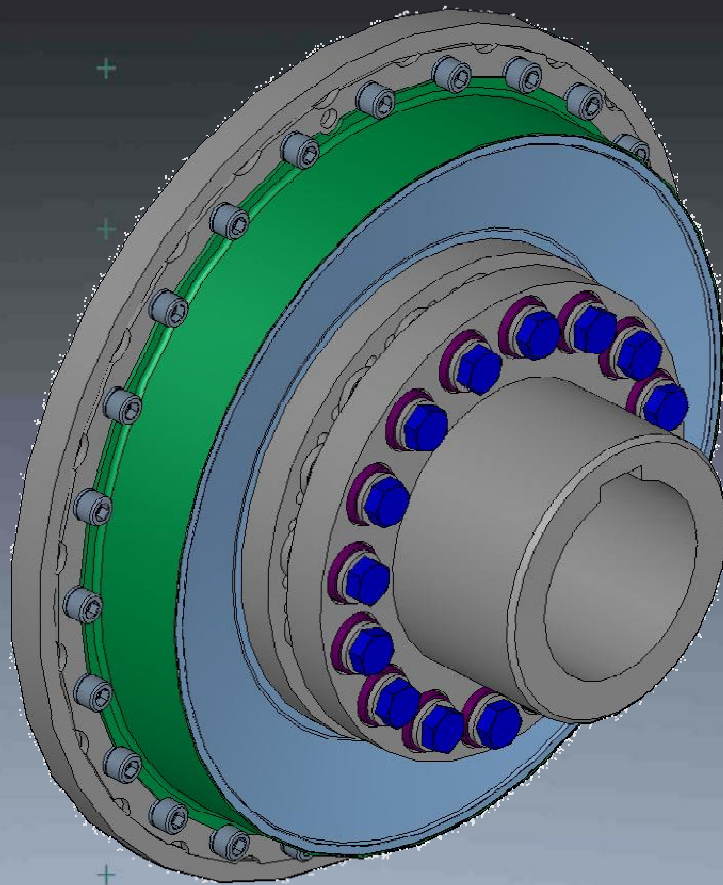


CENTAX-SEC Series B  
Assembly and operating instructions  
CX-64...85-BFS1-LE/SE-\*\*-B  
M15-008-EN  
Rev. 1



Power Transmission  
Leading by innovation



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## **1 General remarks**

These assembly and operating instructions form a constituent part of the coupling delivery and must be kept in an easily accessible place at all times.

CENTA products are developed and produced to quality standard DIN EN ISO 9001:2000.

In the interests of further development, CENTA reserves the right to make technical changes.



### **IMPORTANT**

CENTA is unable to accept liability for damage and operating faults caused by failure to observe the operating instructions.

These operating instructions are protected under copyright to CENTA Antriebe Kirschey GmbH.

In case of technical questions, please enquire with our head office:

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## 2 Safety

The purpose of these operating instructions is to enable users to:

- use the coupling safely and correctly
- maximize efficiency
- ensure that care and maintenance are carried out correctly

For this reason, these operating instructions must be thoroughly read and understood prior to work on and with the coupling.

### WARNING



#### **Injury and material damage can occur as a result of:**

- Failure to adhere to the safety and accident prevention regulations valid at the relevant installation site

The safety and accident prevention regulations valid at the installation site in question must be adhered to when performing any of the tasks described in these operating instructions.

### 2.1 Safety remarks

In these operating instructions, safety remarks are indicated by a pictogram and a signal word.

#### 2.1.1 Signal words

The following signal words are used in the safety remarks:

**DANGER**

Denotes the immediate threat of danger.  
If not prevented, fatal or extremely serious injuries can result.

**WARNING**

Denotes a potentially dangerous situation.  
If not prevented, fatal or extremely serious injuries can result.

**CAUTION**

Denotes a potentially dangerous situation.  
If not prevented, minor injuries and/damage to property may result.

**IMPORTANT**

Denotes application tips and particularly useful information. This is not a signal word denoting a dangerous or damaging situation.

### 2.1.2 Pictograms

Possible pictograms in the safety precautions:



Warning of a hazardous area



Do not switch



Use protective gloves



Use protective goggles

### 2.2 Qualification of deployed personnel

All the work described in these operating instructions may only be performed by authorized persons with adequate training and instruction.

#### **WARNING**



**Injury and material damage can occur as a result of:**

- Work at the coupling which is not described in these instructions
- Only carry out work which is described in these operating instructions.

### 2.3 Intended application

#### **WARNING**



**Injury and material damage can occur as a result of:**

- Application not in compliance with the intended use

The couplings are intended exclusively for use in accordance with the relevant design. They may only be used under the specified conditions.

**WARNING**



**Injuries can occur as a result of:**

- Contact with rotating parts

Shield the coupling in accordance with the applicable accident prevention regulations with an enclosure.

**Exception:**

The coupling is encased by the driving and driven units.

**The scope of delivery provided by CENTA does not include a protective enclosure.**

This enclosure must fulfil the following criteria:

- Provide protection against persons gaining access to rotating parts
- Restrain any rotating parts which may be work loose
- Guarantee sufficient ventilation for the coupling

This enclosure must be made of stable steel components. In order to ensure adequate ventilation for the coupling, the enclosure must be fitted with regular openings. For safety reasons, these openings must not exceed the dimensions outlined in table 2-1.

| <b>Component</b>               | <b>Circular openings [mm]</b> | <b>Rectangular openings [mm]</b> |
|--------------------------------|-------------------------------|----------------------------------|
| Top of the enclosure           | Ø 8                           | □ 8                              |
| Side elements of the enclosure | Ø 8                           | □ 8                              |


*Table 2-1 Shape and size of ventilation holes*

The enclosures must be positioned a minimum of 15 mm distant from rotating parts. The enclosure must be electrically conductive and be included in the equipotential bonding.

Before commencing long-term operation, the plant must successfully complete a test run.



**2.4 Application not in compliance with the intended use**

| <b>WARNING</b>  |  |
|---|--|
|  | <p><b>Injury and material damage can occur as a result of:</b></p> <ul style="list-style-type: none"><li>▪ Inadmissibly high torque</li><li>▪ Inadmissibly high or low speeds</li><li>▪ Exceeding the specified ambient temperature</li><li>▪ Inadmissible ambient medium</li><li>▪ Inadmissible coupling enclosure</li><li>▪ Exceeding the admissible overall misalignment values</li></ul> <p>Only use the coupling for the specified application.</p> |

CENTA bears no liability for damage resulting from application not in compliance with the intended use of the equipment.

Should there be a change of plant parameters, the coupling design must be reviewed by CENTA (address see chapter 1).



### 3 Delivery, transport, storage and disposal

#### 3.1 Delivery

After delivery, the coupling:

- must be checked for completeness and correctness of the delivery.
- must be examined for possible transport damage (which must be reported immediately to the carrier).



#### 3.2 Transport

| <b>CAUTION</b>   |  |
|--|--|
|   | <p><b>Injury and material damage can occur as a result of:</b></p> <ul style="list-style-type: none"><li>▪ Incorrect transportation of couplings</li></ul> <p>Ensure that the coupling is correctly transported.</p>   |
| <b>CAUTION</b>   |  |
|  | <p><b>Material damage to coupling components can occur as a result of:</b></p> <ul style="list-style-type: none"><li>▪ Contact with sharp-edged objects</li></ul> <p>Protect coupling components for transportation.<br/>Only hoist coupling components with nylon belts or ropes.<br/>Always cushion parts when supporting them from below.</p> |

Following transportation damage:

- Check the coupling carefully for damage.
- Consult the manufacturer (Address see chapter 1).

#### 3.3 Storage

| <b>CAUTION</b>   |  |
|--|--|
|   | <p><b>Material damage to elastic elements and rubber parts can occur as a result of:</b></p> <ul style="list-style-type: none"><li>▪ Incorrect storage</li></ul> <p>These parts must be stored laid flat and so they cannot distort, and protected from ozone, heat, light, moisture and solvents.</p> |
|  <b>IMPORTANT</b>                                 |  |
| Rubber parts are marked where possible with their production date. From this date, they may only be stored for a maximum of 5 years. |  |

**3.3.1 Storage location**

Requirements imposed on the storage location:


- Moderately ventilated and low in dust
- Dry (max. 65% humidity)
- Temperature stabilized (-10°C to +25°C)
- Free of ozone-producing devices such as light sources and electric motors
- Free of UV light sources and direct sunlight
- Do not store solvents and disinfectants, fuels or lubricants, acids, chemicals etc. in the same location

For more details, refer to DIN 7716.

**3.3.2 Storage of couplings / flexible elements**

- Unpack the parts.
- Check the packaging for damage. Replace if necessary.
- Check that the wax protection on steel components is intact. If necessary, patch or renew.
- Package the parts (for prolonged periods of storage, enclose desiccant and weld into film).
- Place the parts into storage.

**3.4 Disposal**

| <b>RECYCLING</b>  |   |
|---|---|
|  | Ensure safe, environmentally responsible disposal of operating supplies and exchange parts. For this, locally provided recycling facilities and regulations must be utilized. |

For disposal, the coupling parts must be separated where possible and sorted according to material type.



## **4 Technical description**

### **4.1 Characteristics**

The CENTAX-SEC series B coupling have the following positive characteristics:

- Medium to high torsional elasticity, according to the shore hardness of the rubber element
- High radial elasticity
- High axial displacement ability, the bolts can slide axially in the hub and adjust themselves axially independently
- Adequate angular elasticity
- Easy axial or radial assembly
- Easy replacement of the rubber element without disturbance of the coupled units
- Robust, well-proven, durable, low-maintenance and cost-effective
- Type-approved by leading societies
- Protected by Patent applications

### **4.2 Specifications**

The specifications can be found in the catalogue and the dimensions in the installation drawing.

## 5 Alignment of the units being connected

### **IMPORTANT**

- Align the units during the assembly.
- Align the units that are to be connected as accurately as possible. In this way, a long service life for the coupling and maximum operating misalignment values can be achieved.  
The overall misalignment is composed of the misalignment and the operating misalignment. The permissible overall misalignment values can be found in the corresponding catalogue and must not be exceeded.
- All permissible alignment tolerances apply to arrangements at operating temperatures.  
If the arrangement would be aligned at a different temperature, there would be additional deviations in the arrangement, which were produced by the difference between the aligning and operating temperature.  
For alignment, this has to be taken into account.
- After completion of assembly, check the alignment of the coupling again and if necessary correct.

### 5.1 Axial Alignment

Determine the axial misalignment (see Fig. 5-1).

- Take installation length **L** from the installation drawing.
- Align the units (installation dimension =  **$L \pm \Delta K_A$**  max).

Permissible axial alignment tolerance:

$$\Delta K_{A \max} = 0.5 \text{ mm}$$

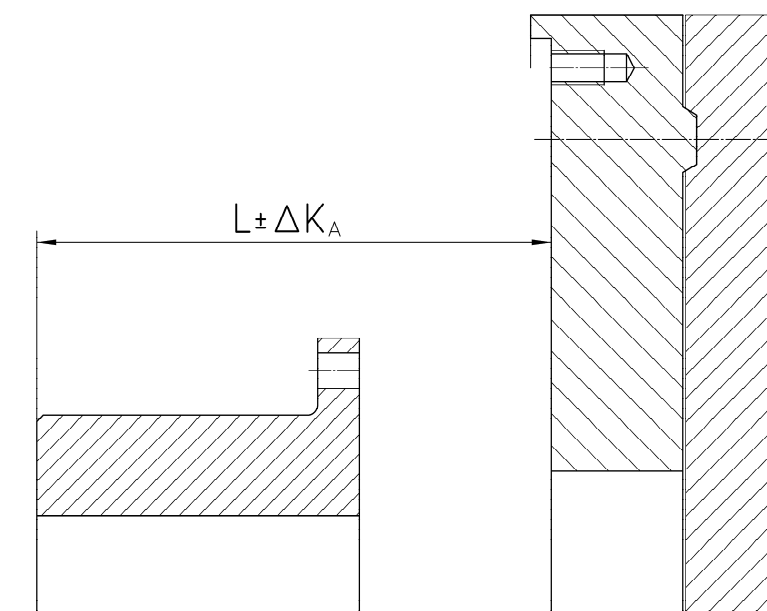


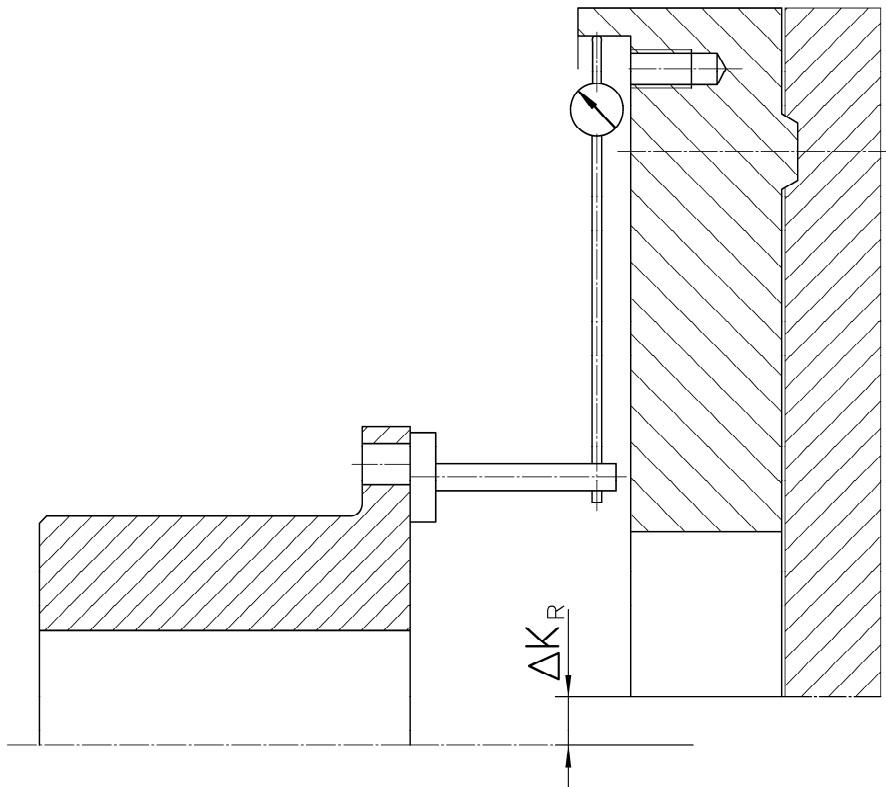
Fig. 5-1 Axial misalignment

## 5.2 Radial alignment

Measure the radial misalignment with a dial gauge (see Fig. 5-2).

- Attach the dial gauge to the hub.
- Set the sensor of the dial gauge radially against the centering.
- Turn the hub with dial gauge and flywheel slowly by 360°.
- Align the units (calculated deviation  $\leq \Delta K_{R \max}$ ).

The permissible radial alignment tolerance  $\Delta K_{R \max}$  can be found in the following table.



*Fig. 5-2 Radial misalignment*



| <b>Size</b> | <b>Shore hardness<br/>[Shore A]</b> | <b><math>\Delta K_{R \max}</math><br/>[mm]</b> |
|-------------|-------------------------------------|--|
| 64          | 50 / 60                             | $\pm 0.45$                                     |
|             | 70                                  | $\pm 0.15$                                     |
| 66          | 50 / 60                             | $\pm 0.6$                                      |
|             | 70                                  | $\pm 0.18$                                     |
| 67          | 50 / 60                             | $\pm 0.45$                                     |
|             | 70                                  | $\pm 0.15$                                     |
| 69 - 71     | 50 / 60                             | $\pm 0.6$                                      |
|             | 70                                  | $\pm 0.18$                                     |
| 72          | 50 / 60                             | $\pm 0.75$                                     |
|             | 70                                  | $\pm 0.22$                                     |
| 75 - 76     | 50 / 60                             | $\pm 0.82$                                     |
|             | 70                                  | $\pm 0.25$                                     |
| 78          | 50 / 60                             | $\pm 0.9$                                      |
|             | 70                                  | $\pm 0.3$                                      |
| 80          | 50 / 60                             | $\pm 1.0$                                      |
|             | 70                                  | $\pm 0.33$                                     |
| 81          | 50 / 60                             | $\pm 1.0$                                      |
|             | 70                                  | $\pm 0.37$                                     |
| 82 - 85     | 50 / 60                             | $\pm 1.2$                                      |
|             | 70                                  | $\pm 0.37$                                     |

*Table 5-1 Permissible radial alignment tolerance*

### 5.3 Angular alignment

Measure the angular misalignment with a dial gauge (see Fig. 5-3).

- Attach the dial gauge to the hub.
- Position the sensor of the dial gauge radially against flat surface at a distance R.
- Turn the hub with dial gauge and flywheel slowly by 360°.

The maximum dial gauge deflection must not exceed the value  $2xS_w$  at any point. The permissible tolerance  $S_{w \max}$  should be taken from the table below.

- Align the units (calculated deviation  $\leq \Delta K_{W \max}$ ).

Permissible angular alignment tolerance:

$$\Delta K_{W \max} = 0.03^\circ$$

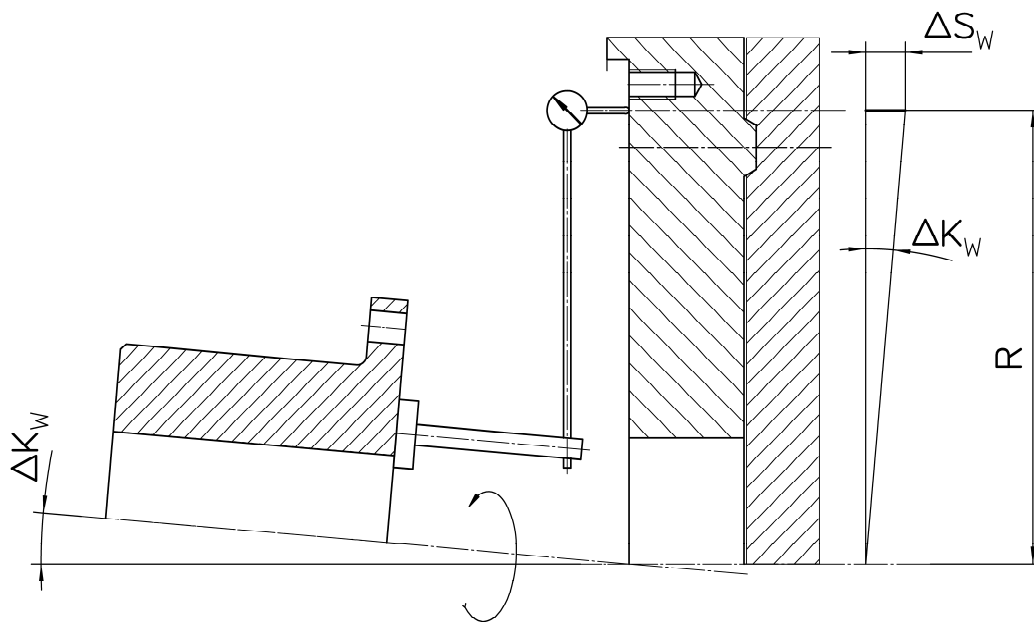


Fig. 5-3 Angular misalignment





| <b>Size</b> | <b>R<br/>[mm]</b> | <b>S<sub>w max</sub><br/>[mm]</b> |
|-------------|-------------------|-----------------------------------|
| 64          | 225               | 0.11                              |
| 66 - 69     | 250               | 0.13                              |
| 71 - 72     | 300               | 0.15                              |
| 75 - 76     | 325               | 0.17                              |
| 78          | 355               | 0.18                              |
| 80          | 405               | 0.21                              |
| 81          | 425               | 0.22                              |
| 82 - 85     | 505               | 0.26                              |

*Table 5-2 Permissible angular alignment tolerance*

## 6 Mounting

### 6.1 General assembly instructions

Any work method which impairs the safety of the coupling is prohibited. The user undertakes to notify the manufacturer immediately of any changes occurring at the coupling which could impair safety (address see chapter 1).

#### WARNING


**Injuries can occur as a result of:**

- Contact with rotating parts

Before starting work at the coupling, switch off the plant and secure against unintentional start-up.

#### WARNING


**Injury and material damage can occur as a result of:**

- Assembly of the coupling in the wrong sequence

Only ever assemble the coupling in the described sequence.

#### WARNING


**Injury and material damage can occur as a result of:**

- Falling coupling components

Secure coupling components against falling to the floor.

#### CAUTION


**Material damage to coupling components can occur as a result of:**

- Contact with sharp-edged objects

Protect coupling components for transportation.

Only hoist coupling components with nylon belts or ropes.

Always cushion parts when supporting them from below.

#### CAUTION


**Material damage can occur as a result of:**

- Soiled joint surfaces

The surfaces that are to be joined must be free of dirt, preservatives and lubricants.

**CAUTION**



**Material damage to coupling components can occur as a result of:**

- Anaerobic adhesives (e.g. Loctite) used for screw locking
- This type of screw locking medium may not be in contact with rubber parts.

** IMPORTANT**

- Screw preparation and tightening torque levels in accordance with CENTA data sheet D13-013 (see chapter 11.1).
- Use suitable lifting devices for assembly.
- The following assembly stages are described for coupling CX-82-BFS1.
- Part illustration and marking may differ slightly from installation drawing and delivery state.

**6.2 Mounting the hub**

- Mount the hub as appropriate for the type supplied (see installation drawing).
  - Mounting the hub with feather key, see chapter 6.2.1 .
  - Mounting the hub with oil interference fit, see chapter 6.2.2 .

**6.2.1 Mounting the hub with feather key**

**CAUTION**



**Material damage can occur as a result of:**

- Incorrect heating of the hubs/flange hubs
- Heat the hubs/flange hubs steadily in an oil bath, a fan oven, on an electric hot plate, either inductive or with a flame (ring burner).

**CAUTION**



**Injuries can occur as a result of:**

- Hot coupling components
- Use suitable protective gloves.

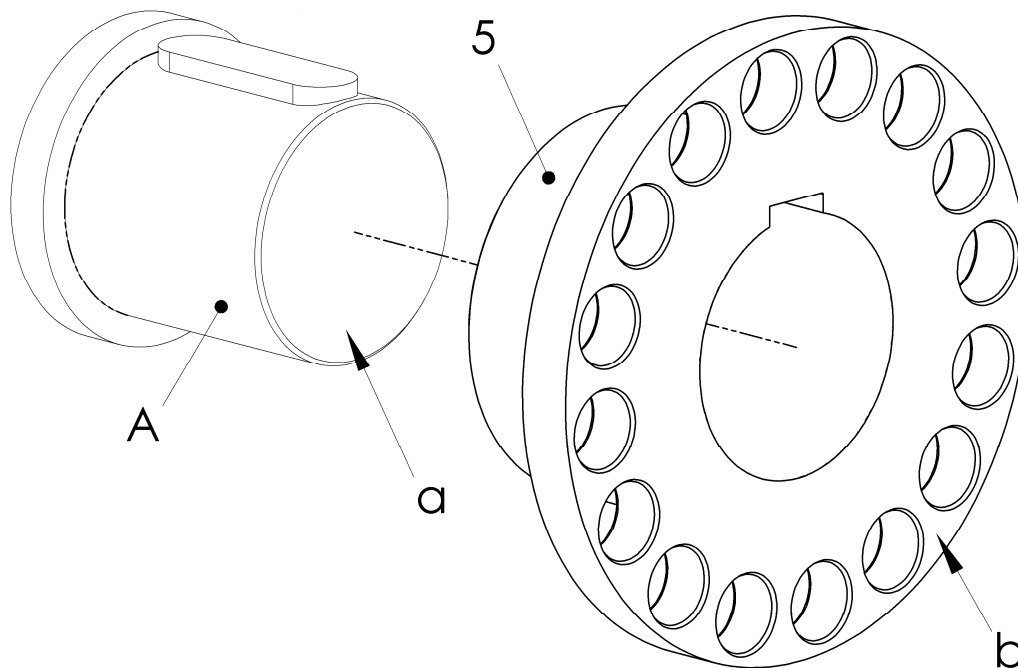


Fig. 6-1 Mounting the hub with feather key

| Item | Info | Designation       | Remark        |
|------|------|-------------------|---------------|
| 5    |      | Hub               |               |
| A    |      | Shaft             | Customer part |
|      | a    | Face of shaft (A) |               |
|      | b    | Face of hub (5)   |               |

- Warm the hub (5) to a temperature of 170° – 200° C.
- Push the hub (5) onto the shaft (A).

 **IMPORTANT**

Face of shaft must not protrude to face of hub. Otherwise radial replacement of other coupling parts is not guaranteed.

**CAUTION**



**Material damage can occur as a result of:**

- Hot hubs/flange hubs
- Before further mounting of hubs/flange hubs, allow them to cool to ambient temperature.

**6.2.2 Mounting the hub with oil interference fit****WARNING****Injury and material damage can occur as a result of:**

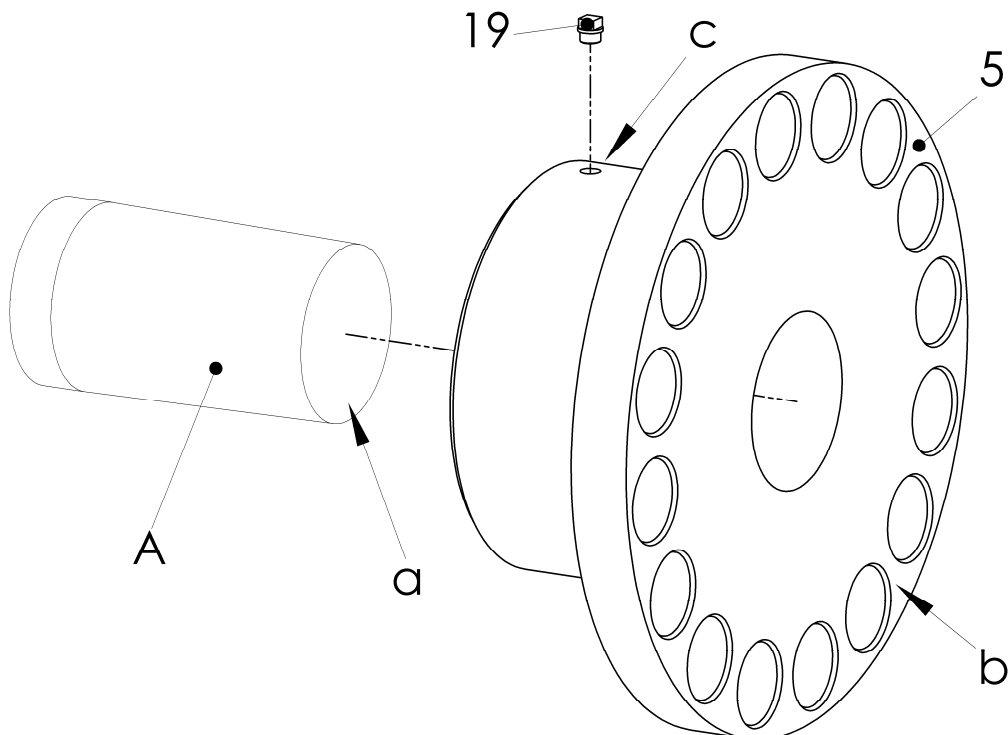
- Non-compliance with the operating instructions for the hydraulic pumps

Before carrying out work with the hydraulic pumps, do not fail to read their operating instructions. Only ever work with hydraulic pumps as described in their operating instructions.

**WARNING****Injury and material damage can occur as a result of:**

- Hydraulic fluid spraying out

Use protective goggles.



*Fig. 6-2 Mounting the hub with oil interference fit*

| Item | Info | Designation       | Remark        |
|------|------|-------------------|---------------|
| 5    |      | Hub               |               |
| 19   |      | Screw plug G¼     |               |
| A    |      | Shaft             | Customer part |
|      | a    | Face of shaft (A) |               |
|      | b    | Face of hub (5)   |               |
|      | c    | Thread G¼         |               |


**IMPORTANT**

We recommend the following mounting fluids:

- For mounting:  
Oil with a viscosity 300 mm<sup>2</sup>/s at 20°C, e.g. SKF LHM300
- For dismantling:  
Oil with a viscosity 900 mm<sup>2</sup>/s at 20°C, e.g. SKF LHDF900

- Lightly oil the cone of the shaft (A).
- Push the hub (5) onto the shaft (A).
- Remove the screw plug (19) from the hub (5).
- Connect the pump for expanding the hub (5) to the thread G¼ (c).
- Screw the pump for pushing on the hub to the shaft.
- Build up the oil pressure for pushing on the hub.

**WARNING**

**Material damage can occur as a result of:**

- Too fast increase of the expanding pressure in the hub
- The increase of the expanding pressure may not exceed **35 bar/minute**.

**WARNING**

**Material damage can occur as a result of:**

- Insufficient expanding pressure in the hub
- If the expanding pressure is too low, the necessary pushing pressure is too high.

- Slowly build up the oil pressure for expanding the hub.
- Build up the oil pressure alternately until the lift path (p up) of the hub (5) is reached (for p up see installation drawing).
- Decrease the oil pressure for expanding the hub.
- Remove the pump for expanding the hub from the hub (5).
- Maintain the oil pressure for pushing on the hub for one hour.
- Decrease the oil pressure for pushing on the hub.
- Remove the pump for pushing on the hub from the shaft.
- Turn the hub (5) allow the oil to run out of the thread G $\frac{1}{4}$  (c) and dispose of it correctly.
- Screw the screw plug (19) into the hub (5).

** IMPORTANT**

Do not place a load on the hub for 24 hours.

** IMPORTANT**

Face of shaft must not protrude to face of hub. Otherwise radial replacement of other coupling parts is not guaranteed.

### 6.3 Mounting the flange to the flywheel

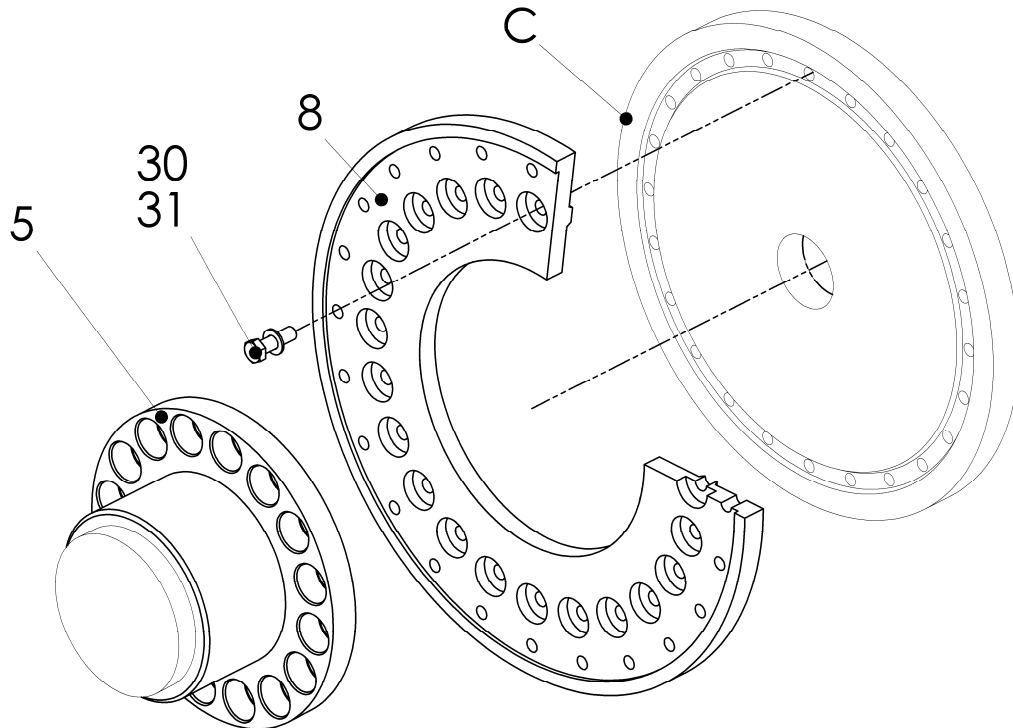


Fig. 6-3 Mounting the flange to the flywheel

| Item | Info | Designation | Remark        |
|------|------|-------------|---------------|
| 5    |      | Hub         |               |
| 8    |      | Flange      |               |
| 30   |      | Screw       | If ordered    |
| 31   |      | Washer      | If ordered    |
| C    |      | Flywheel    | Customer part |

- Push the flange (8) into the centring of the flywheel (C).
- Screw the flange (8) to the flywheel (C) using the screws (30) and the washers (31).

### 6.4 Aligning the units

- Align the units to be connected (see chapter 5).



## 6.5 Mounting the pre-mounted assembly

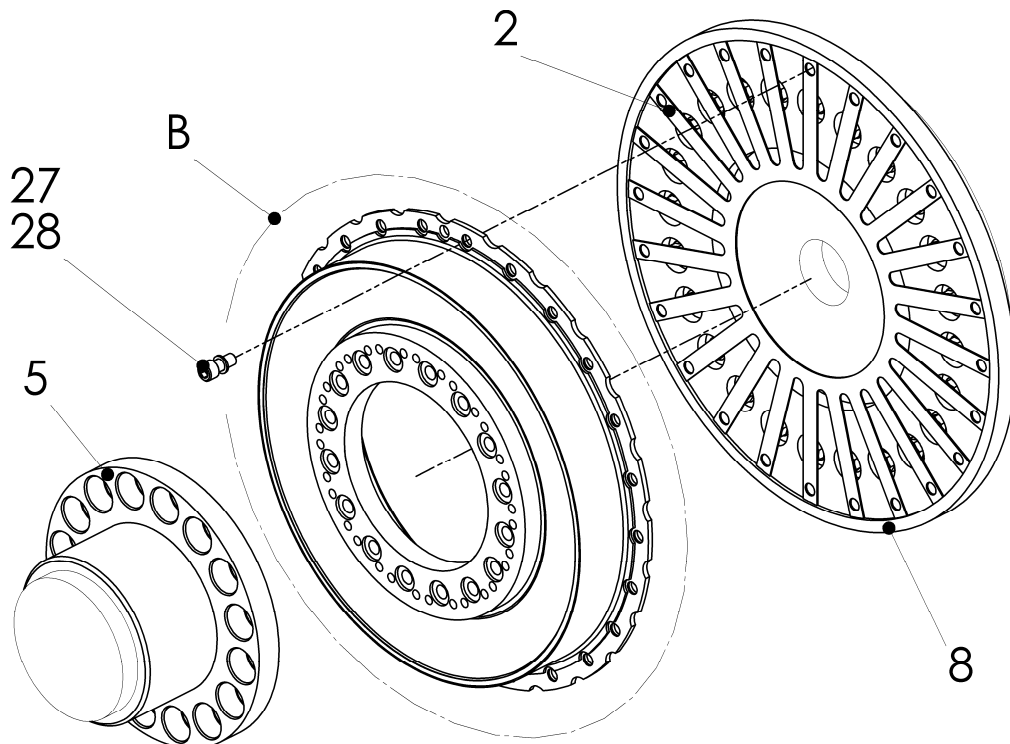
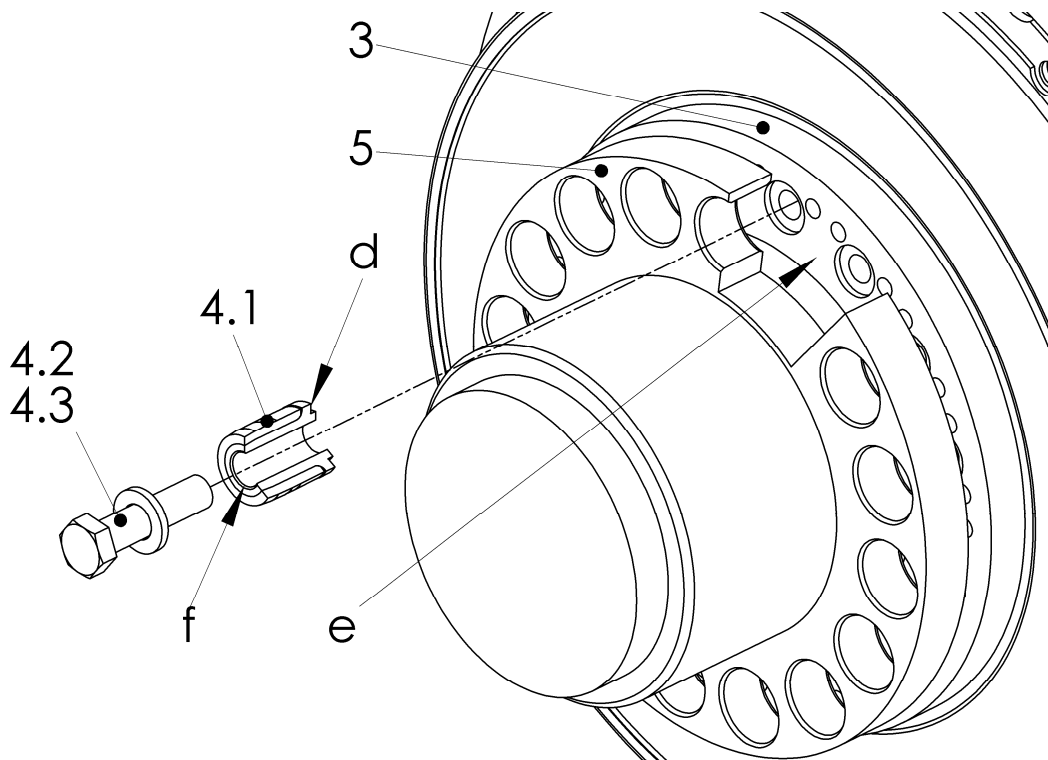


Fig. 6-4 Mounting the pre-mounted assembly

| Item | Info | Designation          | Remark |
|------|------|----------------------|--------|
| 2    |      | Ventilation plate    |        |
| 5    |      | Hub                  |        |
| 8    |      | Flange               |        |
| 27   |      | Screw ISO4762-10.9   |        |
| 28   |      | Washer ISO7092-300HV |        |
| B    |      | Pre-mounted assembly |        |

- Push the ventilation plate (2) into the centring of the flange (8).
- Push the pre-mounted assembly (B) into the centring of the flange (8).
- Screw the pre-mounted assembly (B) and the ventilation plate (2) to the flange (8) using the screws (27) and the washers (28).

**6.6 Mounting the buffer sets**

*Fig. 6-5 Mounting the buffer sets*

| Item | Info | Designation                      | Remark          |
|------|------|----------------------------------|-----------------|
| 3    |      | Threaded ring                    |                 |
| 4.1  |      | Buffer set                       |                 |
| 4.2  |      | Washer                           |                 |
| 4.3  |      | Screw ISO4014-10.9               |                 |
| 5    |      | Hub                              |                 |
|      | d    | Contact surface of buffer set    |                 |
|      | e    | Contact surface of threaded ring |                 |
|      | f    | Thread                           | For dismantling |

- Push the buffer set (4.1) through the hub (5) into the centring of the threaded ring (3).
- Screw the buffer set (4.1) using the screw (4.3) and the washer (4.2) to the threaded ring (3) until the surface of the buffer (d) sits close to the surface of the threaded ring (3).
- Repeat the mounting section above until all buffer sets (4.1) are mounted.

**6.7 After completed mounting****WARNING****Injury and material damage can occur as a result of:**

- Loose screw connections

Before commissioning, the tightening torque levels of all screws must be checked and corrected if necessary.

Before commencing long-term operation, the plant must successfully complete a test run.

## 7 Operation

### WARNING



**Injury and material damage can occur as a result of:**

- Worn coupling components

If the running noises change and/or vibrations occur turn the plant off immediately.

Determine the fault and its root cause, and remedy.  
The troubleshooting process is simplified by the table in the next chapter.  
On principle in case of a fault, an analysis of the entire plant should be performed.

### 7.1 Operating faults, root causes and remedy

| Faults                                    | Possible root causes     | Remedy  |
|---|--------------------------|---|
| Running noises or vibrations in the plant | Alignment error          | <ol style="list-style-type: none"> <li>1. Switch off the plant</li> <li>2. Check alignment, correct if applicable</li> <li>3. Trial run</li> </ol>  |
|   | Loose screws             | <ol style="list-style-type: none"> <li>1. Switch off the plant</li> <li>2. Check alignment, correct if applicable</li> <li>3. Check screw torque levels and correct if necessary</li> <li>4. Trial run</li> </ol> |
| Breakage of the rubber element            | Alignment error          | <ol style="list-style-type: none"> <li>1. Switch off the plant</li> <li>2. Exchange defective parts</li> <li>3. Check alignment, correct if applicable</li> <li>4. Trial run</li> </ol>                           |
|   | Inadmissibly high torque | <ol style="list-style-type: none"> <li>1. Switch off the plant</li> <li>2. Exchange defective parts</li> <li>3. Check alignment, correct if applicable</li> <li>4. Trial run</li> </ol>                           |

*Table 7-1 Troubleshooting table*

In case of uncertainty or if you have questions, please contact our head office (address see chapter 1).

### 7.2 Admissible overall misalignment of the coupling

The overall misalignment values can be found in the catalogue.

## 8 Care and maintenance

### WARNING

**Injuries can occur as a result of:**

- Contact with rotating parts

Before starting work at the coupling, switch off the plant and secure against unintentional start-up.

The coupling requires low maintenance. We recommend a visual inspection at the regular scheduled maintenance intervals for the whole unit.

### 8.1 Work to be performed

#### 8.1.1 Cleaning the coupling

- Remove any loose dirt from the coupling.

#### 8.1.2 Visual inspection of the coupling

- Inspect the coupling for cracks, chips or missing parts.
- Replace faulty and missing parts.

#### 8.1.3 Visual inspection of the rubber elements / rubber segments

**IMPORTANT**

Exchange the rubber elements / rubber segments in the event that:

- The wear specifications given in W00-002 are exceeded

- Assess the rubber elements / rubber segments as described in CENTA guidelines W00-002.

#### 8.1.4 Inspection of the screw connections

- Check the tightening torque levels of all screws and if necessary, correct.

### 8.2 Replacing defective parts

**IMPORTANT**

When the rubber elements / rubber segments are replaced, the buffer sets must also be replaced.

- Remove the coupling as described in chapter 9.
- Replace wearing parts.
- Mount the coupling as described in chapter 6 and 9.

## 9 Dismantling

### 9.1 General dismantling instructions

Any work method which impairs the safety of the coupling is prohibited.  
The user undertakes to notify the manufacturer immediately of any changes occurring at the coupling which could impair safety (address see chapter 1).

#### WARNING

**Injuries can occur as a result of:**

- Contact with rotating parts

Before starting work at the coupling, switch off the plant and secure against unintentional start-up.

#### WARNING

**Injury and material damage can occur as a result of:**

- Dismantling of the coupling in the wrong sequence

Only ever dismantle the coupling in the described sequence.

#### WARNING

**Injury and material damage can occur as a result of:**

- Falling coupling components

Secure coupling components against falling to the floor.

#### CAUTION

**Material damage to coupling components can occur as a result of:**

- Contact with sharp-edged objects

Protect coupling components for transportation.

Only hoist coupling components with nylon belts or ropes.

Always cushion parts when supporting them from below.

**IMPORTANT**

Use suitable lifting devices for dismantling.

## 9.2 Dismantling the buffer sets

- Dismantle the buffer sets as appropriate for the supplied coupling size.
  - Dismantling the buffer sets of the coupling sizes 64...78 and 81...85, see chapter 9.2.1 .
  - Dismantling the buffer sets of the coupling size 80, see chapter 9.2.2 .

### 9.2.1 Dismantling the buffer sets of the coupling sizes 64...78 and 81...85

**See Fig. 6-5:**

- Loosen the screws (4.3) of the connection buffer set (4.1) and threaded ring (3) and remove with the washers (4.2).
- Loosen the buffer sets (4.1) by using the threads M27 (f) off the threaded ring (3), pull them off the hub (5) and remove.

### 9.2.2 Dismantling the buffer sets of the coupling size 80

**See Fig. 6-5:**

- Loosen the screws (4.3) of the connection buffer sets (4.1) and threaded ring (3) and remove with the washers (4.2).
- Loosen the buffer sets (4.1) by using the threads M24 (f) off the threaded ring (3), pull them off the hub (5) and remove.

## 9.3 Dismantling the pre-mounted assembly

**See Fig. 6-4:**

- Support the pre-mounted assembly.
- Loosen the screws (27) of the connection pre-mounted assembly (B), ventilation plate (2) and flange (8) and remove them together with the washers (28).
- Pull the pre-mounted assembly (B) off the centring of the flange (8) and remove.
- Pull the ventilation plate (2) off the centring of the flange (8) and remove.
- Remove the mounting supports.

## 9.4 Dismantling the flange

**See Fig. 6-3:**

- Loosen the screws (30) of the connection flange (8) and flywheel (C) and remove with the washers (31).
- Pull the flange (8) off the centring of the flywheel (C) and remove.

## 9.5 Dismantling the hub (if necessary)

- Dismantle the hub as appropriate for the type supplied.
  - Dismantling the hub with feather key, see chapter 9.5.1 .
  - Dismantling the hub with oil interference fit, see chapter 9.5.2 .





### 9.5.1 Dismantling the hub with feather key

**See Fig. 6-1:**

- Separate both, the driving and the driven unit.
- Remove the hub (5) from the shaft (A).

### 9.5.2 Dismantling the hub with oil interference fit

**See Fig. 6-2:**

|   |   |
|---|---|
| <b>WARNING</b>  |   |
|   | <p><b>Injury and material damage can occur as a result of:</b></p> <ul style="list-style-type: none"> <li>▪ Non-compliance with the operating instructions for the hydraulic pumps</li> </ul> <p>Before carrying out work with the hydraulic pumps, do not fail to read their operating instructions. Only ever work with hydraulic pumps as described in their operating instructions.</p> |
| <b>WARNING</b>  |   |
|    | <p><b>Injury and material damage can occur as a result of:</b></p> <ul style="list-style-type: none"> <li>▪ Hydraulic fluid spraying out</li> </ul> <p>Use protective goggles.</p>  |
| <b>WARNING</b>  |   |
|    | <p><b>Injuries and material damages can occur by:</b></p> <ul style="list-style-type: none"> <li>▪ Suddenly loosening hubs</li> </ul> <p>Secure the hub with a hydraulic tool against sudden axial loosening.</p>   |
|  <b>IMPORTANT</b>  |   |
| <p>We recommend the following mounting fluids:</p> <ul style="list-style-type: none"> <li>• For mounting:<br/>Oil with a viscosity 300 mm<sup>2</sup>/s at 20°C, e.g. SKF LHM300</li> <li>• For dismantling:<br/>Oil with a viscosity 900 mm<sup>2</sup>/s at 20°C, e.g. SKF LHDF900</li> </ul> |   |



- Remove the screw plug (19) from the hub (5).
- Connect the pump for expanding the hub (5) to the thread G¼ (c).
- Screw the pump for holding the hub to the shaft (A).
- Build up the oil pressure for holding the hub.

## WARNING

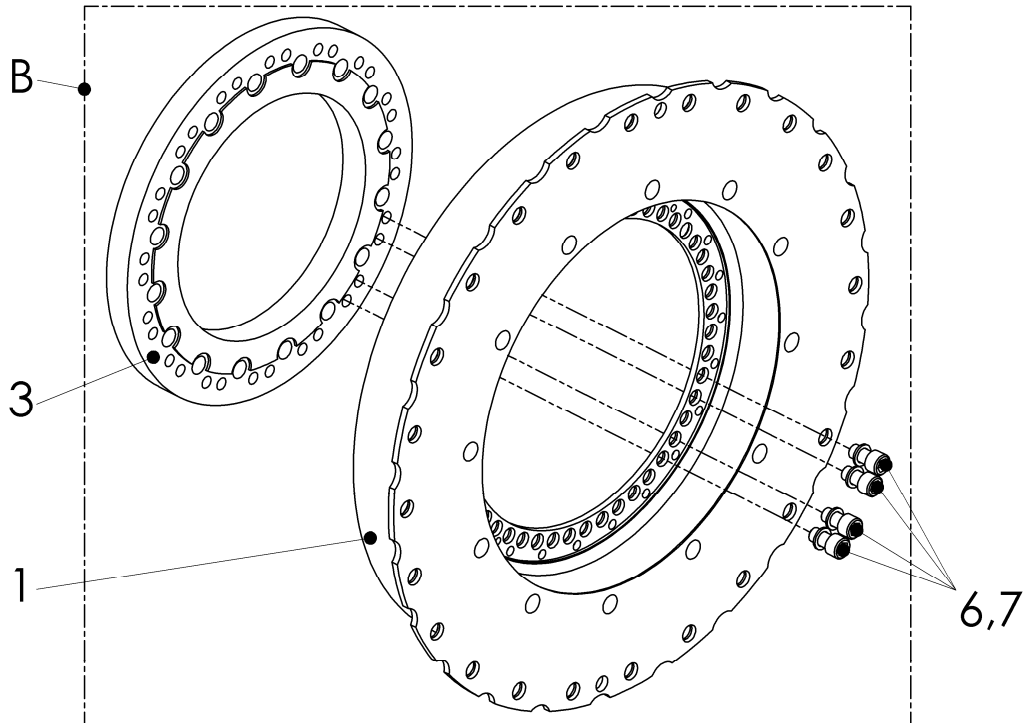
**Material damage can occur as a result of:**

- Too fast increase of the expanding pressure in the hub
- The increase of the expanding pressure may not exceed **35 bar/minute**.

- Slowly build up the oil pressure for expanding the hub ( **$p_{\max} = 1500 \text{ bar}$** ).
- Slowly reduce the oil pressure for holding the hub.
- Slowly reduce the oil pressure for expanding the hub.
- Repeat the above dismantling section until the hub is completely released from the shaft.
- Remove the pump for holding the hub from the shaft (A).
- Remove the pump for expanding the hub from the hub (5).
- Turn the hub (5), allow the oil to run out of the thread G¼ (c) and dispose of it correctly.
- Screw the screw plug (19) into the hub (5).

### 9.6 Disassembling the pre-mounted assembly

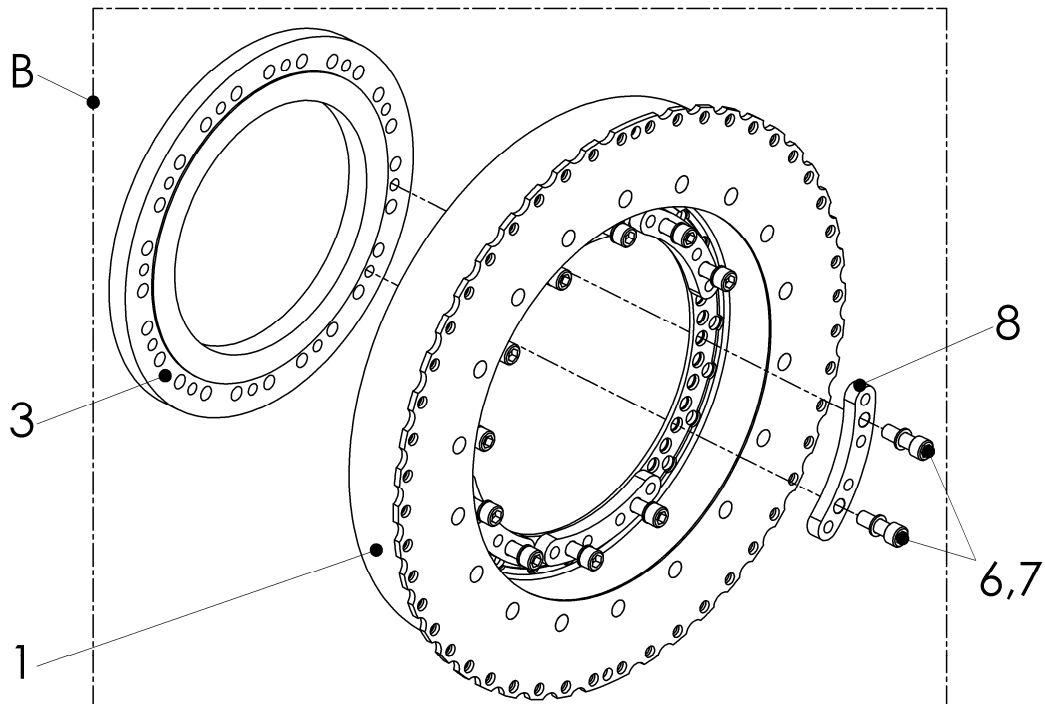
- Disassemble the pre-mounted assembly as appropriate for the supplied coupling size.
  - Disassembling the pre-mounted assembly of the coupling sizes 64...78 and 81...85, see chapter 9.6.1 .
  - Disassembling the pre-mounted assembly of the coupling size 80, see chapter 9.6.2 .

**9.6.1 Disassembling the pre-mounted assembly of the coupling sizes 64...78 and 81...85**


*Fig. 9-1 Disassembling the pre-mounted assembly of the coupling sizes 64...78 and 81...85*

| Item | Info | Designation          | Remark |
|------|------|----------------------|--------|
| 1    |      | Rubber element       |        |
| 3    |      | Threaded ring        |        |
| 6    |      | Washer ISO7092-300HV |        |
| 7    |      | Screw ISO4762-10.9   |        |
| B    |      | Pre-mounted assembly |        |

- Loosen the screws (7) of the connection rubber element (1) and threaded ring (3) and remove together with the washers (6).
- Pull the threaded ring (3) off the centring of the rubber element (1) and remove.

**9.6.2 Disassembling the pre-mounted assembly of the coupling size 80**


*Fig. 9-2 Disassembling the pre-mounted assembly of the coupling size 80*

| Item | Info | Designation          | Remark |
|------|------|----------------------|--------|
| 1    |      | Rubber element       |        |
| 3    |      | Threaded ring        |        |
| 6    |      | Washer ISO7092-300HV |        |
| 7    |      | Screw ISO4762-10.9   |        |
| 8    |      | Inner segment        |        |
| B    |      | Pre-mounted assembly |        |

- Loosen the screws (7) of the connection rubber element (1) and threaded ring (3). Remove the screws (7) and the washers (6) together with the inner segments (8).
- Pull the threaded ring (3) off the centring of the rubber element (1) and remove.

## **9.7 Assembling the pre-mounted assembly**

### **See Fig. 9-1 and 9-2:**

- Assemble the pre-mounted assembly as appropriate for the supplied coupling size.
  - Assembling the pre-mounted assembly of the coupling sizes 64...78 and 81...85, see chapter 9.7.1 .
  - Assembling the pre-mounted assembly of the coupling size 80, see chapter 9.7.2 .

### **9.7.1 Assembling the pre-mounted assembly of the coupling sizes 64...78 and 81...85**

#### **See Fig. 9-1:**

- Push the threaded ring (3) into the centring of the rubber element (1).
- Screw the rubber element (1) to the threaded ring (3) using the screws (7) and the washers (6).

### **9.7.2 Assembling the pre-mounted assembly of the coupling size 80**

#### **See Fig. 9-2:**

- Push the threaded ring (3) into the centring of the rubber element (1).
- Screw the rubber element (1) and the inner segments (8) to the threaded ring (3) using the screws (7) and the washers (6).

## **9.8 Reassembling the coupling**

- Reassemble the coupling as described in chapter 6.

**10 Wearing and spare parts****WARNING****Injury and material damage can occur as a result of:**

- Mounting and/or utilization of non-original CENTA parts
- Never use parts from other manufacturers.

A stock of the most important wearing and spare parts is the most important condition to ensure that the coupling is functional and ready for operation at all times.

We only provide a warranty for CENTA original parts.

Wearing parts of this coupling:

- Rubber element
- Buffer set

When exchanging, all screw connections must be renewed. These must be ordered separately.

When ordering a spare, specify:

- Order no.
- Coupling order no.
- Drawing no.



## 11 Annex

### 11.1 CENTA data sheet D13-013 (lubricated screw connections)

**Validity:**

For all non-dynamically stressed screw connections with **lubricated** shank bolts in accordance with ISO 4014, ISO 4017 and ISO 4762 (DIN 912) with metric standard thread in accordance with DIN ISO 262, unless other specifications are given on CENTA documents.

**Preparation of parts that are to be screwed together:**

The joining areas must be free of dirt, preservatives and lubricants.

**Preparation of screws that ARE NOT secured with liquid screw locking medium:**

Give the screws extra lubrication with motor oil under the screw head and in the thread.

**Preparation of screws that ARE secured with liquid screw locking medium:**

Give the screws extra lubrication with motor oil under the screw head. Remove all grease from the thread.

**Screw tightening method:**

Screw in (by hand with torque wrench).

| d          | Thread size    |                    | d          | Thread size    |                    |
|------------|----------------|--------------------|------------|----------------|--------------------|
|            | Strength class | Tightening torques |            | Strength class | Tightening torques |
|            |                | [Nm] ±5%           |            |                | [in lbs] ±5%       |
| <b>M6</b>  | 8.8            | 9                  | <b>M22</b> | 8.8            | 470                |
|            | 10.9           | 13                 |            | 10.9           | 670                |
|            | 12.9           | 15                 |            | 12.9           | 780                |
| <b>M8</b>  | 8.8            | 21                 | <b>M24</b> | 8.8            | 600                |
|            | 10.9           | 30                 |            | 10.9           | 850                |
|            | 12.9           | 35                 |            | 12.9           | 1000               |
| <b>M10</b> | 8.8            | 41                 | <b>M27</b> | 8.8            | 750                |
|            | 10.9           | 60                 |            | 10.9           | 1070               |
|            | 12.9           | 71                 |            | 12.9           | 1250               |
| <b>M12</b> | 8.8            | 71                 | <b>M30</b> | 8.8            | 1000               |
|            | 10.9           | 104                |            | 10.9           | 1450               |
|            | 12.9           | 121                |            | 12.9           | 1700               |
| <b>M14</b> | 8.8            | 113                | <b>M33</b> | 8.8            | 1400               |
|            | 10.9           | 165                |            | 10.9           | 1950               |
|            | 12.9           | 195                |            | 12.9           | 2300               |
| <b>M16</b> | 8.8            | 170                | <b>M36</b> | 8.8            | 1750               |
|            | 10.9           | 250                |            | 10.9           | 2500               |
|            | 12.9           | 300                |            | 12.9           | 3000               |
| <b>M18</b> | 8.8            | 245                | <b>M39</b> | 8.8            | 2300               |
|            | 10.9           | 350                |            | 10.9           | 3300               |
|            | 12.9           | 410                |            | 12.9           | 3800               |
| <b>M20</b> | 8.8            | 350                |            |                |                    |
|            | 10.9           | 490                |            |                |                    |
|            | 12.9           | 580                |            |                |                    |