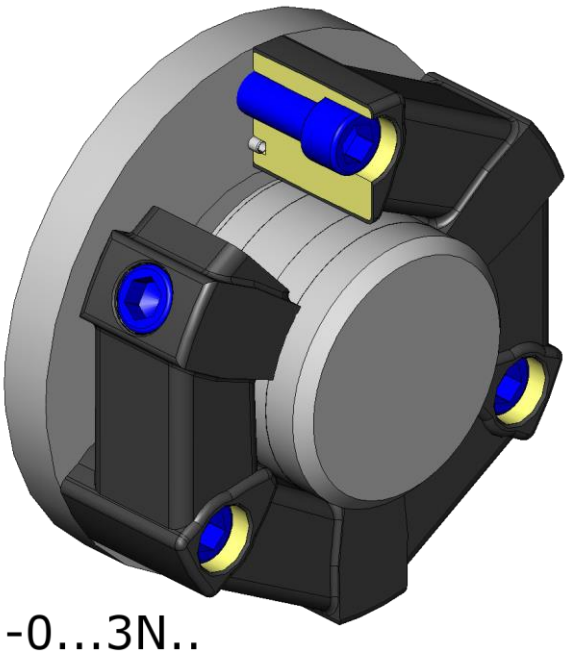
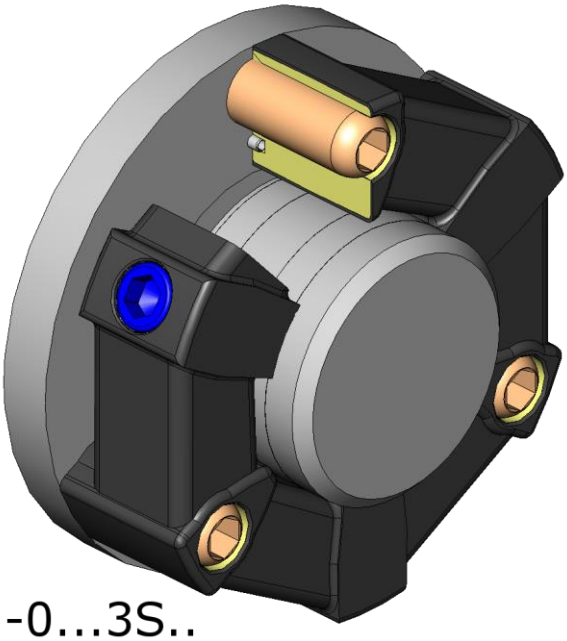
CENTA POWER TRANSMISSION
LEADING BY INNOVATION



-0...3N..



-0...3S..

CENTAFLEX-A

Assembly and operating instructions
008A-00001...00600-.N/S..
M008-00073-EN
Rev. 2

Contents

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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.

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.

Component	Circular openings [mm]	Rectangular openings [mm]
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

WARNING	
	**Injury and material damage can occur as a result of:** ▪ Inadmissibly high torque ▪ Inadmissibly high or low speeds ▪ Exceeding the specified ambient temperature ▪ Inadmissible ambient medium ▪ Inadmissible coupling enclosure ▪ Exceeding the admissible overall misalignment values Only use the coupling for the specified application.

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

CAUTION	
	**Injury and material damage can occur as a result of:** ▪ Incorrect transportation of couplings Ensure that the coupling is correctly transported.

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.

Following transportation damage:

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

3.3 Storage

CAUTION	
	**Material damage to elastic elements and rubber parts can occur as a result of:** ▪ Incorrect storage These parts must be stored laid flat and so they cannot distort, and protected from ozone, heat, light, moisture and solvents.

IMPORTANT
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

RECYCLING	
	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

CENTAFLEX-A couplings are proven, extremely simple, versatile and offer good torsional flexibility.

- Simple, compact smooth-faced design.
- Low weight, low moment of inertia.
- High output, high admissible speeds, large bores permitted, rupture-proof
- Large angle of twist with almost linear curve (appr. 6-8° at nominal torque).
- High elasticity and considerable flexibility in any direction (radial, axial, angular) with low counter forces acting on shafts and bearings.
- The CENTAFLEX coupling has a shock and vibration absorbing action.
- Torque transmission is absolutely free of play, uniform, silent and electrically insulating.
- The coupling is low-maintenance. The rubber parts are not subject to wear, resulting in a long service life and no generation of dirt (rubber particles).
- The rubber element is air flushed all round, resulting in good dissipation of the generated heat. The rubber element remains cool.
- By slackening the radial screws, the drive can be conveniently separated and rotated without dismantling.
- Because of the torque, no axial reaction forces at all are applied to the shaft and bearings.
- The rubber elements are available in a number of different shore hardnesses.
- This allows the torsional stiffness to be varied within wide limits and so adjusted to the vibration-specific requirements.
- Material: Normal version: Natural rubber, capable of withstanding dynamic loads and temperature resistant.

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

5.1 Axial alignment

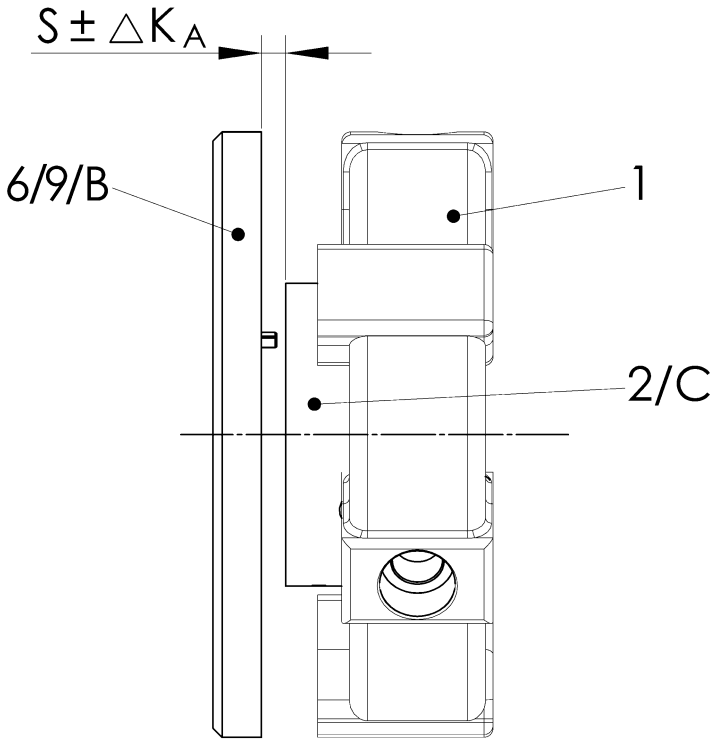


Fig. 5-1 Axial alignment

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
6/9		Hub/Adapter	Illustrated is the adapter (9)
B		Flange	Customer part
C		Hub	Customer part

- Determine the installation dimension **S** from the table 5-1.
- Align the units axially (installation dimension = **$S \pm \Delta K_{A\ max}$**).

  Permissible axial alignment tolerance: **$\Delta K_{A\ max}$=0,3 mm**

CENTAFLEX-A size	**S [mm]**
00001	2
00002 / 00004 / 00008 / 00012	4
00016 / 00022 / 00025 / 00028	6
00030 / 00050	8
00080	4
00090 / 00140 / 00200 / 00250	8
00400	10
00600	15

Table 5-1 Installation dimension (Size 008A-00001...00600)

5.2 Radial alignment

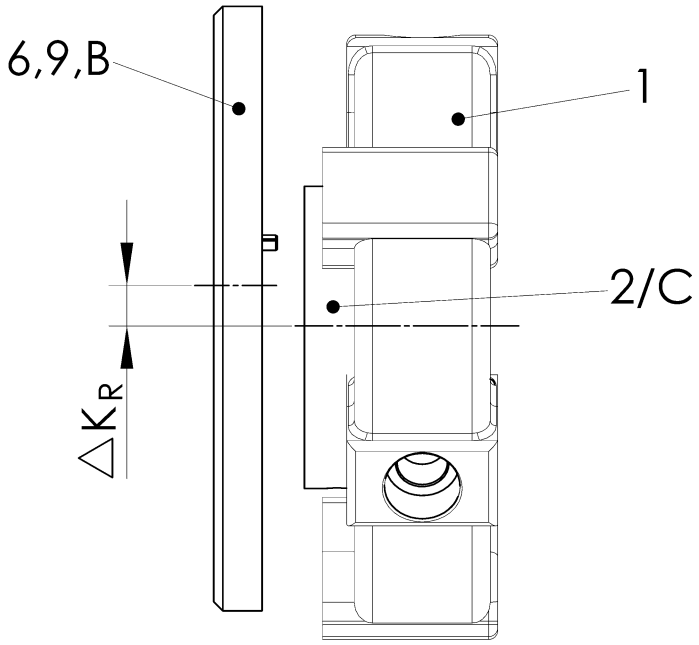


Fig. 5-2 Radial alignment

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
6/9		Hub/Adapter	Illustrated is the adapter (9)
B		Flange	Customer part
C		Hub	Customer part

- Determine the radial misalignment (see Fig. 5-2).
- The permissible radial alignment tolerance $\Delta K_{R\ max}$ can be found in the table 5-2.
- Align the units correspondingly.

CENTAFLEX-A size	**$\Delta K_{R\ max}$ [mm]**
00001 / 00002 / 00004	±0,22
00008 / 00012 / 00016 / 00022 / 00025 00028 / 00030 / 00050	±0,30
00080	±0,22
00090 / 00140 / 00200 / 00250 00400 / 00600	±0,30

Table 5-2 Permissible radial alignment tolerance (Size 008A-00001...00600)

5.3 Angular alignment

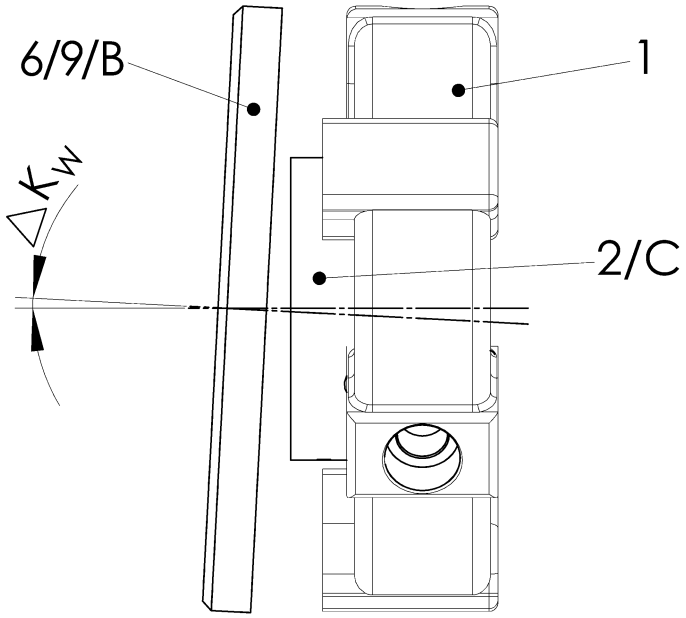


Fig. 5-3 Angular alignment

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
6/9		Hub/Adapter	Illustrated is the adapter (9)
B		Flange	Customer part
C		Hub	Customer part

- Determine the angular misalignment (see Fig. 5-3).
- The permissible angular alignment tolerance $\Delta K_{W\,max}$ can be found in the table 5-3.
- Align the units correspondingly.

CENTAFLEX-A size	**$\Delta K_{w\ max}$ [°]**
00001 / 00002 / 00004 / 00008	0,45
00012	0,30
00016	0,45
00022	0,30
00025	0,45
00028	0,30
00030	0,45
00050 / 00080	0,30
00090	0,45
00140 / 00200 / 00250 / 00400 / 00600	0,30

Table 5-3 Permissible angular alignment tolerance (Size 008A-00001...00600)

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 for screws item(s) 2.4, 6.4 in accordance with CENTA data sheet D013-016 (see chapter 11.1).
- Screw preparation and tightening torque levels for screws item(s) 3, 7, 40, 42 in accordance with CENTA data sheet D013-019 (see chapter 11.2)
- The tightening torques for the threaded pins of hubs according to table 6-1 (see chapter 6.4.1).
- Use suitable lifting devices for assembly.
- Elements for connection of the coupling to customer components do not form part of the delivery.
- The following assembly stages are described for coupling 008A-00030, -00250, -00400.
- Part illustration and marking may differ slightly from installation drawing and delivery state.

IMPORTANT

Use exclusively **new** screws supplied by CENTA.
These are coated with microencapsulated adhesive which serves as a screw locking medium.

IMPORTANT

To ensure optimum screw locking, after tightening the curing time for the microencapsulated adhesive must be observed:

- Appr. 4-5 hours at room temperature (20°C)
- Higher temperatures will accelerate the curing time (e.g. 15 minutes at 70°C created by a hot air blower)

After 24 hours, the adhesive is completely cured.

6.2 Mounting the coupling according to the supplied type

Mount the coupling as appropriate for the supplied design as well as the size and shore hardness of the rubber elements.
These informations can be found in the title block of the installation drawing.
They are explained below.

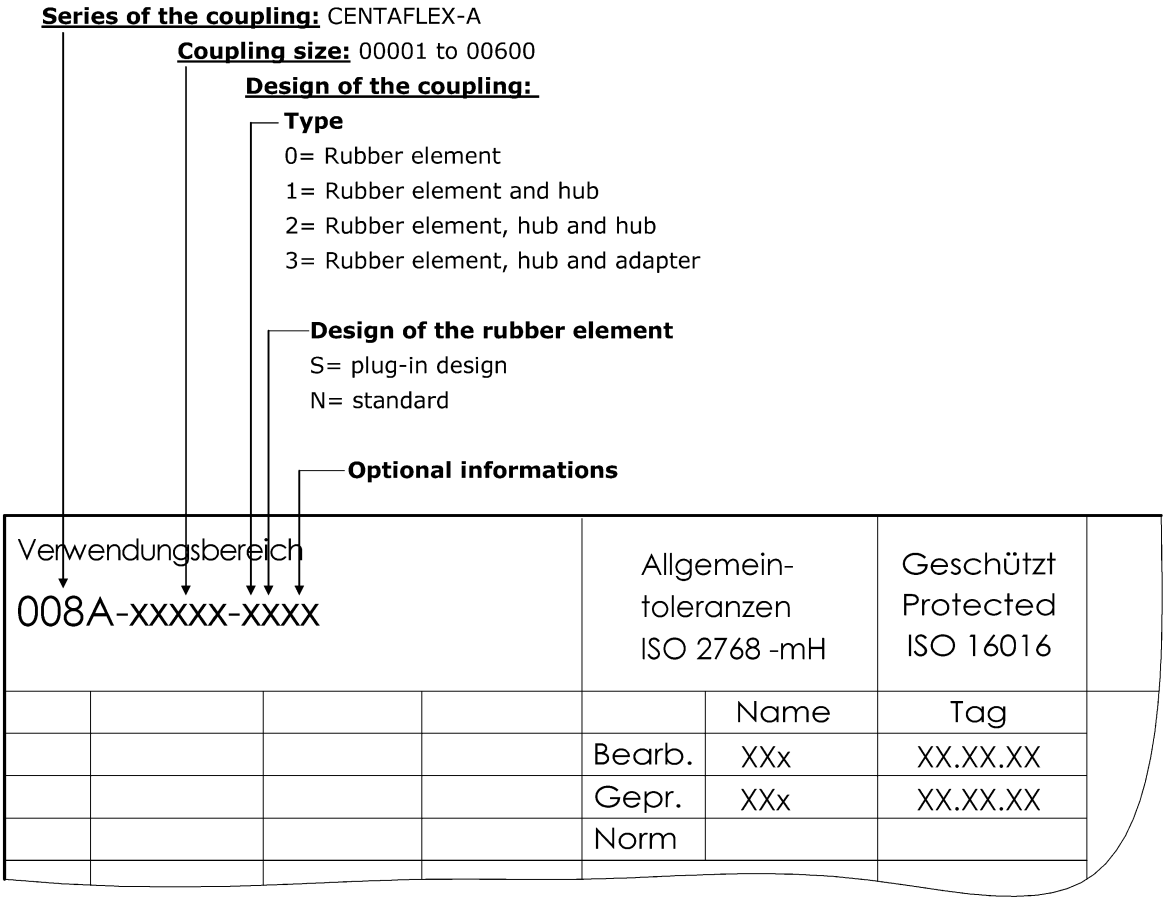


Fig. 6-1 Detail from the installation drawing title block

➢ Overview of possible types, see following table.

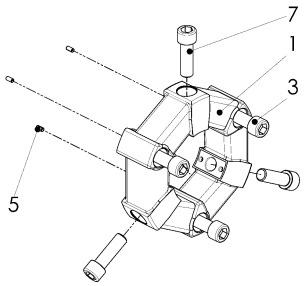
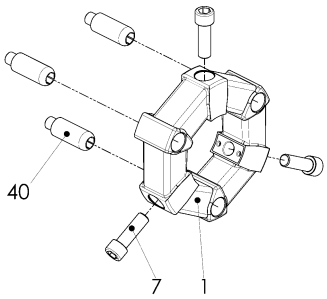
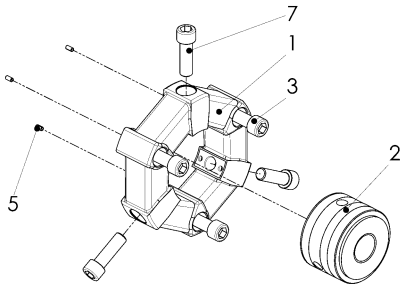
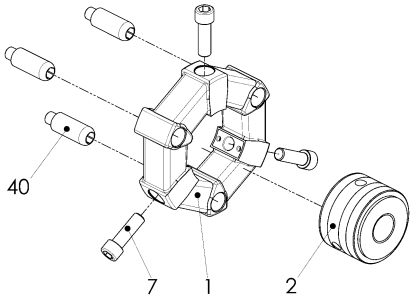
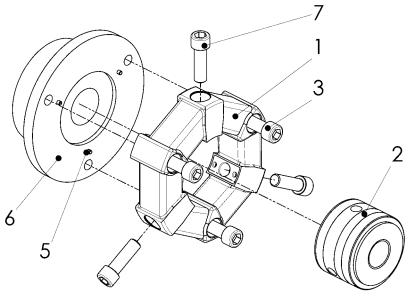
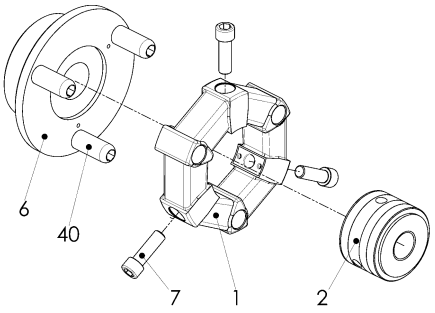
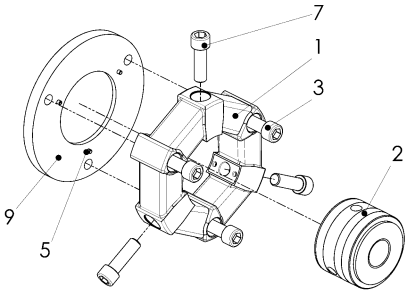
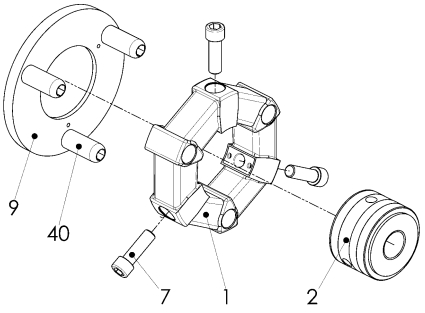
Type -.N..	Type -.S..
 *Type 0*	 *Type 0*
 *Type 1*	 *Type 1*
 *Type 2*	 *Type 2*
 *Type 3*	 *Type 3*

Table 6-1 Overview of possible types

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
3		Screw	
5		Spring pin	Coupling size 00016 and larger
6		Hub	
7		Screw	
9		Adapter	
40		Bolt	

IMPORTANT

This assembly instruction describes the mounting of several design.
Mount the coupling as appropriate for the supplied design (see installation drawing).

- Mounting the coupling according to the supplied type in the following order. From the installation drawing, read off the supplied type and the build-in parts.
  - Preparing the hub/adapter/flange (6/9/B) for mounting, see chapter 6.3 .
  - Mounting the hub (2/6; Type 1 and 2), see chapter 6.4 .
  - Mounting the adapter (9; Type 3), see chapter 6.5 .
  - Positioning the rubber element (1), see chapter 6.6 .
  - Mounting the rubber element (1), see chapter 6.7; 6.8 and 6.9 .

6.3 Preparing the hub/adapter/flange (6/9/B) for mounting

- Prepare the hub/adapter/flange (6/9/B) according to the supplied coupling type and size (see installation drawing).
  - Preparing the type 008A-00001..00600-.**N**.., see chapter 6.3.1 .
  - Preparing the type 008A-00001..00250-.**S**.., see chapter 6.3.2 .
  - Preparing the type 008A-00400..00600-.**S**.., see chapter 6.3.3 .

6.3.1 Prepare the hub/adapter/flange (6/9/B) for mounting (Type 008A-00016..00600-.N..)

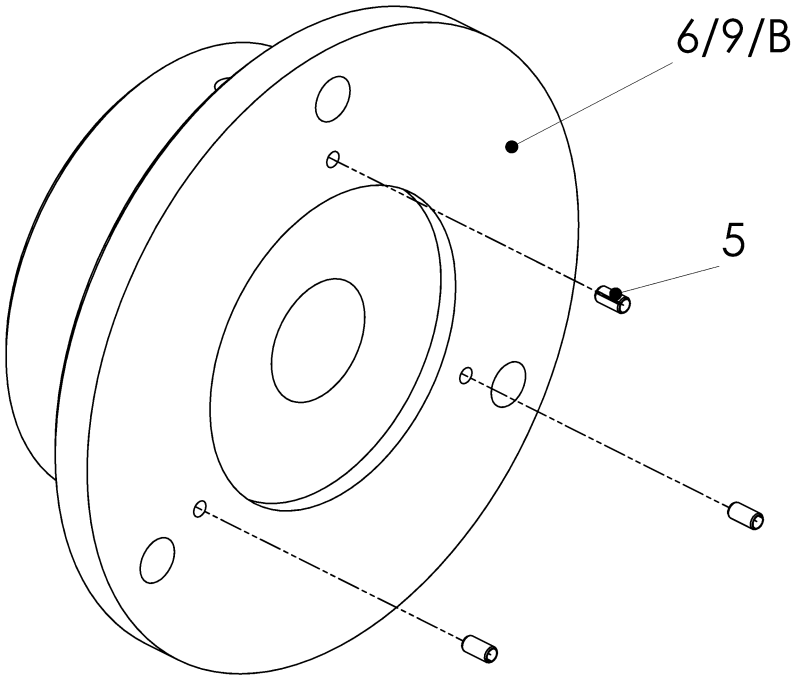


Fig. 6-2 Prepare the hub/adapter/flange (6/9/B) for mounting (Type 008A-00016..00600-.N..)

Item	Info	Designation	Remark
5		Spring pin DIN7346	Coupling size 00016 and larger
6/9		Hub/Adapter	Illustrated is the hub (6)
B		Flange	Costumer part

Coupling sizes 00001...00012

- Not necessary preparing the hub/adapter/flange (6/9/B).

Coupling sizes 00016...00600

- Drive in the spring pins (5) into the hub/adapter/flange (6/9/B).

6.3.2 Prepare the hub/adapter/flange (6/9/B) for mounting (Type 008A-00001..00250-.S..)

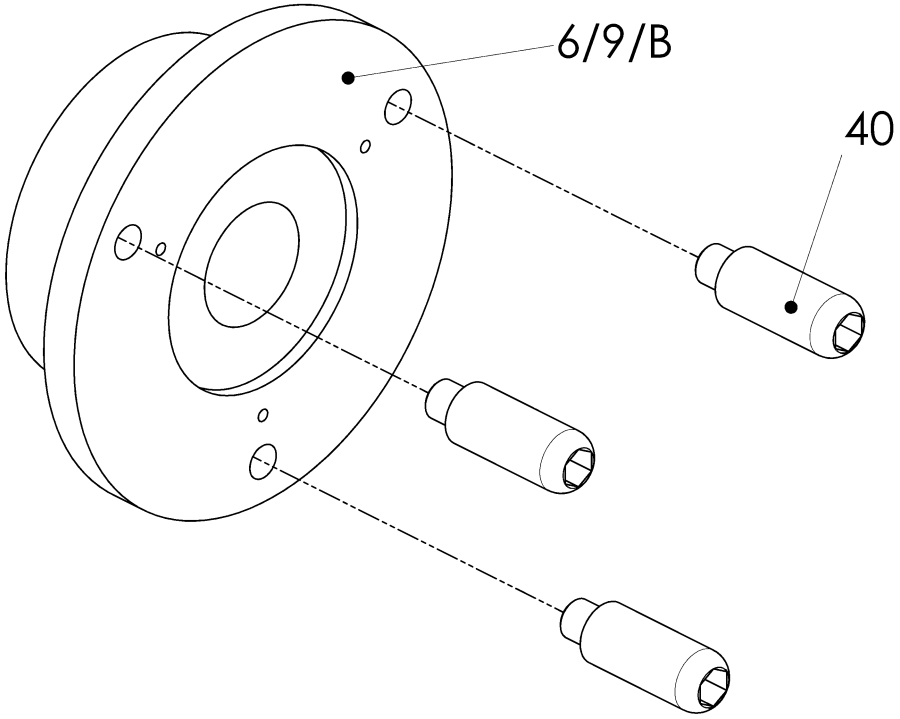


Fig. 6-3 Prepare the hub/adapter/flange (6/9/B) for mounting (Type 008A-00001..00250-.S..)

Item	Info	Designation	Remark
6/9		Hub/Adapter	Illustrated is the hub (6)
40		Bolt	
B		Flange	Costumer part

- Screw the bolts (40) into the hub/adapter/flange (6/9/B).

6.3.3 Prepare the hub/adapter/flange (6/9/B) for mounting (Type 008A-00400..00600-.S..)

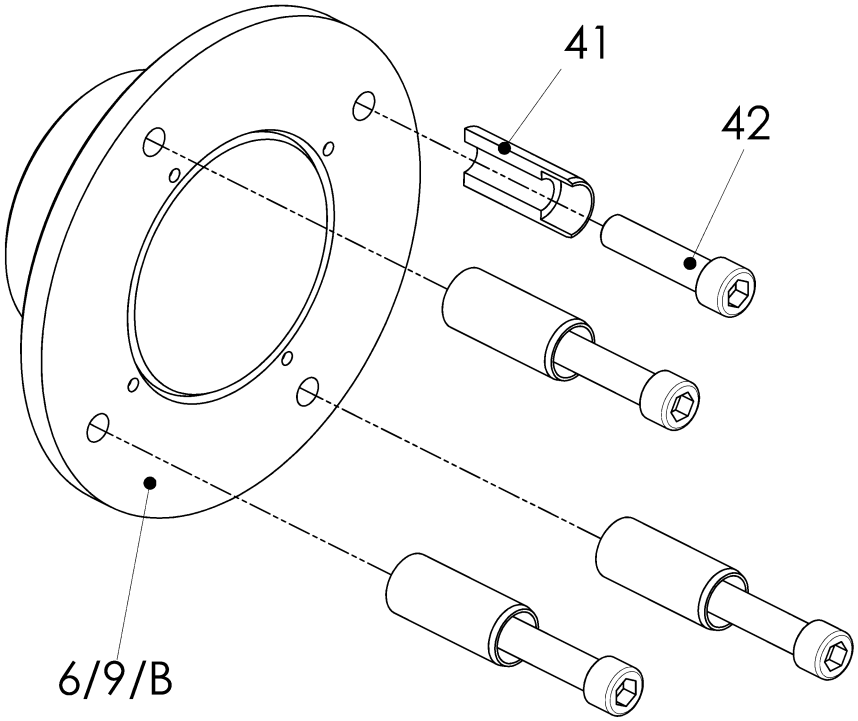


Fig. 6-4 Prepare the hub/adapter/flange (6/9/B) for mounting (Type 008A-00400..00600-.S..)

Item	Info	Designation	Remark
6/9		Hub/Adapter	Illustrated is the hub (6)
41		Bush	
42		Screw	
B		Flange	Costumer part

- Screw the bushes (41) to the hub/adapter/flange (6/9/B) using the screws (42).

6.4 Mounting the hub (2/6; Type 1 and 2)

- Mounting the hub (2/6) as appropriate for the supplied design (see installation drawing).
  - Overview of possible hubs and chapters of mounting, see following table.

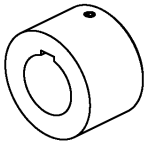
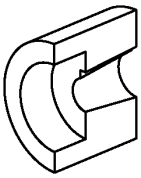
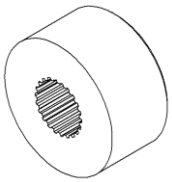
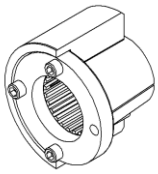
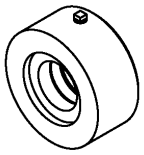
Possible design	Mounting the hub with …	see chapter
	cylindrical drilling and feather key	6.4.1
	conical drilling and feather key	6.4.2
	toothing	6.4.3
	CENTALOC-clamping	6.4.4
	CENTA-conical clamping	6.4.5
	conical oil interference fit	6.4.6

Table 6-2 Overview of possible hub/flange hub design

6.4.1 Mounting the hub (2/6) with cylindrical drilling and feather key

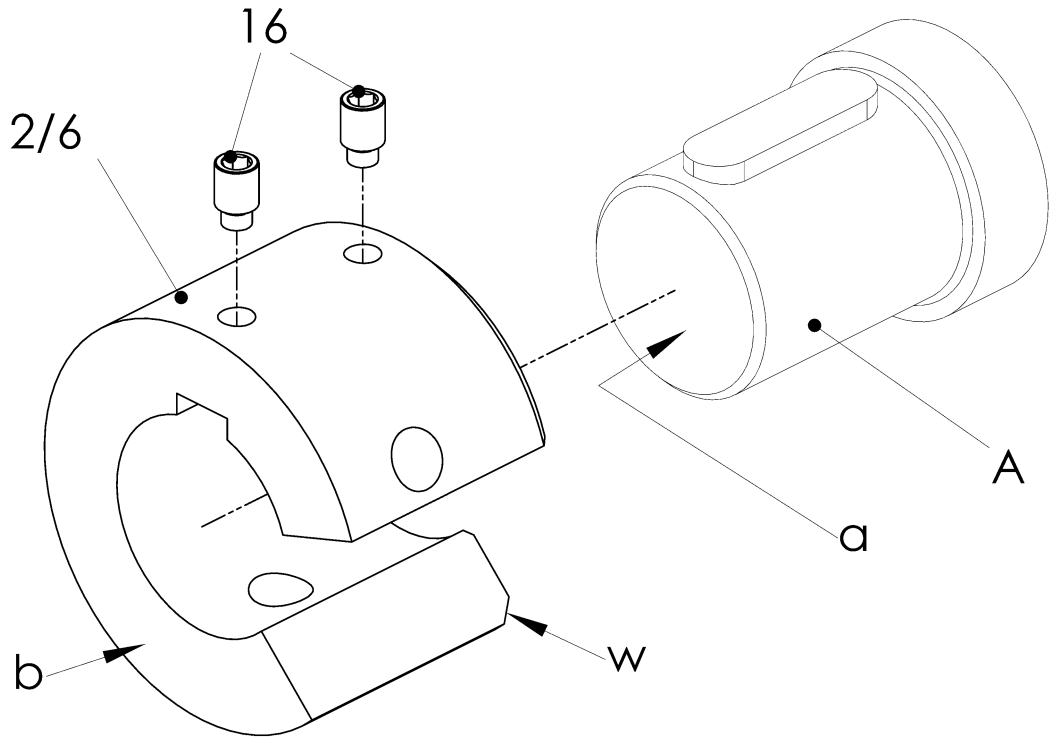


Fig. 6-5 Mounting the hub (2/6) with cylindrical drilling and feather key

Item	Info	Designation	Remark
2/6		Hub	Illustrated is the hub (2)
16		Threaded pin DIN914	see installation drawing
A		Shaft	Costumer part
	a	Face of the shaft	
	b	Face of the hub	
	w	Bevel of the hub	

CAUTION	
	**Material damage can occur as a result of:** ▪ Incorrect heating of the hubs Heat the hubs steadily in 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.

- Heat the hub (2/6) to a temperature of 80° - 100°C.
- Push the hub (2/6) onto the shaft (A) with feather key.
  The bevel of the hub (w) must point towards the shaft (A).

IMPORTANT
The face of the shaft must not protrude to the face of the hub. Otherwise the operation of the coupling is not guaranteed.

CAUTION	
	**Material damage can occur as a result of:** ▪ Incorrect heating of the hubs Heat the hubs steadily in a fan oven, on an electric hot plate, either inductive or with a flame (ring burner).

- Secure the hub (2/6; if necessary) with the threaded pin (16).
  Threaded pin: size acc. the installation drawing
  tightening torque see table below.

Threaded pin	M6	M8	M10	M12	M14	M16	M20
Tightening torque [Nm]	7	16	30	50	70	120	200

Table 6-3 Tightening torques for threaded pins

6.4.2 Mounting the hub (2/6) with conical drilling and feather key

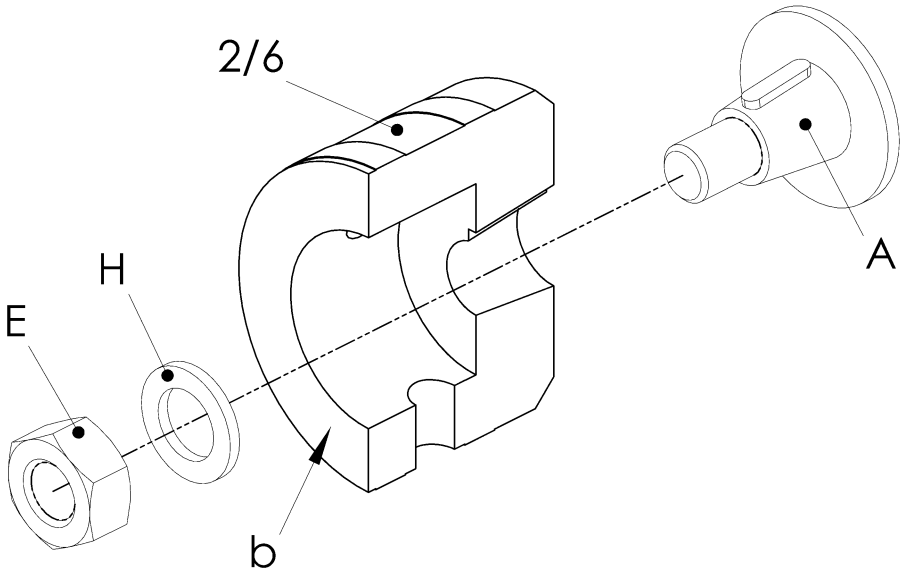


Fig. 6-6 Mounting the hub (2/6) with conical drilling and feather key

Item	Info	Designation	Remark
2/6		Hub	Illustrated is the hub (2)
A		Shaft	Costumer part
E		Nut	Costumer part
H		Washer	Costumer part
	b	Face of the hub	

- Push the hub (2/6) onto the shaft (A).
- Brace the hub (2/6) against the shaft (A), using the washer (H) and the nut (E).

IMPORTANT

The screw connection of the shaft must not protrude to the face of the hub. Otherwise the operation of the coupling is not guaranteed.

6.4.3 Mounting the hub (2/6) with toothing

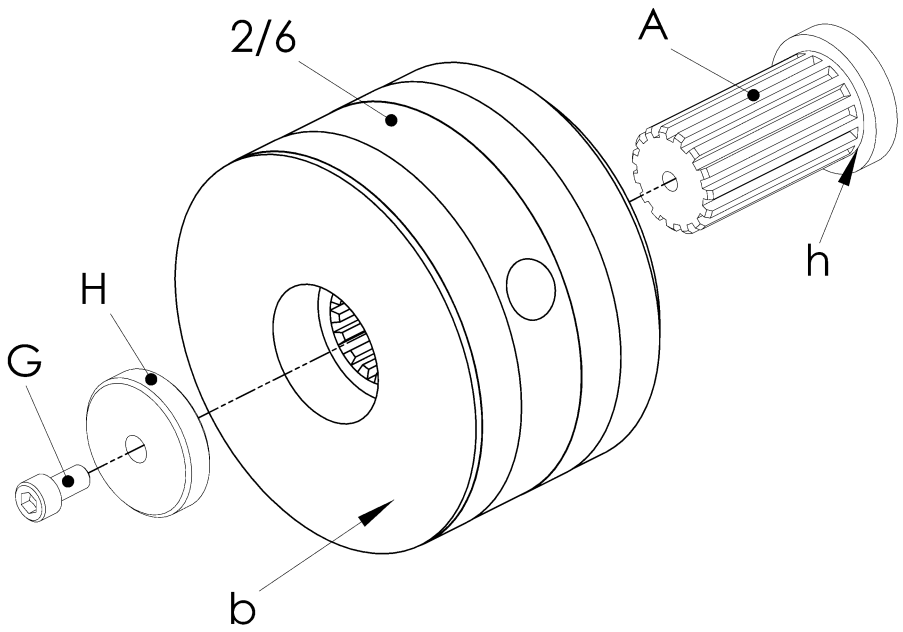


Fig. 6-7 Mounting the hub (2/6) with toothing

Item	Info	Designation	Remark
2/6		Hub	Illustrated is the hub (2)
A		Shaft	Costumer part
G		Screw	Costumer part
H		Washer	Costumer part
	b	Face of the hub	
	h	Shaft shoulder	

- Push the hub (2/6) onto the shaft (A) against the shaft shoulder (h). Take the mounting position of the hub (2/6) from the installation drawing.
- Brace the hub (2/6) against the shaft (A), using the washer (H) and the screw (G).

IMPORTANT

The screw connection of the shaft must not protrude to the face of the hub. Otherwise the operation of the coupling is not guaranteed.

6.4.4 Mounting the CENTALOC-clamping hub (2/6)

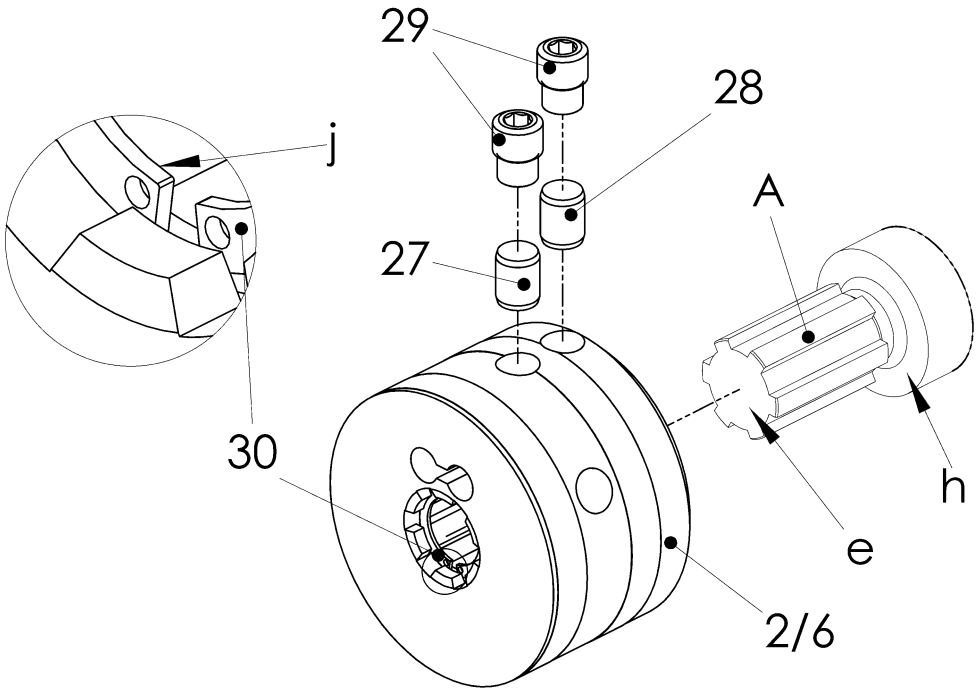


Fig. 6-8 Mounting the CENTALOC-clamping hub (2/6)

Item	Info	Designation	Remark
2/6		Hub	Pre-mounted; Illustrated is the hub (2)
27/28		Parallel pin DIN7	See installation drawing
29		Threaded pin	
30		Circlip DIN472	See installation drawing
A		Shaft	Costumer part
	e	Shaft end	
	h	Shaft shoulder	
	j	Back side of circlip	

- Push the hub (2/6) as appropriate for the supplied design **with / without** circlip (30; see installation drawing) onto the shaft (A):
  - **with** circlip (30):
    Push the hub (2/6) onto the shaft (A), until the shaft end (e) touches the back side of the circlip (j).

IMPORTANT
Ensure that the hub is correctly positioned on the shaft (against shaft end). If necessary brace hub with washer against the shaft.

  - **without** circlip (30):
    Push the hub (2/6) onto the shaft (A) against the shaft shoulder (h).

IMPORTANT
Ensure that the hub is correctly positioned on the shaft (against shaft shoulder). If necessary brace hub with washer against the shaft.

- Secure the hub (2/6) with the parallel pins (27/28) and the threaded pins (29, size acc. the installation drawing, tightening torque see table 6-3).

6.4.5 Mounting the CENTA-conical clamping hub (2/6)

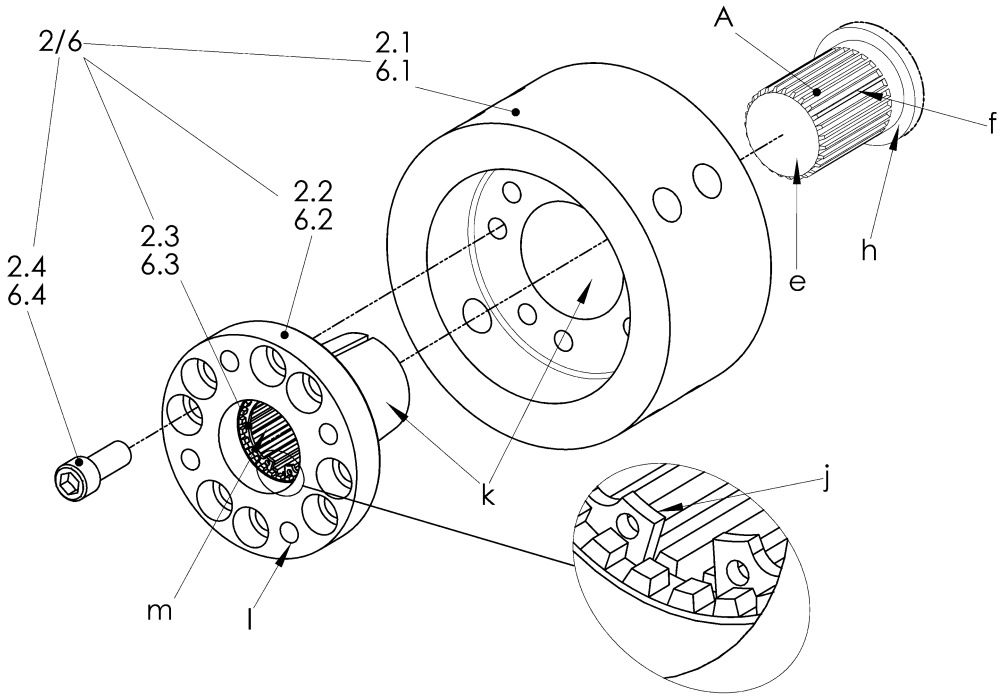


Fig. 6-9 Mounting the CENTA-conical clamping hub (2/6)

Item	Info	Designation	Remark
2/6		Hub	Pre-mounted assembly; Illustrated is the hub (2)
2.1/6.1		Hub	Pre-mounted
2.2/6.2		Hub-taper	Pre-mounted
2.3/6.3		Circlip	Design see installation drawing
2.4/6.4		Screw	
A		Shaft	Customer part
	e	Shaft end	
	f	Shaft extension	
	h	Shaft shoulder	
	j	Back side of circlip	
	k	Conical surface	
	l	Forcing thread	
	m	Drilling	

IMPORTANT

The surfaces of the conical clamping connection and the hub-shaft connection must be free of oil, grease and dirt.

- Preparing the hub (2.1/6.1), hub-taper (2.2/6.2) and the shaft (A) for mounting:
  - Clean and degrease the drilling (m) and the conical surface (k) of the hub-taper (2.2/6.2).
  - Clean and degrease the conical surface (k) of the hub (2.1/6.1).
  - Clean and degrease the shaft extension of the shaft (f).
- Insert the hub-taper (2.2/6.2) into the hub (2.1/6.1).
- Screw the hub-taper (2.2/6.2) with screws (2.4/6.4) loosely into the hub (2.1/6.1).
  Screw preparations according to CENTA data sheet D013-016, see chapter 11.2.
- Push the hub-taper (2.2/6.2) as appropriate for the supplied design **with / without** circlip (2.3/6.3; see installation drawing) onto the shaft (A):
  - **with** circlip (2.3/6.3):
    Push the hub-taper (2.2/6.2) with the hub (2.1/6.1) onto the shaft (A), until the shaft end (e) touches the back side of the circlip (j).

IMPORTANT

Ensure that the hub-conus is correctly positioned on the shaft (against shaft end).
If necessary brace hub-conus with washer against the shaft.

  - **without** circlip (2.3/6.3):
    Push the hub-taper (2.2/6.2) with the hub (2.1/6.1) onto the shaft (A) against the shaft shoulder (h).

IMPORTANT

Ensure that the hub-conus is correctly positioned on the shaft (against shaft shoulder).
If necessary brace hub-conus with washer against the shaft.

- Evenly hand tighten the screws (2.4/6.4) crosswise.

- Tighten the screws (2.4/6.4) one after the other with 40% of the specified tightening torque, until it has been achieved for all screws.
- Tighten the screws (2.4/6.4) one after the other with 60% of the specified tightening torque, until it has been achieved for all screws.
- Tighten the screws (2.4/6.4) one after the other with 100% of the specified tightening torque, until it has been achieved for all screws.

6.4.6 Mounting the hub (2/6) with conical 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.

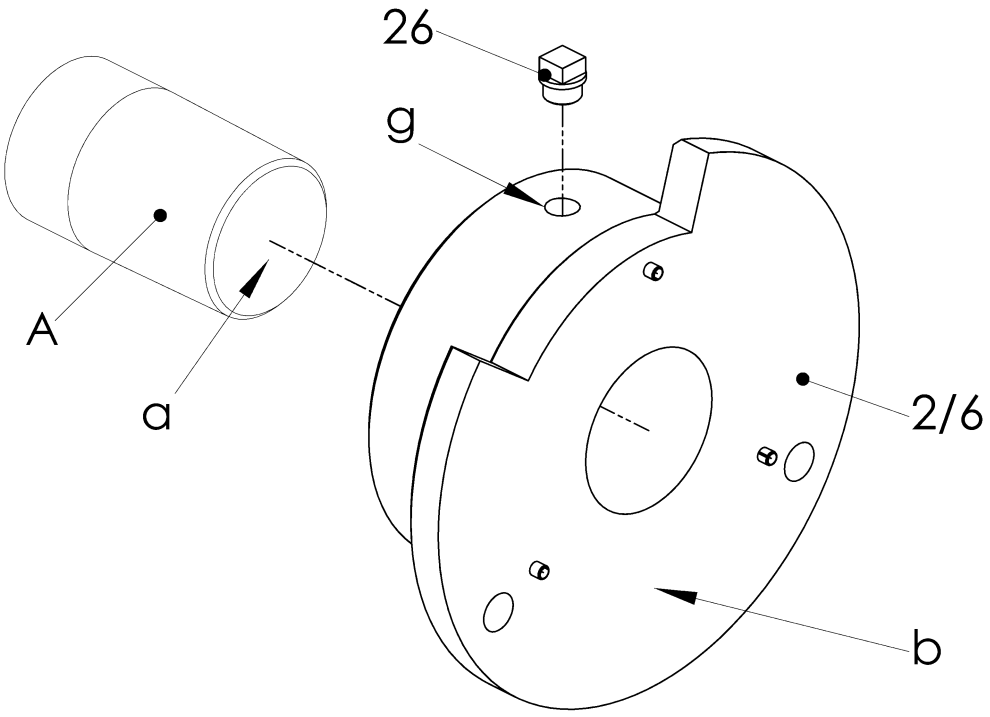


Fig. 6-10 Mounting the hub (2/6) with conical oil interference fit

Item	Info	Designation	Remark
2/6		Hub	Illustrated is the hub (6)
26		Screw plug	G¼; see installation drawing
A		Shaft	Customer part
	a	Face of shaft	
	b	Face of flange hub	
	g	Thread	G¼; see installation drawing

IMPORTANT

We recommend the following mounting fluids:

- For mounting:
  Oil with a viscosity 300 mm^2/s at 20°C, e.g. SKF LHMF300
- For dismantling:
  Oil with a viscosity 900 mm^2/s at 20°C, e.g. SKF LHDF900

- Lightly oil the cone of the shaft (A).
- Push the hub (2/6) onto the shaft (A).
- Remove the screw plug (26) from the hub (2/6).
- Connect the pump for expanding the hub (2/6) to the thread G¼ (g).
- Screw the pump for pushing on the hub (2/6) to the shaft.
- Build up the oil pressure to push on the hub (2/6).

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.

- Build up the oil pressure for expanding the hub (2/6) slowly.
- Build up the oil pressure alternately until the lift path (p up) of the hub (2/6) is reached (for p up and reference faces, see installation drawing).
- Decrease the oil pressure for expanding the hub (2/6).
- Remove the pump for expanding the hub (2/6) from the hub (2/6).
- Maintain the oil pressure for pushing on the hub (2/6) for one hour.
- Decrease the oil pressure for pushing on the hub (2/6).

- Remove the pump for pushing on the hub (2/6) from the shaft.
- Turn the hub (2/6), allow the oil to run out of the thread G¼ (g) and dispose of it correctly.
- Screw the screw plug (26) into the hub (2/6).

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.

6.5 Mounting the adapter (Type 3)

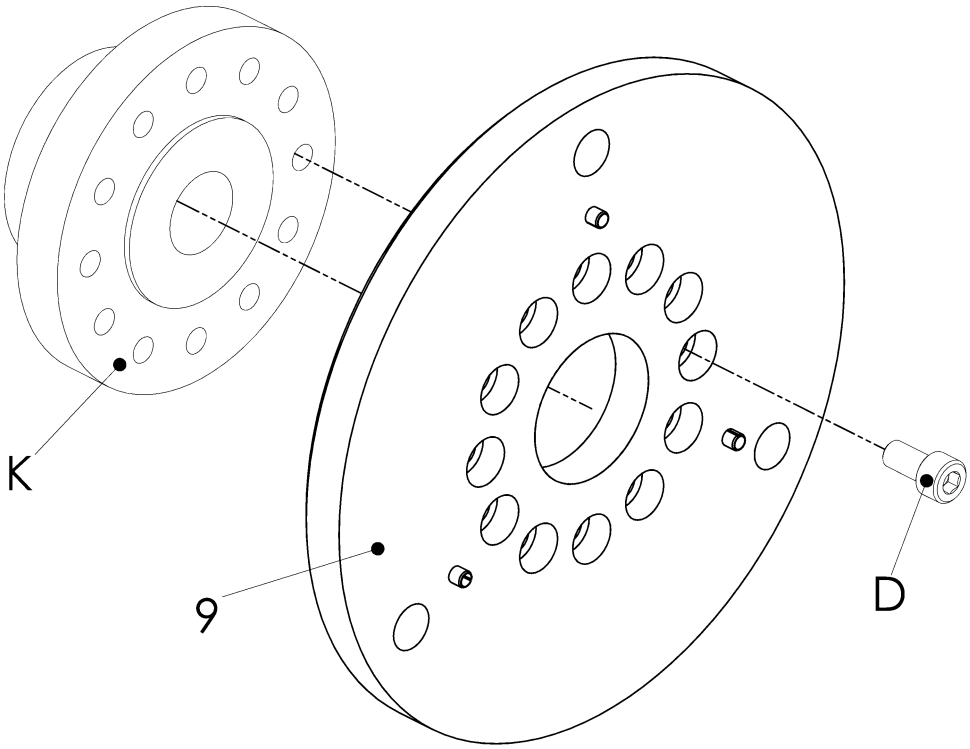


Fig. 6-11 Mounting the adapter (Type 3)

Item	Info	Designation	Remark
9		Adapter	
D		Screw	Costumer part
K		Hub	Costumer part

- Push the adapter (9) onto the centring of the hub (K).
- Screw the adapter (9) to the hub (K) using the screws (D).

6.6 Positioning the rubber element (1)

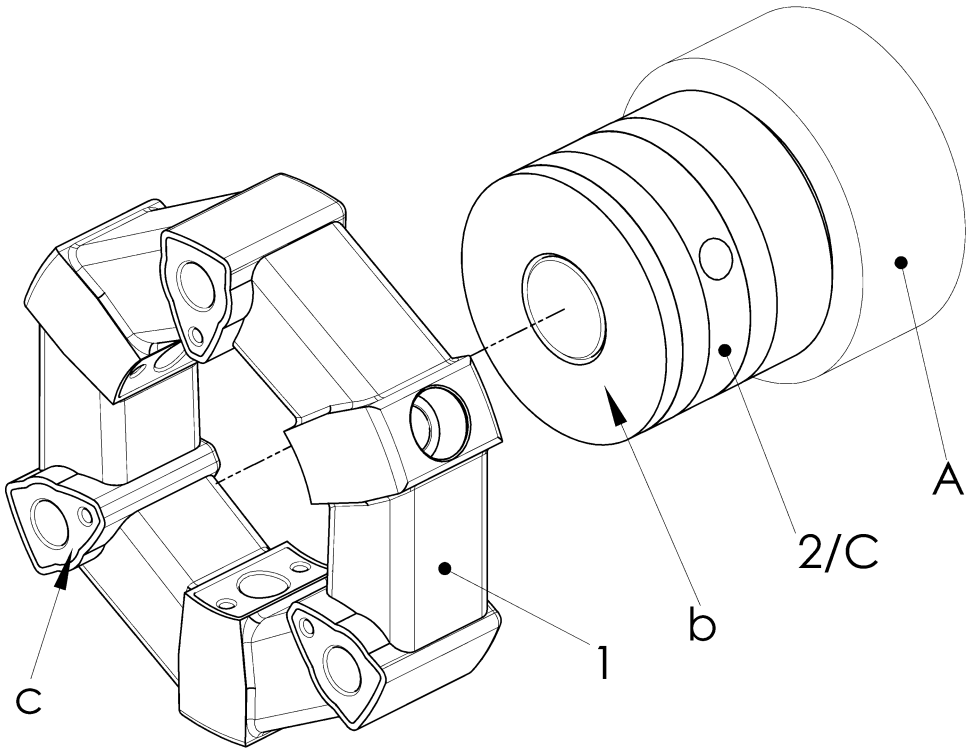


Fig. 6-12 Positioning the rubber element (1)

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
A		Shaft	Customer part
C		Hub	Customer part
	b	Face of hub	
	c	Contact surface of rubber element	

- Push the rubber element (1) centred onto the hub (2/C). The contact surfaces of the rubber element (c) must be on the side of face of the hub (b).

6.7 Mounting the rubber element (1)

- Mounting the rubber element as appropriate for the supplied type (see installation drawing).
  - Mounting the rubber element (1; Type .**N**..), see chapter 6.8 .
  - Mounting the rubber element (1; Type .**S**..), see chapter 6.9 .

6.8 Mounting the rubber element (1; Type .N..)

- Mounting the rubber element:
  - Aligning the units,
    see chapter 6.8.1 .
  - Mounting the rubber element (Coupling size 00001...00012),
    see chapter 6.8.2 .
  - Mounting the rubber element (Coupling size 00016...00200),
    see chapter 6.8.3 .
  - Mounting the rubber element (Coupling size 00250),
    see chapter 6.8.4 .
  - Mounting the rubber element (Coupling size 00400...00600),
    see chapter 6.8.5 .

6.8.1 Aligning the units

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

6.8.2 Mounting the rubber element (Coupling size 00001…00012)

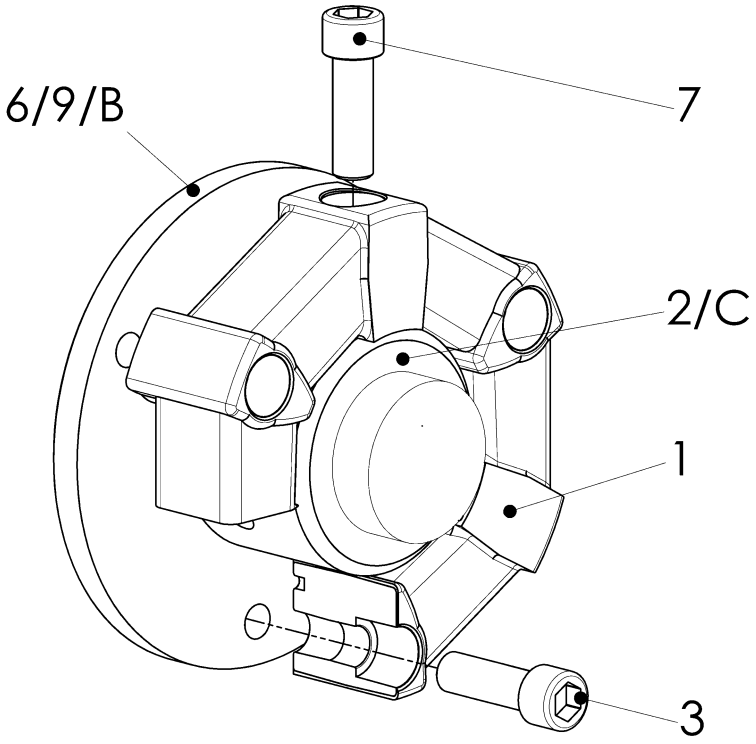


Fig. 6-13 Mounting the rubber element (Type 008A-00001...00012-.N..)

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
3		Screw	
6/9		Hub/Adapter	
7		Screw	
B		Flange	Customer part
C		Hub	Customer part

CAUTION

Material damage to rubber part can occur as a result of:

- Twisted rubber element mounted by friction between screw head and vulcanized aluminium part

Use a suitable tool for applying counter pressure on the rubber element to prevent twisting of the rubber element during tightening of the screws.

- Turn the rubber element (1) towards the hub/adapter/flange (6/9/B) until the drillings for the screws (3) are aligned.
- Screw the rubber element (1) to the hub/adapter/flange (6/9/B) using the screws (3). While tightening the screws (3) exert counter pressure on the rubber element (1) to avoid twisting.
- Push the screws (7) into the rubber element (1) and screw them first two to three threads into the hub (2/C).
- Tighten all screws (7) until the prescribed tightening torque (see chapter 11.1) has been achieved.

6.8.3 Mounting the rubber element (Coupling size 00016…00200)

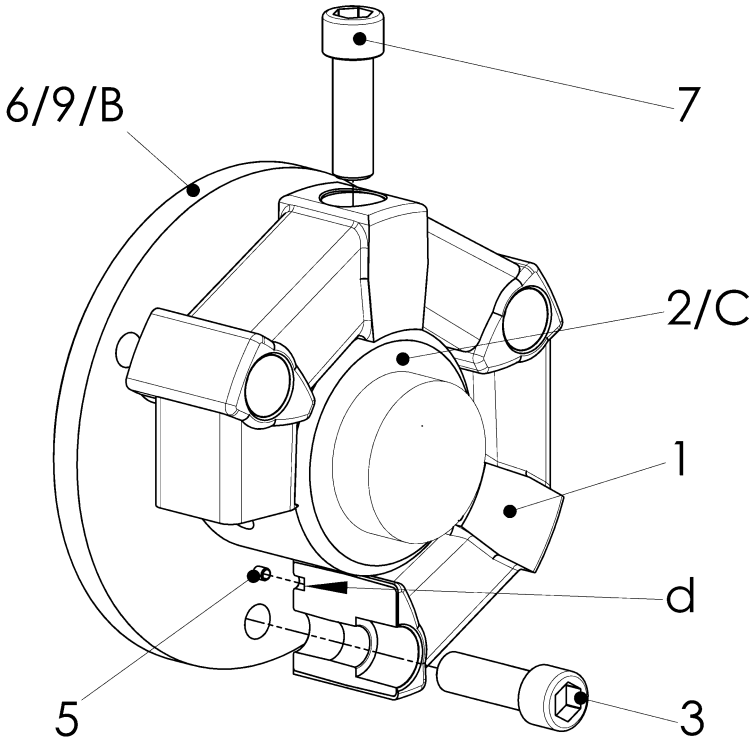


Fig. 6-14 Mounting the rubber element (Type 008A-00016...00200-.N..)

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
3		Screw	
5		Spring pin	
6/9		Hub/Adapter	
7		Screw	
B		Flange	Customer part
C		Hub	Customer part
	d	Drilling for spring pin	

- Turn the rubber element (1) towards the hub/adapter/flange (6/9/B) until the drillings (d) and the spring pins (5) are aligned.
- Screw the rubber element (1) to the hub/adapter/flange (6/9/B) using the screws (3).
- Push the screws (7) into the rubber element (1) and screw them first two to three threads into the hub (2/C).
- Tighten all screws (7) until the prescribed tightening torque (see chapter 11.1) has been achieved.

6.8.4 Mounting the rubber element (Coupling size 00250)

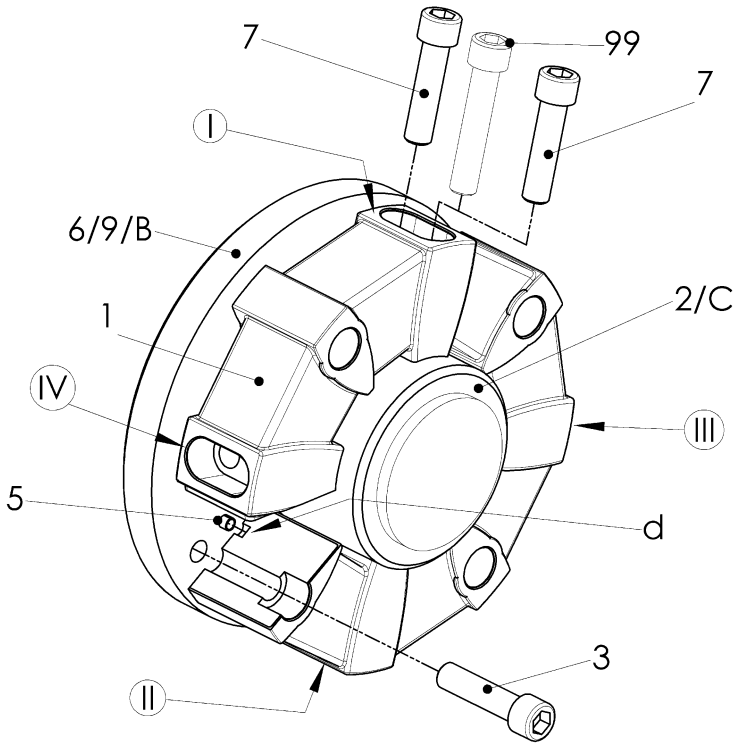


Fig. 6-15 Mounting the rubber element (Type 008A-00250-.N..)

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
3		Screw	
5		Spring pin	
6/9		Hub/adapter	
7		Screw	
99		Screw ISO4762-10.9 M20x90	1 pc. for mounting
B		Flange	Customer part
C		Hub	Customer part
	d	Drilling for spring pin	
	I - IV	Order of mounting	

- Turn the rubber element (1) towards the hub/adapter/flange (6/9/B) until the drillings (d) and the spring pins (5, coupling size 16 and larger) are aligned.
- Screw the rubber element (1) to the hub/adapter/flange (6/9/B) using the screws (3).
- Repeat the following mounting section in order I – IV, until all screws (7) are screwed in two to three threads:
  - Pull up the rubber element (1) to the hub (2/C) using the screw (99) and screw in next to this a screw (7) two to three threads.
  - Remove the screw (99) and replace it by another screw (7), at first screw it two to three threads in the hub (2/C).
- Tighten in order I – IV all screws (7) until the prescribed tightening torque (see chapter 11.1) has been achieved.

6.8.5 Mounting the rubber element (Coupling size 00400…00600)

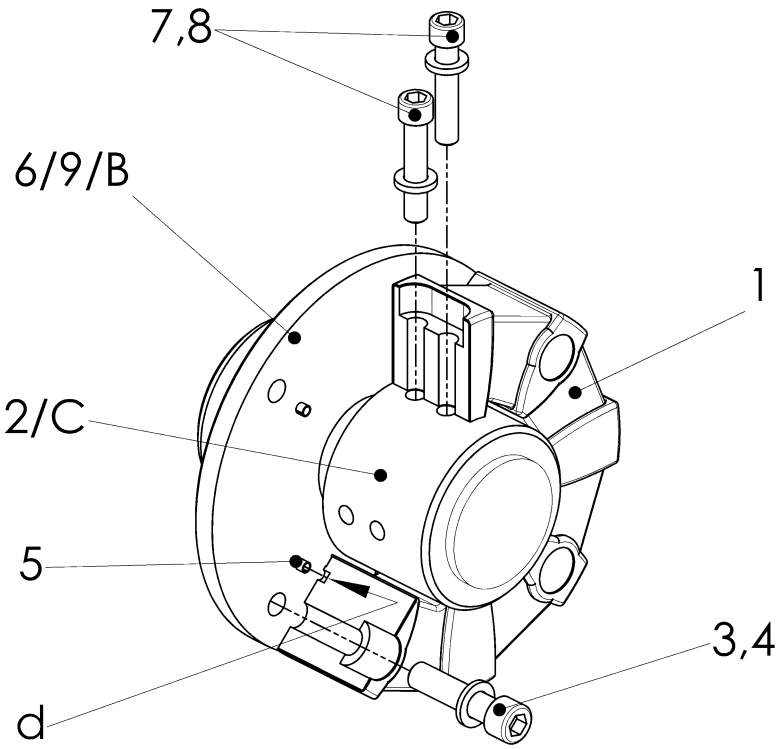


Fig. 6-16 Mounting the rubber element (Type 008A-00400...00600-.N..)

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
3		Screw	
4		Washer	
5		Spring pin	
6/9		Hub/Adapter	
7		Screw	
8		Washer	
B		Flange	Customer part
C		Hub	Customer part
	d	Drilling for spring pin	

- Turn the rubber element (1) towards the hub/adapter/flange (6/9/B) until the drillings (d) and the spring pins (5) are aligned.
- Screw the rubber element (1) to the hub/adapter/flange (6/9/B) using the screws (3) and washers (4).
- Push the screws (7) and the washers (8) into the rubber element (1) and screw them first two to three threads into the hub (2/C).
- Fasten all screws (7) crosswise with the prescribed tightening torque (see chapter 11.1).

6.9 Mounting the rubber element (1; Type .S..)

- Mounting the rubber element:
  - Mounting the rubber element (Coupling size 00001...00200), see chapter 6.9.1.
  - Mounting the rubber element (Coupling size 00250), see chapter 6.9.2 .
  - Mounting the rubber element (Coupling size 00400...00600), see chapter 6.9.3 .
  - Connecting the driving and driven units, see chapter 6.9.4 .

6.9.1 Mounting the rubber element (Coupling size 00001…00200)

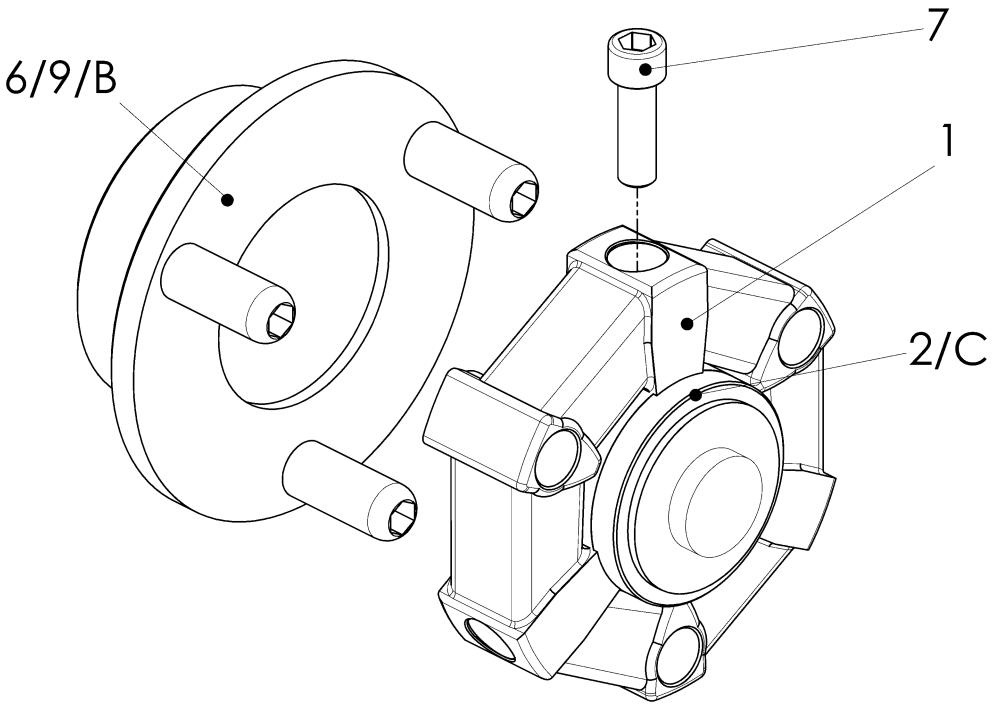


Fig. 6-17 Mounting the rubber element (Type 008A-00001...00200-.S..)

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
6/9		Hub/adapter	
7		Screw	
B		Flange	Customer part
C		Hub	Customer part

- Push the screws (7) into the rubber element (1) and screw them first two to three threads into the hub (2/C).
- Tighten all screws (7) until the prescribed tightening torque (see chapter 11.1) has been achieved.

6.9.2 Mounting the rubber element (Coupling size 00250)

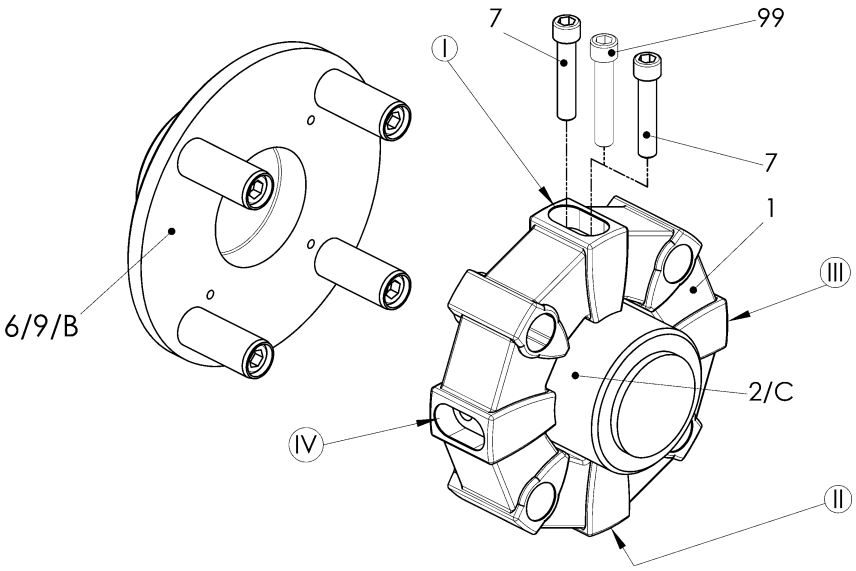


Fig. 6-18 Mounting the rubber element (Type 008A-00250-.S..)

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
6/9		Hub/adapter	
7		Screw	
99		Screw ISO4762-10.9 M20x90	1 piece for mounting
B		Flange	Customer part
C		Hub	Customer part
	I - IV	Order of mounting	

- Pull up the rubber element (1) with screw (99) to the hub (2/C) and screw in next to this a screw (7) two to three threads.
- Remove the screw (99) and replace it by another screw (7), at first screw it two to three threads in the hub (2/C).

- Repeat the mounting section above in order I – IV until all screws (7) are screwed in two to three threads.
- Tighten in order I – IV all screws (7) until the prescribed tightening torque (see chapter 11.1) has been achieved.

6.9.3 Mounting the rubber element (Coupling size 00400…00600)

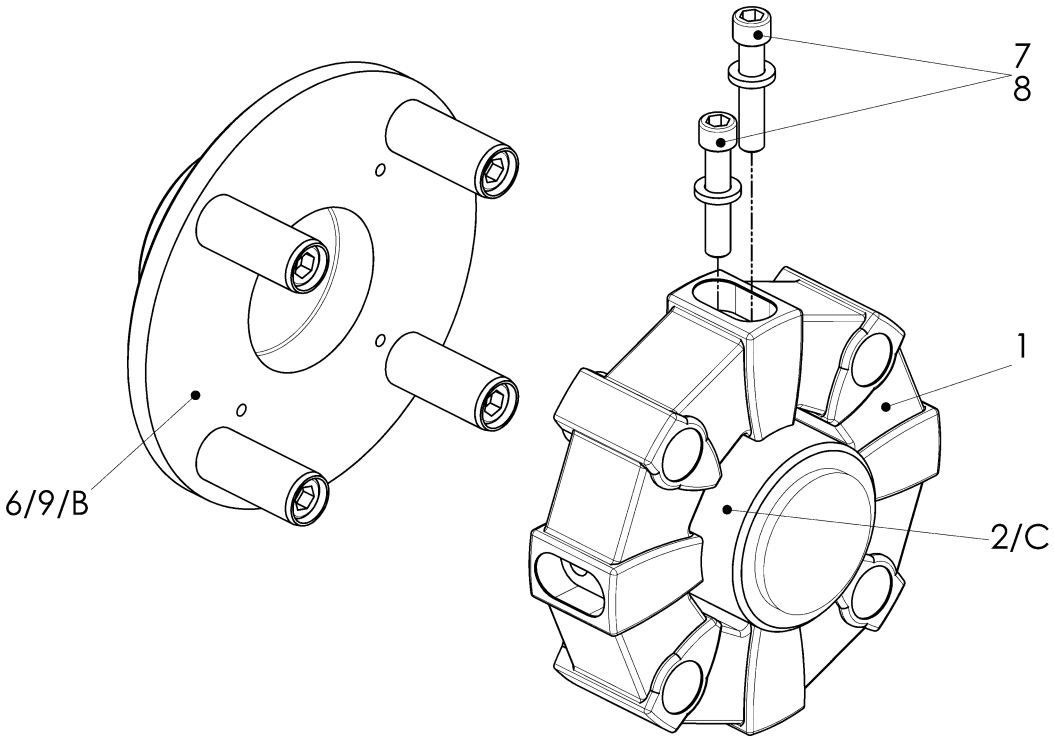


Fig. 6-19 Mounting the rubber element (Type 008A-00400...00600-.S..)

Item	Info	Designation	Remark
1		Rubber element	
2		Hub	
6/9		Hub/Adapter	
7		Screw	
8		Washer	
B		Flange	Customer part
C		Hub	Customer part

- Push the screws (7) and the washers (8) into the rubber element (1) and screw them first two to three threads into the hub (2/C).
- Tighten all screws (7) until the prescribed tightening torque (see chapter 11.1) has been achieved.

6.9.4 Connecting the driving and driven units (Coupling size 00600)

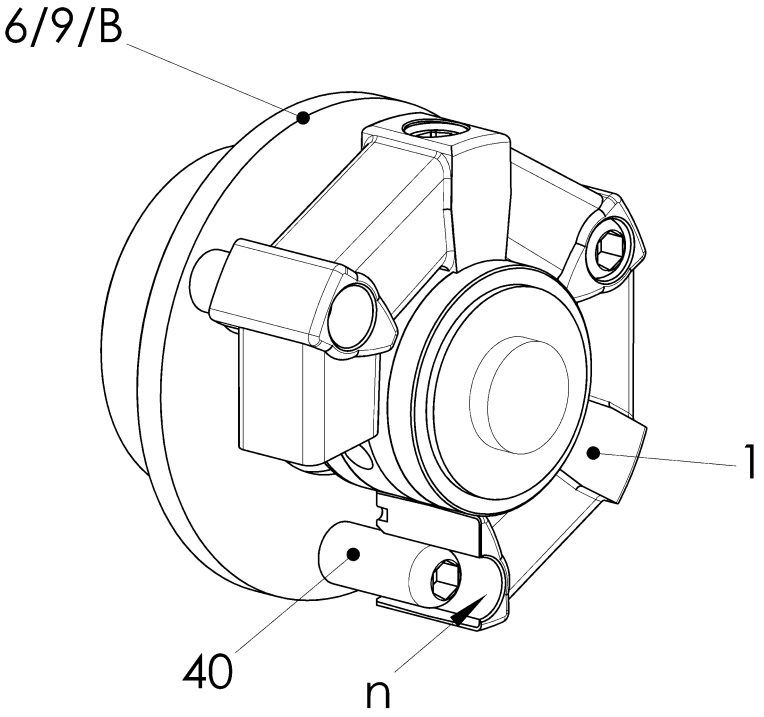


Fig. 6-20 Connecting the driving and driven units (Type 008A-00600-.S..)

Item	Info	Designation	Remark
1		Rubber element	
6/9		Hub/Adapter	
40		Bolt	
B		Flange	Customer part
	n	Drilling for bolt	

- Lightly grease the drillings for socket bolt (n).
- Turn the rubber element (1) towards the hub/adapter/flange (6/9/B) until the drillings (n) and the bolt (40) are aligned.
- Push the driving and driven units together.
- Ensure, that the offset between the driving and driven units are within the alignment tolerances (see chapter 5).

6.10 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.

IMPORTANT
After completion of assembly, check the alignment of the coupling again and if necessary correct.

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
Prior to all kinds of remedies		• Switch off the plant
Running noises or vibrations in the unit	Alignment error	• Check alignment and correct • Check screw torque levels and correct
	Loose screws	
Rubber element damaged	Alignment error	• Replace defective parts • Check alignment and correct • Eliminate the cause for inadmissibly high torque
	Inadmissibly high torque	
After all remedies		• Trial run

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 element

Visual inspection of the CENTAFLEX-A rubber element (see fig. below). Pay particular attention to cracks or to the adhesion of rubber and metal parts in the zones indicated by the arrows. Pressure folds (creasing) in these zones may be considered normal.

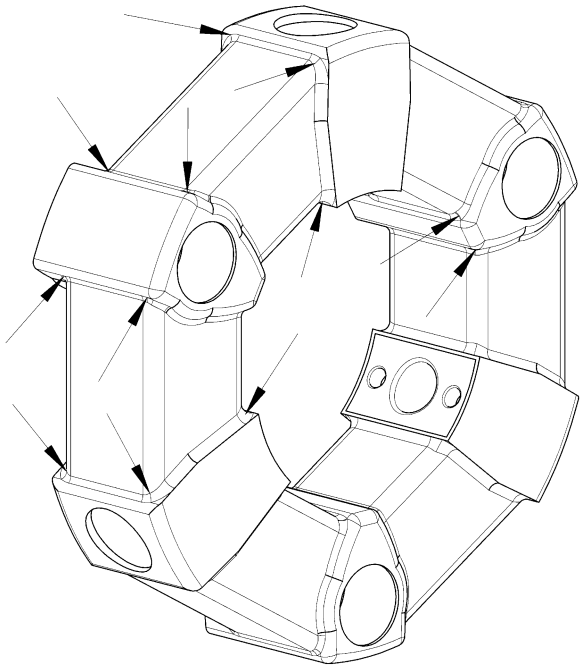


Fig. 8-1 Examples of wear zones at the CENTAFLEX-A rubber element indicated by arrows

In the event of cracks, deeper than permissible (see table below) or rubber-to-metal connections have become detached, the rubber parts must be exchanged.

CENTAFLEX-A Sizes	**permissible crack depth [mm]**
00001 / 00002 / 00004 / 00008 / 00012	1.5
00016 / 00022 / 00025 / 00028 / 00030 / 00050	2.0
00080 / 00090 / 00140 / 00200 / 00250	3.0
00400 / 00600	5.0

Table 8-1 Permissible crack depth at the CENTAFLEX-A-rubber element (Sizes 00001 to 00600)

8.1.4 Inspection of the screw connections

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

8.2 Replace defective parts

IMPORTANT
Exchange the rubber elements in the event of damage.

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

IMPORTANT
Use exclusively **new** screws supplied by CENTA. These are coated with microencapsulated adhesive which serves as a screw locking medium.

- Mount the coupling as described in chapter 6.

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 rubber element (1)

- Dismantling the rubber element as appropriate for the delivered design (see installation drawing).
  - Dismantling the rubber element (1; Type .**N**), see chapter 9.2.1 .
  - Dismantling the rubber element (1; Type .**S**), see chapter 9.2.2 .

9.2.1 Dismantling the rubber element (1; Type .N..)

See fig. 6-13; 6-14; 6-15 or 6-16:

- Loosen the screws (7) of the connection rubber element (1) and hub (2/C) and remove together with washers (8, coupling size 00400 and larger).
- Loosen the screws (3) of the connection rubber element (1) and hub/adapter/flange (6/9/B) and remove together with washers (4, coupling size 00400 and larger).
- Pull the driving and driven units apart.

See fig. 6-12:

- Remove the rubber element (1) off the hub (2/C).

9.2.2 Dismantling the rubber element (1; Type .S..)

See fig. 6-20:

- Pull the driving and driven units apart.

See fig. 6-17; 6-18 or 6-19:

- Loosen the screws (7) of the connection rubber element (1) and hub (2/C) and remove together with washers (8, coupling size 00400 and larger).

See fig. 6-12:

- Remove the rubber element (1) off the hub (2/C).

9.3 Dismantling the hub (2/6; if necessary)

- Dismantle the hub (2/6) as appropriate for the type supplied (see installation drawing).
  - Dismantling the hub (2/6) with cylindrical drilling and feather key, see chapter 9.3.1 .
  - Dismantling the hub (2/6) with conical drilling and feather key, see chapter 9.3.2 .
  - Dismantling the hub (2/6) with toothing, see chapter 9.3.3 .
  - Dismantling the CENTALOC-clamping hub (2/6), see chapter 9.3.4 .
  - Dismantling the CENTA-conical clamping hub (2/6), see chapter 9.3.5 .
  - Dismantling the hub (2/6) with conical oil interference fit, see chapter 9.3.6 .

9.3.1 Dismantling the hub (2/6) with cylindrical drilling and feather key

See fig. 6-5:

- Loosen the threaded pins (16; if existing) and remove off the hub (2/6).
- Remove the hub (2/6) from the shaft (A).

9.3.2 Dismantling the hub (2/6) with conical drilling and feather key

See fig. 6-6:

- Loosen the nut (E) and remove with the washer (H).
- Remove the hub (2/6) from the shaft (A).

9.3.3 Dismantling the hub (2/6) with toothing

See fig. 6-7:

- Loosen the screw (G) and remove with the washer (H).
- Remove the hub (2/6) from the shaft (A).

9.3.4 Dismantling the CENTALOC clamping hub(2/6)

See fig. 6-8:

- Loosen the threaded pins (29).
- Remove the hub (2/6) from the shaft (A).

9.3.5 Dismantling the CENTA-conical clamping hub (2/6)

See fig. 6-9:

- Loosen the screws (2.4/6.4) and screw them out equally about 10mm.
- For each forcing thread screw out a screw (2.4/6.4) and screw them loose into the forcing thread (l).
- Push the hub (2.1/6.1) off hub-taper (2.2/6.2) with the help of the screws (2.4/6.4) in forcing threads.
- Remove the screws (2.4/6.4).
- Remove the hub-taper (2.2/6.2) with hub (2.1/6.1) off the shaft (A).

9.3.6 Dismantling the hub (2/6) with conical 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.

WARNING

Injuries and material damages can occur by:

- Suddenly loosening hubs

Secure the hub with a hydraulic tool against sudden axial loosening.

IMPORTANT

We recommend the following mounting fluids:

- For mounting:
  Oil with a viscosity 300 mm^2/s at 20°C, e.g. SKF LHMF300
- For dismantling:
  Oil with a viscosity 900 mm^2/s at 20°C, e.g. SKF LHDF900

See fig. 6-10:

- Remove screw plug (26) from hub (2/6).
- Connect the pump to the thread G¼ (g) of hub (2/6) to expand the hub.
- Screw the pump to the shaft (A), in order to hold the hub (2/6).
- Build up oil pressure in order to hold the hub (2/6).
- Slowly build up oil pressure to expand the hub(2/6; **p_{max}= 1500 bar**).
  - Slowly reduce the oil pressure for holding the hub (2/6).
  - Slowly reduce the oil pressure for expanding the hub (2/6).
- Repeat the above mounting section until the hub (2/6) is completely released from the shaft (A).
- Remove the pump for holding the hub (2/6) from the shaft (A).
- Remove pump for expanding the hub (2/6) from the hub (2/6).
- Turn the hub (2/6), drain oil out of the thread G¼ (g) and dispose correctly.
- Screw the screw plug (26) into the hub (2/6).

9.4 Dismantling the adapter (Type 3)

See fig. 6-11:

- Loosen and remove the screws (D) of the connection adapter (9) and hub (K).
- Pull the adapter (9) off the centring of the hub (K) and remove.

9.5 Dismatling the hub/adapter/flange (6/9/B; if necessary)

- Dismatling the hub/adapter/flange (6/9/B).
  - Type 008A-00001...00600-.**N**.., see chapter 9.5.1 .
  - Type 008A-00001...00250-.**S**.., see chapter 9.5.2 .
  - Type 008A-00400...00600-.**S**.., see chapter 9.5.3 .

9.5.1 Dismatling the hub/adapter/flange (6/9/B) (Type 008A-00001...00600-.N..)

See fig. 6-2:

- Remove the spring pin (5) out of the hub/adapter/flange (6/9/B).

9.5.2 Dismatling the hub/adapter/flange (6/9/B) (Type 008A-00001...00250-.S..)

See fig. 6-3:

- Screw the bolts (40) out of the hub/adapter/flange (6/9/B) and remove.

9.5.3 Dismatling the hub/adapter/flange (6/9/B) (Type 008A-00400...00600-.S..)

See fig. 6-4:

- Loosen the screws (42) of the connection bushes (41) and the hub/adapter/flange (6/9/B) and remove.

9.6 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 part of this coupling:

- Rubber element

IMPORTANT

When exchanging, all screw connections of the rubber elements must be renewed. These must be ordered separately.

IMPORTANT

Use exclusively **new** screws supplied by CENTA.
These are coated with microencapsulated adhesive which serves as a screw locking medium.

When ordering a spare, specify:

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

11 Annex

11.1 CENTA data sheet D013-019 (screw connections with microencapsulated screw locking medium)

Validity:
For all non-dynamically stressed screw connections with **screws*** in accordance with ISO 4014, ISO 4017, ISO 4762 (DIN 912) and ISO 6912 with metric standard thread in accordance with DIN ISO 262 and **socket bolts*** with metric standard thread in accordance with DIN ISO 262, unless other specifications are given on CENTA documents.

* The threads are coated with microencapsulated screw locking medium.

Preparation of parts that are to be screwed together:
The joining areas must be free of dirt, preservatives and lubricants.

Preparation of screws with microencapsulated screw locking medium:
Give the screws extra lubrication with grease under the screw head.

Screw tightening method:
Screw in (by hand with torque wrench).

Curing time for the microencapsulated screw locking medium:
To ensure optimum screw locking, after tightening the curing time for the microencapsulated screw locking medium must be observed:

- Appr. 4-5 hours at room temperature (20°C)
- Higher temperatures will accelerate the curing time (e.g. 15 minutes at 70°C created by a hot air blower)

After 24 hours, the microencapsulated screw locking medium is completely cured.

Thread size	Strength class	Tightening torques		Thread size	Strength class	Tightening torques	
		[Nm] ±5%	[in lbs] ±5%			[Nm] ±5%	[in lbs] ±5%
M6	**8.8**	10	90	**M18**	**10.9**	300	2650
M8		25	220	**M20**		500	4450
M10		50	440			610**	5400**
M12		85	750	**M22**		820	7250
M14		140	1250	**M24**		1050	9300
M16		220	1950	**M27**		1550	13700

** only for: CENTAFLEX-A size 400
CENTAFLEX-T size 36x/46x

11.2 CENTA data sheet D013-016 (unlubricated screw connections)

Validity:
For all non-dynamically stressed screw connections with **not 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:
Use screws as delivered.

Preparation of screws that ARE secured with liquid screw locking medium:
Remove all grease from the thread.

Screw tightening method:
Screw in (by hand with torque wrench).

Thread size				Thread size			
d	Strength class	Tightening torques [Nm] ±5%	Tightening torques [in lbs] ±5%	d	Strength class	Tightening torques [Nm] ±5%	Tightening torques [in lbs] ±5%
M6	8.8	10	90	M22	8.8	470	4160
	10.9	14	125		10.9	670	5930
	12.9	17	150		12.9	780	6900
M8	8.8	23	205	M24	8.8	600	5310
	10.9	34	300		10.9	850	7520
	12.9	40	350		12.9	1000	8850
M10	8.8	46	410	M27	8.8	750	6640
	10.9	68	600		10.9	1070	9470
	12.9	79	700		12.9	1250	11060
M12	8.8	79	700	M30	8.8	1000	8850
	10.9	117	1050		10.9	1450	12830
	12.9	135	1200		12.9	1700	15050
M14	8.8	125	1100	M33	8.8	1400	12400
	10.9	185	1650		10.9	1950	17250
	12.9	215	1900		12.9	2300	20350
M16	8.8	195	1725	M36	8.8	1750	15500
	10.9	280	2500		10.9	2500	22150
	12.9	330	2900		12.9	3000	26550
M18	8.8	245	2200	M39	8.8	2300	20350
	10.9	350	3100		10.9	3300	29200
	12.9	410	3600		12.9	3800	33650
M20	8.8	350	3100				
	10.9	490	4350				
	12.9	580	5150				

11.3 CENTA data sheet D008-900, Declaration of incorporation according to the EC Machinery Directive 2006/42/EC, Appendix II B

Manufacturer:

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Contact:

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We herewith declare that the **incomplete** machine

Product:	Highly elastic coupling CENTAFLEX-A
Model / series code:	CF-A / 008A
Installation size:	1…800
Design:	all
Serial number:	according to shipping documents, if applicable

- provided this is possible as far as the scope of supply is concerned - complies with the following basic requirements of the **Machinery Directive 2006/42/EC** Appendix I, subchapters 1.1.2, 1.1.3, 1.1.5, 1.3.2, 1.3.3, 1.3.4 and 1.5.4.

In addition, we declare that the special technical documents for this incomplete machine were compiled according to Appendix VII Part B and undertake to forward these to the market monitoring authorities by request via our "Documentation Department".

Commissioning of the incomplete machine is interdicted until the incomplete machine has been incorporated in a machine and the latter complies with the provisions of the EC Machinery Directive and the EC Declaration of Conformity according to Appendix II A is on hand.

The declaration is invalidated by every modification to the delivered parts.

Authorised representative for the compilation of the relevant technical documents:

i.A. S. Anderseck

by order of Gunnar Anderseck
(Authorised Person Documentation)

Declaration of incorporation was issued:

i.V. J. Exner

Haan, 19.11.2009

by proxy Dipl.-Ing. Jochen Exner
(Design Management)