | M |



KTR Kupplungstechnik  
GmbH  
D-48407 Rheine

# CLAMPEX® KTR 400 mounting instructions

KTR-N 40818 E  
sheet: 2  
edition: 2

The clamping set is generally delivered in assembled condition.

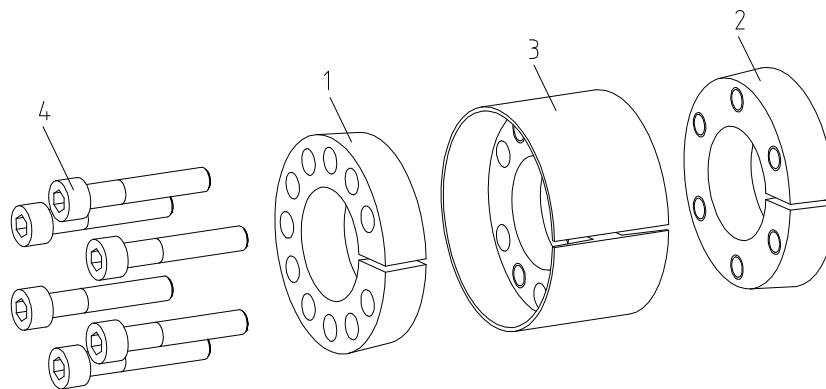
## Tolerances, surfaces

A good rotating process is sufficient:  
**Rz £ 16mm**

Highest permissible tolerance:  
**d = h8/H8 - shaft/hub**

## Components of CLAMPEX® KTR 400

| Component | Quantity      | Designation                   |
|-----------|---------------|-------------------------------|
| 1         | 1             | front pressure ring (slotted) |
| 2         | 1             | back pressure ring (slotted)  |
| 3         | 1             | external ring (slotted)       |
| 4         | see catalogue | cap screw DIN 912             |



picture 1: CLAMPEX® KTR 400



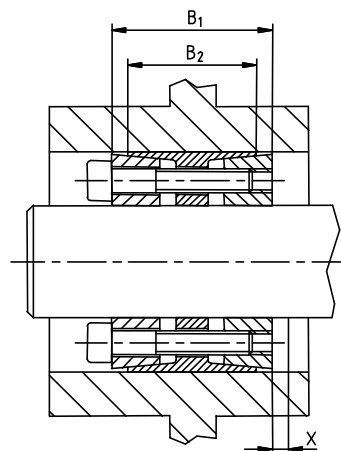
### CAUTION !

Check the clamping set before the assembly, so that the slots of component 1, 2 and 3 are flush with each other.



### ATTENTION !

Plan a free space between the pressure ring in the back and the hub/shaft for a later disassembly.



picture 2: free space for the disassembly

Formula for calculation of the free space x for the disassembly:

$$x = \frac{(B_1 - B_2)}{2}$$

Dimensions for B<sub>1</sub> and B<sub>2</sub> see CLAMPEX® catalogue.



### ATTENTION !

Dirty or used clamping sets must be disassembled, cleaned and afterwards oiled with thin-bodied oil (e. g. Castrol 4 in 1 or Klüber Quitsch Ex) before the assembly.

|                               |                             |                         |           |   |   |    |   |
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**Assembly**

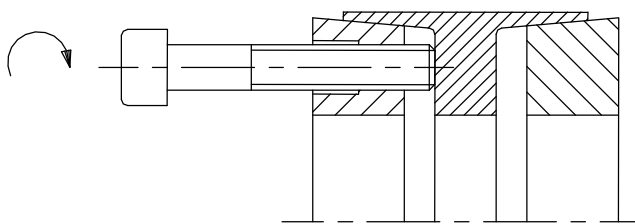
- Check the position of shaft and hub regarding the stipulated tolerance (h8/H8).
- Clean the hub bore and the shaft and afterwards oil them with thin-bodied oil (e. g. Castrol 4 in 1 or Klüber Quitsch Ex).



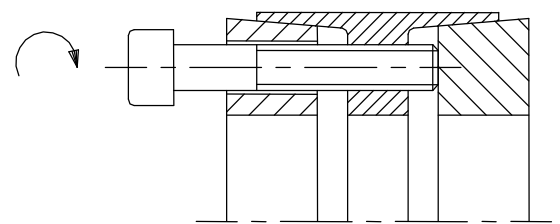
**CAUTION !**

**Do not use oils and greases with molybdenum disulphide or high pressure additions as well as slide grease pastes.**

- Detach the screws slightly. To make the assembly easier, fix the pressure rings in the front and in the back via the respective forcing thread by 2 clamping screws (see picture 3 and 4). Insert clamping set KTR 400 between shaft and hub.



picture 3: fixing of the front pressure ring



picture 4: fixing of the back pressure ring

- Remove the clamping screws used for the fixing and screw them into the threads of the back pressure ring.
- Slightly tighten the clamping screws manually and align the clamping set with hub part.
- At KTR 400 please make sure that the pressure rings are parallel to each other and in an angle of 90° to the shaft/hub.
- Tighten the clamping screws evenly and crosswise. Increase the tightening torque step by step. This procedure must be repeated until the tightening torque indicated in table 1 is reached with all clamping screws.

**Table 1:**

| type of clamping set         | 400 |    |     |     |     |     |     |     |
|------------------------------|-----|----|-----|-----|-----|-----|-----|-----|
| screw size M                 | M6  | M8 | M10 | M12 | M14 | M16 | M20 | M22 |
| tightening torque $T_A$ [Nm] | 17  | 41 | 83  | 145 | 230 | 355 | 690 | 930 |



**ATTENTION !**

**During the assembly there can be a slight axial displacement of the hub opposite to the shaft.**



## Disassembly

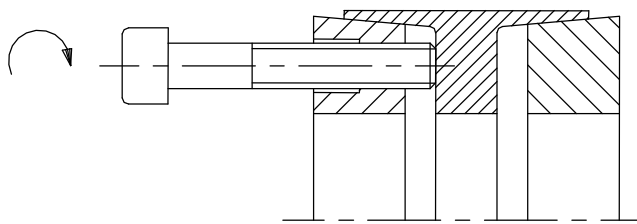


### DANGER !

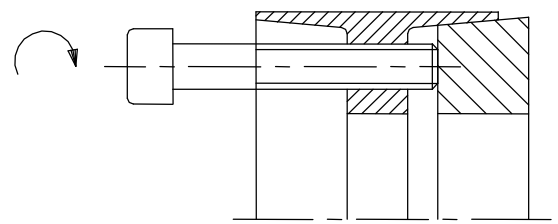
Loosened or falling drive parts can cause injuries to persons or damages to the machines.

Safe the drive parts before the disassembly.

- Loose all clamping screws evenly one after the other and unscrew them.
- Screw the clamping screws into the forcing threads of the front pressure ring (component 1) (see picture 5).
- Tighten the clamping screws evenly and crosswise. Increase the impression torque step by step until the front pressure ring (component 1) and the external ring (component 3) are separated.
- Screw the clamping screws into the forcing threads of the external ring (component 3) (see picture 6).
- Tighten the clamping screws evenly and crosswise. Increase the impression torque step by step until the back pressure ring (component 2) and the external ring (component 3) are separated.
- Remove the unscrewed clamping set between shaft and hub.



picture 5: disassembly of the front pressure ring



picture 6: disassembly of the back pressure ring



### CAUTION !

In case of non-observance of these hints or in case of non-considerance of the operating conditions regarding the selection of the clamping set, the function of the clamping set can be influenced.

**Disposal of waste:**

***Defective clamping sets must be cleaned and scrapped.***

|                               |                             |                         |           |   |   |    |  |   |
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