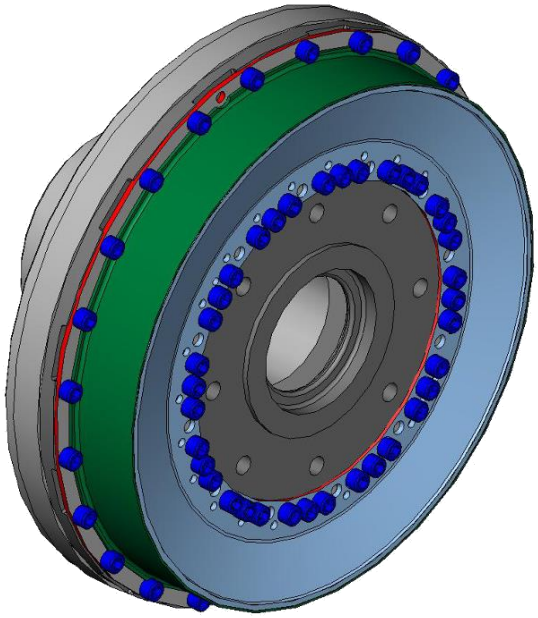
CENTA POWER TRANSMISSION
LEADING BY INNOVATION



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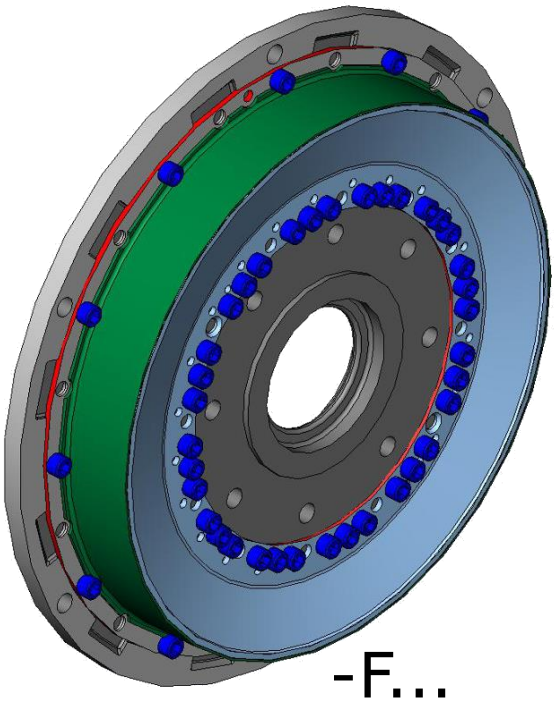

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CENTAX-V

Assembly and operating instructions
012V-00012…00080-….
M012-00001-EN
Rev. 4

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

The CENTAX-V series have the following advantages and characteristics:

- Elements have linear stiffness characteristic.
- Conservatively dimensioned flexible elements and bearings.
- Internal ventilation of the couplings, hence good heat dissipation, elements will not overheat in normal operation.
- The radial bearing is close to the universal joint, ensuring low angular moment.
- Wide range of design and types, each size available with several standard SEA flywheel adaptors and hubs to suit a variety of universal shaft flanges.
- Graduated torque range with each size having a variety of torsional stiffness elements.
- Couplings can be provided on request with Classification Certificates and/or fail safe device.
- Maximum angular missalignment of 9 degrees on universal joint shaft.
- The couplings are of low maintenance.

4.2 Specifications

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

5 Mounting

5.1 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 D013-013 (see chapter 10.1).
- Use suitable lifting devices for assembly.
- The following assembly stages are described for coupling 012V-00068-.....
- Part illustration and marking may different slightly from installation drawing and delivery state.

5.2 Mounting the coupling to the driving unit

➢ Mount the coupling as appropriate for the delivered type to the driving unit (see installation drawing).

  ➢ Mounting the coupling types -FA.. and -FB.. to the flywheel, see chapter 5.3 .

  ➢ Mounting the coupling types -FA.. and -FB.. to the flange, see chapter 5.4 .

  ➢ Mounting the coupling types -SA.. and -SB.. onto the shaft, see chapter 5.5 .

5.3 Mounting the coupling types -FA.. and -FB.. to the flywheel

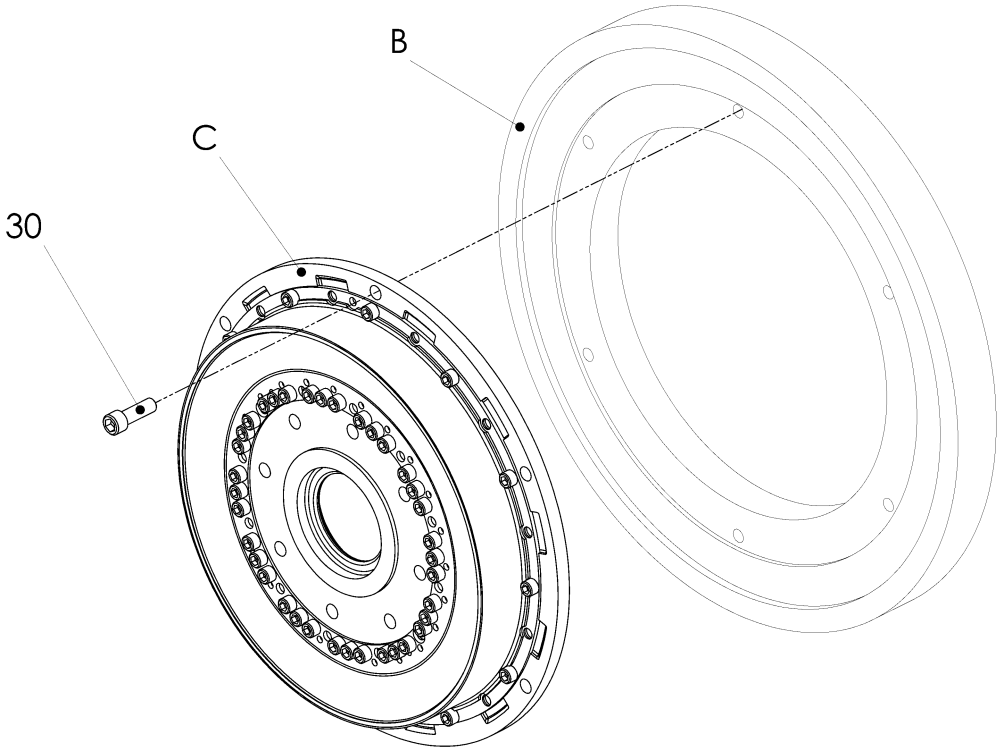

Fig. 5-1 Mounting the coupling types -FA.. and -FB.. to the flywheel

Item	Info	Designation	Remark
30		Screw ISO4762	If ordered
B		Flywheel	Customer part
C		Coupling	Pre-mounted by CENTA

IMPORTANT

Tightening torques for elements to connect couplings with customer parts could deviate from CENTA data sheet D013-013.
Consider specifications on installation drawing.

- Push the coupling (C) into the centring of the flywheel (B).
- Screw the coupling (C) to the flywheel (B) using the screws (30).

5.4 Mounting the coupling types -FA.. and -FB.. to the flange

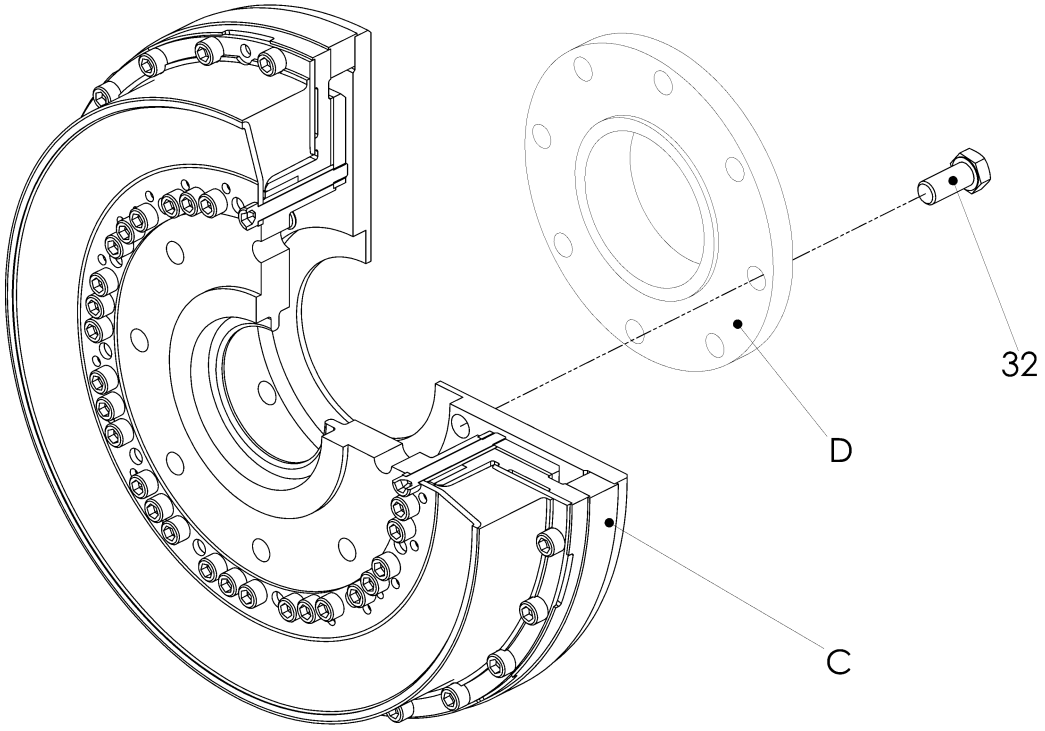

Fig. 5-2 Mounting the coupling types -FA.. and -FB.. to the flange

Item	Info	Designation	Remark
32		Screw	If ordered
C		Coupling	Pre-mounted by CENTA
D		Flange	Customer part

IMPORTANT

Tightening torques for elements to connect couplings with customer parts could deviate from CENTA data sheet D013-013.
Consider specifications on installation drawing.

- Push the coupling (C) onto/into the centring of the flange (D).
- Screw the flange (D) to the coupling (C) using the screws (32).

5.5 Mounting the coupling types -SA.. and -SB.. onto the shaft

- Mounting the hub as appropriate for the supplied design (see installation drawing).
  - Mounting the hub with cylindrical bore and keyway, see chapter, 5.5.1 .
  - Mounting the hub with conical oil interference fit, see chapter 5.5.2 .

5.5.1 Mounting the hub with cylindrical bore and keyway

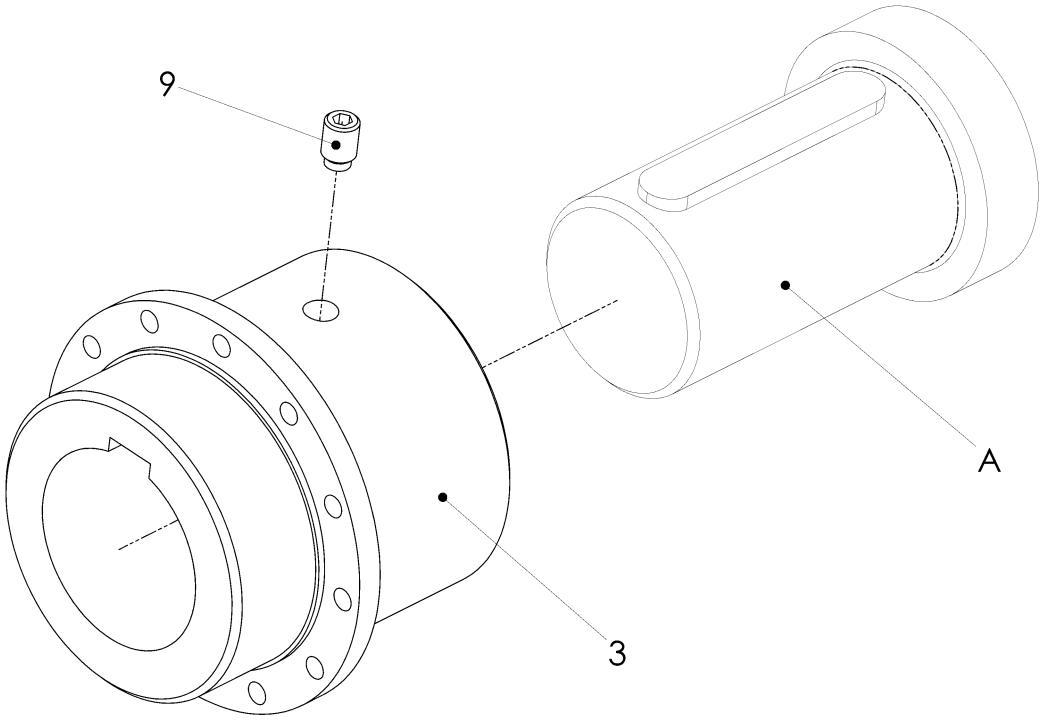

Fig. 5-3 Mounting the hub with cylindrical bore and keyway

Item	Info	Designation	Remark
3		Hub	
9		Threaded pin DIN914	If existing, see installation drawing
A		Shaft	Customer part

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.

- ➢ Warm the hub (3) to a temperature of 170° - 200°C.
- ➢ Push the hub (3) onto the shaft (A).

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.

- ➢ Secure the hub (3) with the threaded pin (9; if necessary).
  Size of the threaded pin 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 5-1 Tightening torques for threaded pins

5.5.2 Mounting the hub with conical oil interference fit

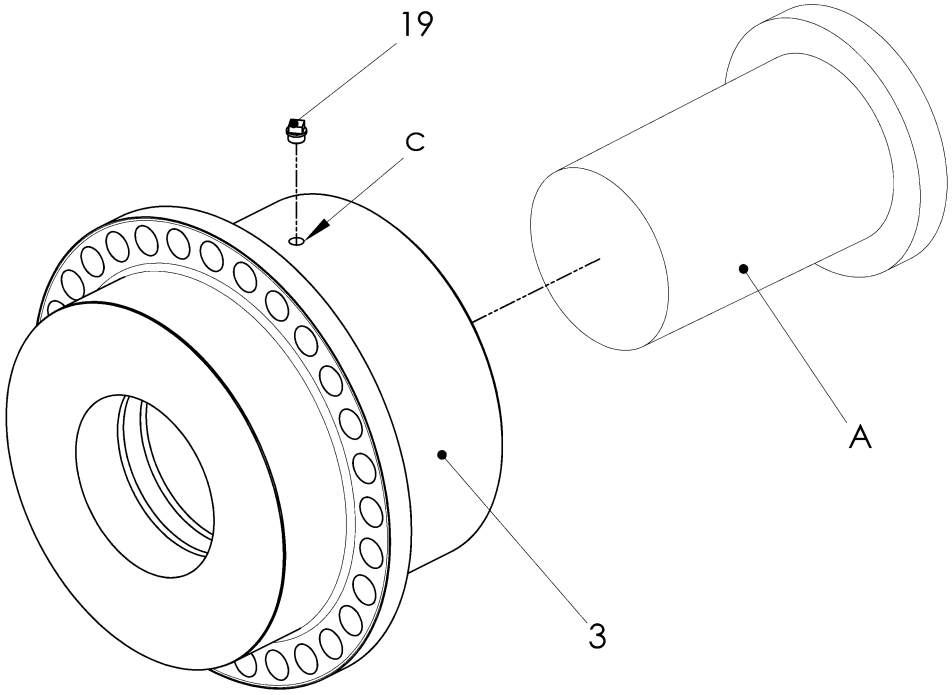

Fig. 5-4 Mounting the hub with conical oil interference fit

Item	Info	Designation	Remark
3		Hub	
19		Screw plug	G¼ or G¾ see installation drawing
A		Shaft	Customer part
	c	Thread	G¼ or G¾ see installation drawing

- Lightly oil the cone of the shaft (A).
- Push the hub (3) onto the shaft (A).
- Remove the screw plug (19) from the hub (3).

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.

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

- ➢ Connect the pump (p_{max}**= 3000 bar**) for expanding the hub (3) to the thread G¼ or G¾ (c).
- ➢ Screw the pump for pushing on the hub to the shaft.
- ➢ Build up the oil pressure to push on the hub.

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.
- ➢ Build up the oil pressure alternately until the lift path (p up) of the hub (3) is reached (for p up and reference faces, see installation drawing).
- ➢ Decrease the oil pressure for expanding the hub.
- ➢ Remove the pump for expanding the hub from the hub (3).
- ➢ 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 (3), drain oil out of the thread G¼ or G¾ (c) and dispose correctly.
- ➢ Screw the screw plug (19) into the hub (3).

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

5.5.3 Mounting the adapter to the hub

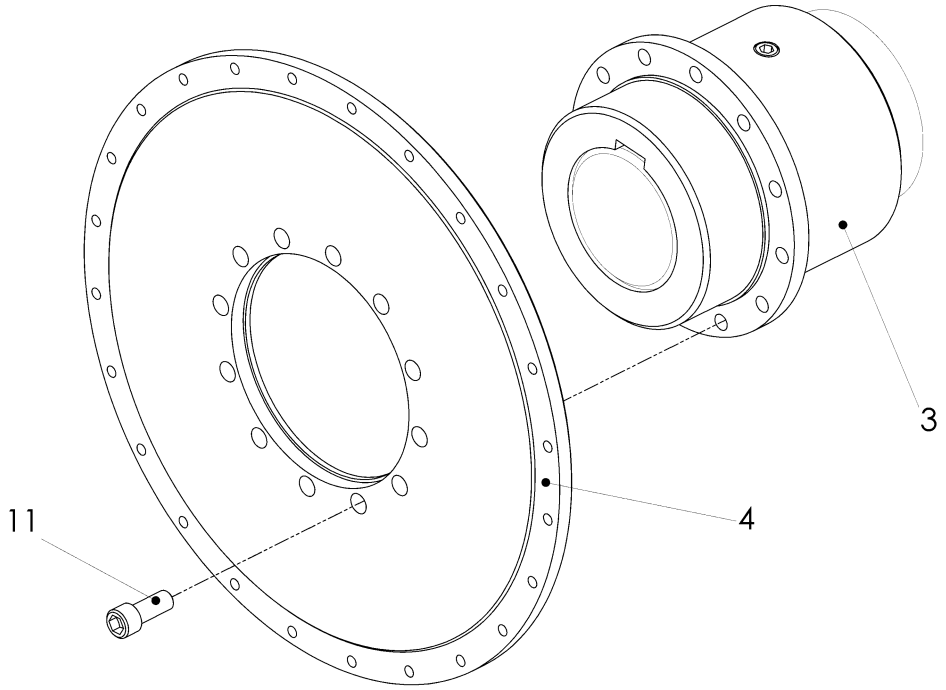

Fig. 5-5 Mounting the adapter to the hub

Item	Info	Designation	Remark
3		Hub	
4		Adapter	
11		Screw ISO4762	

- Push the adapter (4) onto the centring of the hub (3).
- Screw the adapter (4) to the hub (3) using the screws (11).

5.5.4 Mounting the coupling to the adapter

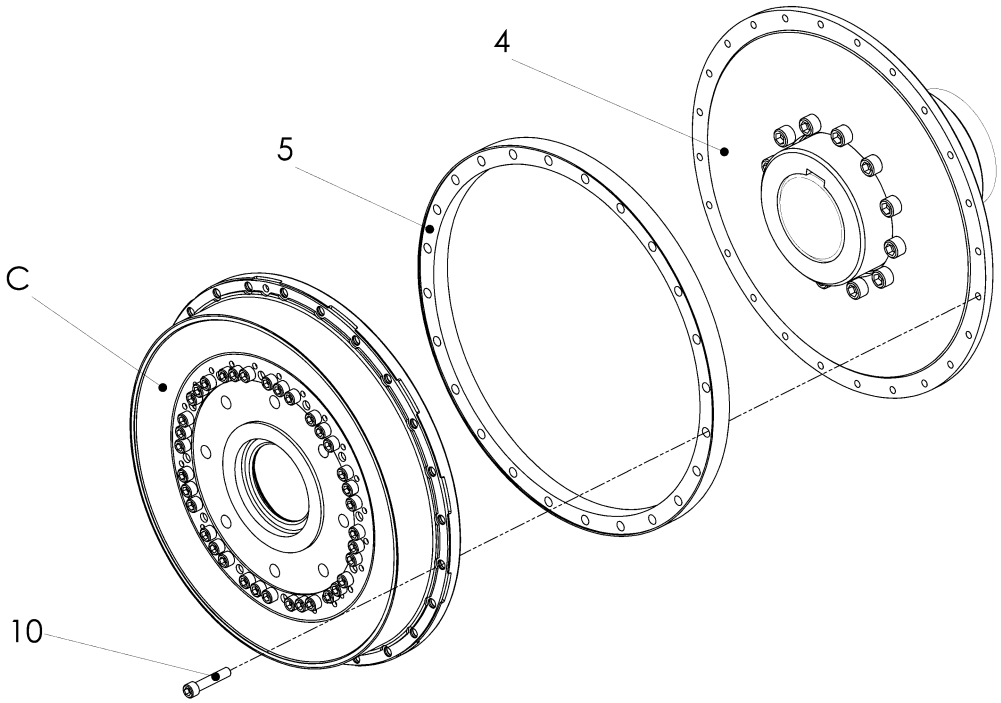

Fig. 5-6 Mounting the coupling to the adapter

Item	Info	Designation	Remark
4		Adapter	
5		Ring	If existing, see installation drawing
10		Screw ISO4762	
C		Coupling	Pre-mounted by CENTA

- Mount the coupling according to the design **with/without** the ring (5):
- Mount the coupling **with** the ring (5):
  - Push the ring (5) onto the centring of the adapter (4).
  - Push the coupling (C) into the centring of the ring (5).
  - Screw the coupling (C) and the ring (5) to the adapter (4) using the screws (10).

- Mount the coupling **without** the ring (5):
  - Push the coupling (C) into the centring of the adapter (4).
  - Screw the coupling (C) to the adapter (4) using the screws (10).

5.6 Mounting the universal joint shaft to the coupling

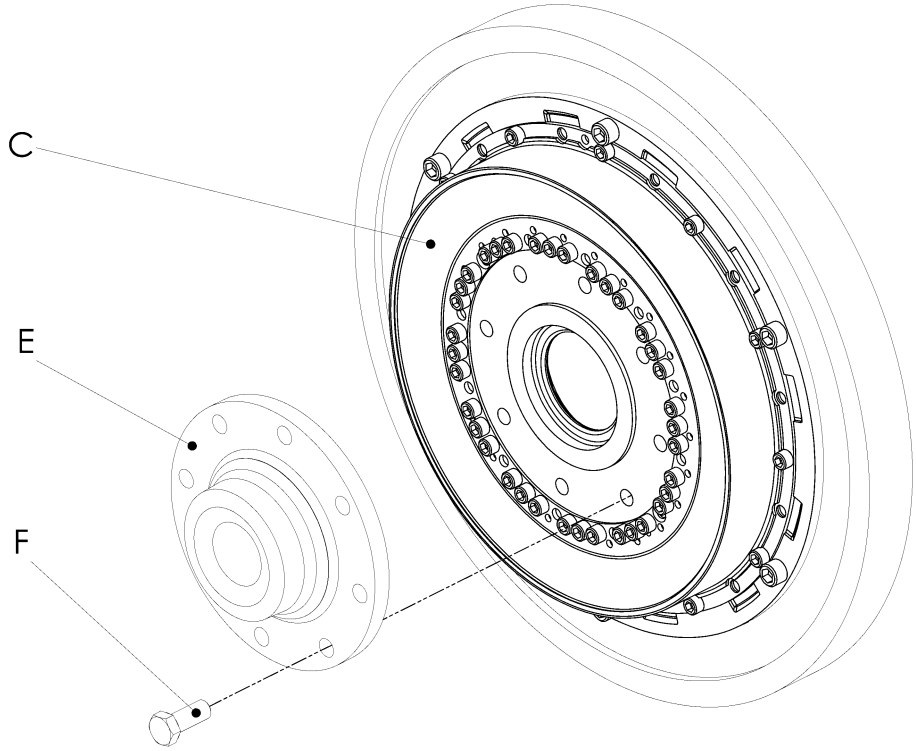

Fig. 5-7 Mounting the universal joint shaft to the coupling

Item	Info	Designation	Remark
C		Coupling	Pre-mounted by CENTA
E		Universal joint shaft	Customer part
F		Screw	Customer part

IMPORTANT

Tightening torques for elements to connect couplings with customer parts could deviate from CENTA data sheet D013-013.
Consider specifications on installation drawing.

- Push the universal joint shaft (E) onto/into the centring of the coupling (C).
- Screw the universal joint shaft (E) to the coupling (C) using the screws (F).

5.7 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.

6 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.

6.1 Operating faults, root causes and remedy

Faults	Possible root causes	Remedy
Prior to all kinds of remedies		• Switch off the plant • Disconnect the driving and the driven units
Running noises or vibrations in the unit	Loose screws	• Check screw torque levels and correct • Check the wearing of the radial bearing and replace weared parts
	Wear of radial bearing	
Rubber element damaged	Inadmissibly high torque	• Replace the rubber element • Eliminate the cause for inadmissibly high ambient temperature
	Inadmissibly high ambient temperature	
After all remedies		• Connect the driving and the driven units • Trial run

Table 6-1 Troubleshooting table

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

7 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. It is possible to perform a visual inspection during the regular scheduled maintenance intervals for the complete unit. Every 12 month a visual inspection is strictly required.

7.1 Work to be performed

7.1.1 Cleaning the coupling

➢ Remove any loose dirt from the coupling.

7.1.2 Visual inspection of the coupling

➢ Inspect the coupling for cracks, chips or missing parts.

➢ Replace faulty and missing parts.

7.1.3 Visual inspection of the rubber elements / rubber segments

IMPORTANT

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

- The wear specifications given in W000-00002 are exceeded

➢ Assess the rubber elements / rubber segments as described in CENTA guidelines W000-00002.

7.1.4 Inspection of the screw connections

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

7.1.5 Checking the radial clearance of the bearing

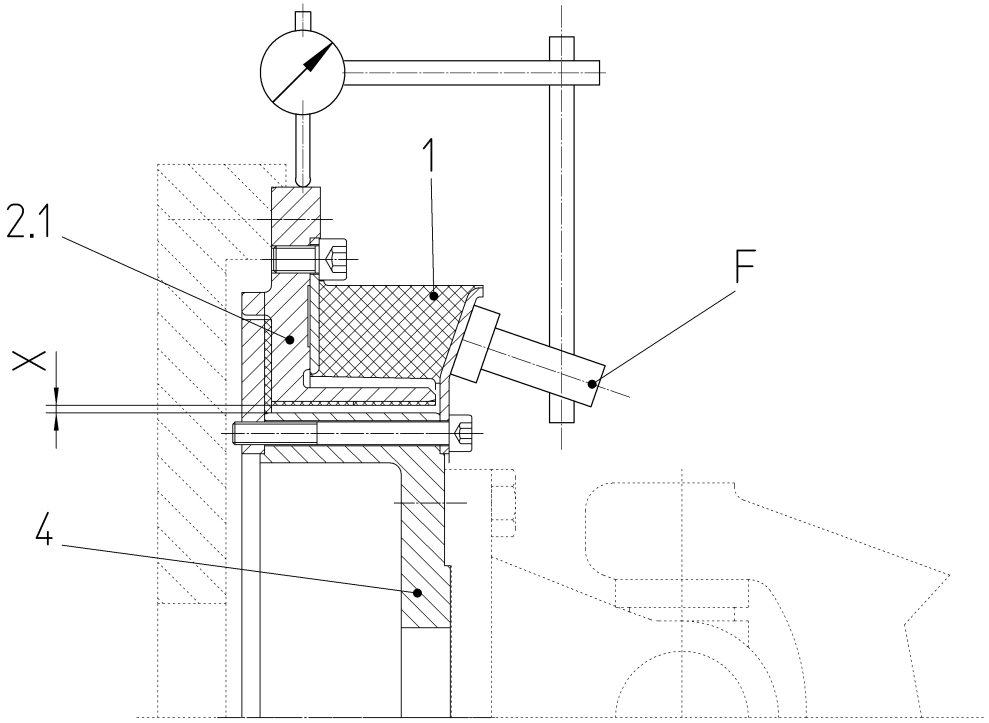

Fig. 7-1 Checking the radial clearance of the bearing

Item	Info	Designation	Remark
1		Rubber element	
2.1		Flange	
4		Hub for universal joint shaft	
F		Dial gauge	
X		Radial clearance of bearing	

- Mount the dial gauge (F) to the rubber element (1). Place the feeler of the dial gauge to the flange (2.1).
- Push down vertically the hub for universal joint shaft (4) until it sits close to the flange (2.1).
- Set the dial gauge to zero.
- Lift the hub for universal joint shaft (4) vertically up until it sits close to the flange (2.1).
- Read and document the deflection of the dial gauge (X, bearing clearance).

- Repeat three times the procedure described above at 4 positions staggered in 60 degrees order.
- Exchange the bearing, if the measured value exceeds the permissible radial clearance.
  Permissible radial clearance: **Y≤0.5mm**.
  We recommend to exchange the bearing and the rubber elements in common.

IMPORTANT
The coupling has to be replaced by service partner if the measured value exceeds 0.5 mm.

7.2 Replacing defective parts

- Remove the coupling as described in chapter 8.
- Replace wearing parts by service partner.
- Mount the coupling as described in chapter 5.

8 Dismantling

8.1 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).

WICHTIG

The coupling is dismantled in reverse order to the assembly process.
Please refer to the illustrations in chapter 5.

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.

8.2 Dismantling the universal joint shaft from the coupling

See Fig. 5-7:

- Loosen and remove the screws (F) of the connection universal joint shaft (E) and the coupling (C).
- Pull the universal joint shaft (E) from/out of the centring of the coupling (C) and remove.

8.3 Dismantling the coupling from the driving unit

- Dismantle the coupling from the driving unit as appropriate for the delivered type (see installation drawing).
  - Dismantling the coupling types -FA.. and -FB.. from the flywheel, see chapter 8.4 .
  - Dismantling the coupling types -FA.. and -FB.. from the flange, see chapter 8.5 .
  - Dismantling the coupling types -SA.. and -SB.. from the shaft, see chapter 8.6 .

8.4 Dismantling the coupling types -FA.. and -FB.. from the flywheel

See Fig. 5-1:

- Loosen and remove the screws (30) of the connection coupling (C) and flywheel (B).
- Pull the coupling (C) out of the centring of the flywheel (B) and remove.

8.5 Dismantling the coupling types -FA.. and -FB.. from the flange

See Fig. 5-2:

- Loosen and remove the screws (32) of the connection flange (D) and the coupling (C).
- Pull the coupling (C) out of/from the centring of the flange (D) and remove.

8.6 Dismantling the coupling types -SA.. and -SB.. from the shaft

8.6.1 Dismantling the coupling from the adapter

See Fig. 5-6:

- Dismantle the coupling according to the design **with/without** the ring (5):
- Dismantle the coupling **with** the ring (5):
  - Loosen and remove the screws (10) of the connection coupling (C), ring (5) and adapter (4).
  - Pull the coupling (C) out of the centring of the ring (5) and remove.
  - Pull the ring (5) from the centring of the adapter (4) and remove.
- Dismantle the coupling **without** the ring (5):
  - Loosen and remove the screws (10) of the connection coupling (C) and adapter (4).
  - Pull the coupling (C) out of the centring of the adapter (4) and remove.

8.6.2 Dismantling the adapter from the hub (if necessary)

See Fig. 5-5:

- Loosen and remove the screws (11) of the connection adapter (4) and hub (3).
- Pull the adapter (4) from the centring of the hub (3) and remove.

8.6.3 Dismantling the hub with cylindrical bore and keyway (if necessary)

See Fig. 5-3:

- Loosen the threaded pin (9)
- Remove the hub (3) from the shaft (A).

8.6.4 Dismantling the hub with conical oil interference fit (if necessary)

See Fig. 5-4:

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

- ➢ Remove the screw plug (19) from the hub (3).
- ➢ Connect the pump (p_{max}**= 3000 bar**) to the thread G¼ or G¾ (c) of hub (3) to expand the hub.
- ➢ Screw the pump to the shaft (A), in order to hold the hub.
- ➢ Build up oil pressure in order to hold the hub.
- ➢ Build up oil pressure to expand the hub (p_{max}**= 2000 bar**).
  - ➢ Slowly reduce the oil pressure for holding the hub.
  - ➢ Reduce the oil pressure for expanding the hub.
- ➢ Repeat the above mounting section until the hub is completely released from the shaft.
- ➢ Remove the pump for holding the hub from the shaft (A).
- ➢ Remove pump for expanding the hub from the hub (3).
- ➢ Turn the hub (3), drain oil out of the thread G¼ or G¾ (c) and dispose correctly.
- ➢ Screw the screw plug (19) into the hub (3).
- ➢ Remove the hub (3) from the shaft (A).

8.7 Reassembling the coupling

- ➢ Reassemble the coupling as described in chapter 5.

9 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
- Radial and axial bearing
  These are delivered as a replacement, completely pre-mounted in the coupling.

IMPORTANT
The coupling has to be replaced by service partner if the measured value exceeds 0.5 mm.

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.

10 Annex

10.1 CENTA data sheet D013-013 (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).

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	9	80	M22	8.8	470	4160
	10.9	13	115		10.9	670	5930
	12.9	15	135		12.9	780	6900
M8	8.8	21	185	M24	8.8	600	5310
	10.9	30	265		10.9	850	7520
	12.9	35	310		12.9	1000	8850
M10	8.8	41	360	M27	8.8	750	6640
	10.9	60	530		10.9	1070	9470
	12.9	71	630		12.9	1250	11060
M12	8.8	71	630	M30	8.8	1000	8850
	10.9	104	920		10.9	1450	12830
	12.9	121	1070		12.9	1700	15050
M14	8.8	113	1000	M33	8.8	1400	12400
	10.9	165	1460		10.9	1950	17250
	12.9	195	1725		12.9	2300	20350
M16	8.8	170	1500	M36	8.8	1750	15500
	10.9	250	2210		10.9	2500	22150
	12.9	300	2660		12.9	3000	26550
M18	8.8	245	2170	M39	8.8	2300	20350
	10.9	350	3100		10.9	3300	29200
	12.9	410	3630		12.9	3800	33650
M20	8.8	350	3100				
	10.9	490	4340				
	12.9	580	5130				

10.2 CENTA data sheet D012-901 Declaration of incorporation according to the EC Machinery Directive 2006/42/EC, Appendix II B

Manufacturer:

CENTA Antriebe
Kirschey GmbH
Bergische Strasse 7
42781 Haan / GERMANY

Contact:

Phone +49-2129-912-0
Fax +49-2129-2790
centa@centa.de
www.centa.info

We herewith declare that the **incomplete** machine

Product:	Torisionally soft intermediate coupling CENTAX-V
Model / series code:	CX-V / 012V
Installation size:	12…80
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, 14.12.2009

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