

®

Montage- und Betriebsanleitung

Installation and operating instructions

Monterings- och driftanvisning

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Modellreihe

Series

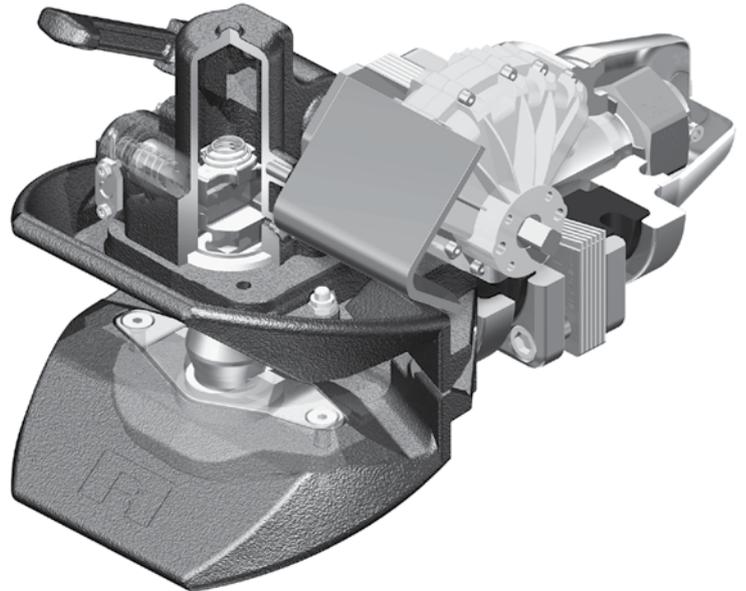
Modellserie

RO*57flex

Selbsttätige Anhängerkupplung

Automatic Trailer Coupling

Automatisk släpvagnskoppling



Series RO*57flex Automatic Trailer Coupling

ECE (E1) 55 R-01 2535 Typ RO*57 flex

Suitable for:

- turntable drawbar trailers
- for drawbar eyes with a diameter of 57.5 mm



The coupling must be installed by authorised personnel!

Read these instructions carefully before fitting!

Official note

When fitting the trailer coupling the regulations for fitting mechanical fastening systems in accordance with Appendix VII of Directive 94/20/EC and the national regulations for commercial vehicles must be observed.

Subject to technical changes without prior notice

Safety instructions 16

1. Fitting 17 – 18

1.1 Before fitting 18

1.2 Fitting 18

2. Operation 19 – 20

2.1 Hitching 19

2.2 Check 19

2.2 Unhitching 20

3. Maintenance 21 – 23

3.1 Maintenance 21

3.2 Testing 21 – 23

Technical data 24 – 25

Drawbar eye to fit 25

Upgrade kits 25



The safety instructions are summarised in a single chapter. In any situation where the user of the trailer coupling is at risk, the safety instructions are repeated in the individual sections and marked with the warning symbol shown here.

When handling hitches, prime movers and trailers the relevant safety regulations in the respective country must be observed (e.g. Berufsgenossenschaft in Germany). Any safety instructions in the operating manual of the tractor vehicle and the trailer remain valid and must be observed.

For operation, maintenance and assembly the safety instructions listed below must be observed. Further safety instructions are then given in the individual case which relate directly to the respective activity.

Safety instructions for operation

- The hitch may only be operated by authorised persons.
- The installation and operating instructions of the respective hitch retain their validity and must be observed.
- Only use the hitch and the towing eye of the trailer if they are in perfect technical condition.
- Only carry out hitching / unhitching operations on firm, level ground.
- During hitching, nobody may stand between the tractor vehicle and the trailer.
- After every hitching operation the correct locked status of the trailer coupling must be checked by means of the control pin or the remote indicator. Only drive the rig in the correctly locked status.
- The remote indicator does not exempt the driver from the obligation to check before driving off subject to StVZO (Regulations Authorising the Use of Vehicles for Road Traffic). Before driving off, among other things, the coupling status of the mechanical connection device for the tractor vehicle and the trailer must be checked.

Safety instructions for maintenance

- For maintenance work, only use the prescribed lubricants.
- Maintenance work may only be carried out by qualified personnel.

Safety instructions for installation

- Installation may only be carried out by authorised workshops.
- Installation must be carried out in compliance with the relevant accident prevention regulations and the technical regulations for mechanical equipment.
- Only original components may be used.
- Instructions and installation guidelines of the vehicle manufacturer must be observed, e.g. type of fastening, clearances etc.
- All screwed connections must be tightened with the prescribed tightening torque.
- Work may only be carried out on the trailer coupling when it is closed.

Risk of injuries!

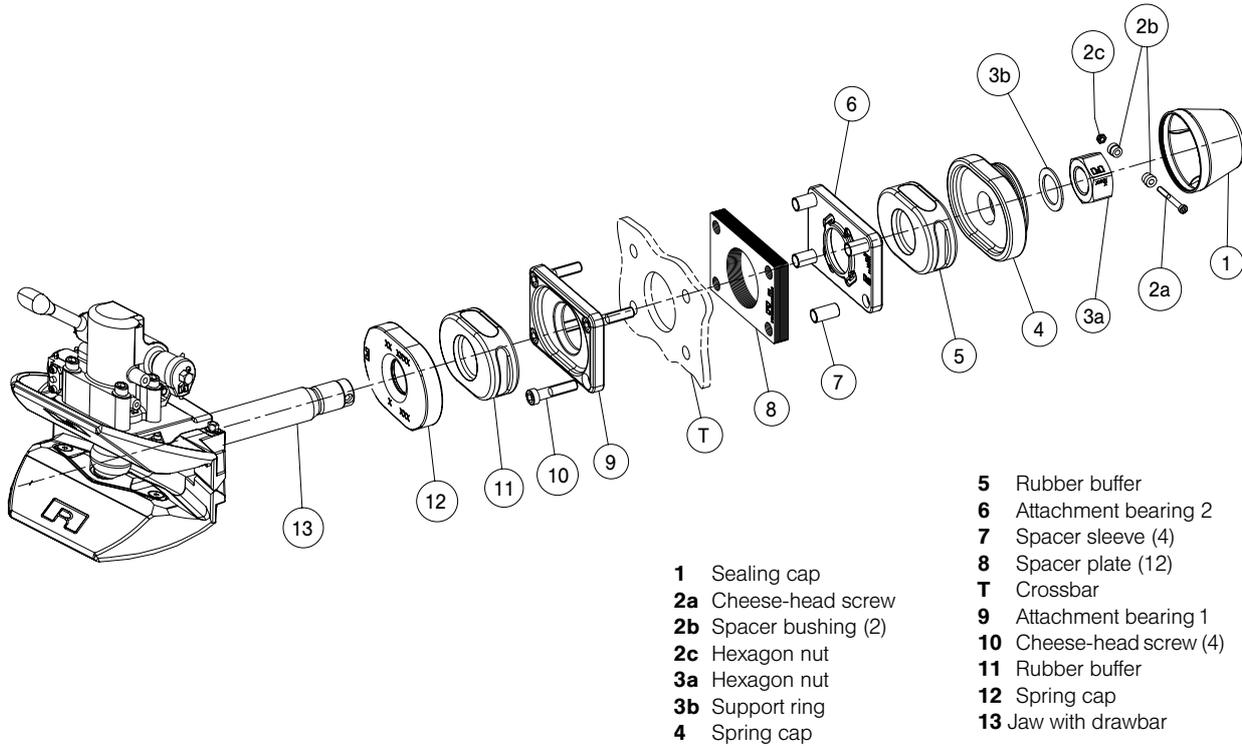
The installation of the hitch on the prime mover must be carried out in accordance with Annex VII of EC Directive 94/20, Annex 7 of ECE R55-01 and must be checked accordingly. As applicable, the relevant licensing regulations in the respective country must be observed.

§§ 19, 20 and 21 StVZO apply in Germany. The mechanical remote control and the mechanical remote indicator are equipment with safety components. This is why the installation must be documented.



The hitch, the remote control and the remote indicator are connection devices which require model approval and are subject to the highest safety requirements.

Alterations of any kind shall cause the warranty to lapse and invalidate the type approval, which in turn invalidates the vehicle operation permit.



- 1** Sealing cap
- 2a** Cheese-head screw (2)
- 2b** Spacer bushing (2)
- 2c** Hexagon nut
- 3a** Hexagon nut
- 3b** Support ring
- 4** Spring cap
- 5** Rubber buffer
- 6** Attachment bearing 2
- 7** Spacer sleeve (4)
- 8** Spacer plate (12)
- T** Crossbar
- 9** Attachment bearing 1
- 10** Cheese-head screw (4)
- 11** Rubber buffer
- 12** Spring cap
- 13** Jaw with drawbar

Fig. 1



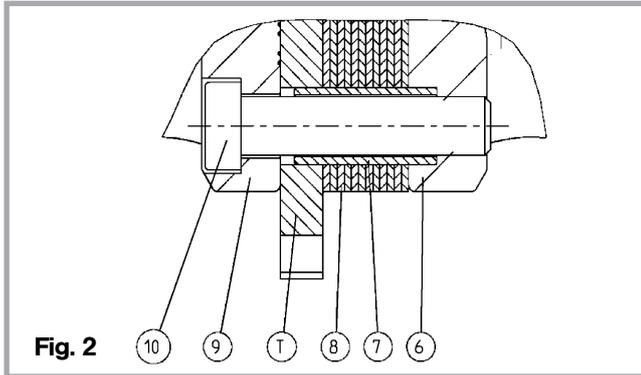


Fig. 2

T (mm)	12-13	14-15	16-17	18-19	20-21	22-23
8 (Number)	12	11	10	9	8	7
T (mm)	24-25	26-27	28-29	30-31	32-33	34-35
8 (Number)	6	5	4	3	2	1

1.1 Before fitting

Note: When fitting the coupling observe:

- applicable national regulations
- vehicle manufacturer's mounting specifications
- clearance for axial turning of coupling head min. $\pm 25^\circ$

Fig. 1

- Loosen **2c** and withdraw **2a**
- Withdraw **2b** and unscrew **3a**
- Remove **3b, 4** and **5**
- Unscrew **10**: remove **6, 8, 9** (**11, 12** remain on **13**)

Take care that **7** does not fall out!

Note: **1** in accompanying pack

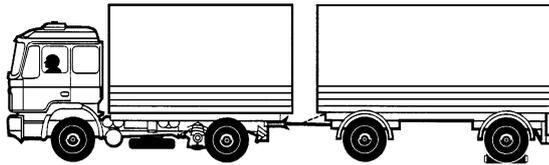
Caution: Do not remove the copper grease from **3a, 3b, 4** and **13**

1.2 Fitting

- Locate **9** externally on **T**
- Locate **10** (M 16 x 70, 8.8)
- Slide **8** corresponding to **T max.** (see table) from inside onto **10**:
T max. 36 mm, 1 x 8:2 mm (Fig. 2)
- Screw **6** (if necessary, after inserting **7**) from inside to **10** (**150 Nm**)
- Carefully slide **13** with **12** and **11** through **T**
- Slide **5, 4** and **3b** onto **13**
- Tighten **3**, **tightening torque 750 Nm**
- Locate 1 x **2b** onto **2a**
- Slide **2a** and **2b** through the bore in **3**
- Locate 1 x **2b** onto **2a** and tighten with **2c**: **tightening torque 25 Nm**
- Locate **1**

Note: Before painting, close coupling.

It is essential to cover or grease coupling pin.



Truck with turntable trailer

Fig. 7

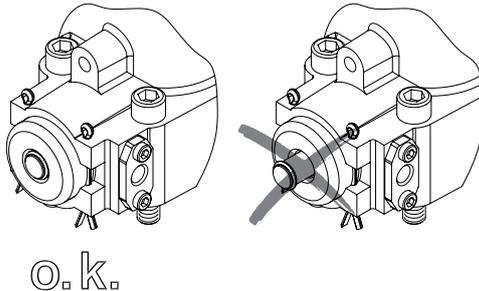


Fig. 8

2.1 Hitching (Fig. 7)

Note: The relevant regulations must be observed when hitching and unhitching.

No one must stand between the vehicles!

- To engage, press lever upwards until it engages
- Position drawbar eye in centre of funnel
- Disengage brake on **front axle** of **turntable drawbar trailer**
- **Slowly** reverse prime mover

2.2 Check

After every hitching operation it is essential to check that the coupling is engaged as specified in regulations.

The check pin must be **flush** with its guide bush after hitching (Fig. 8). If the check pin protrudes (this can also be felt in the dark), this indicates that hitching has not been carried out correctly and that you are at **risk of an accident!**

The truck may not be driven with the trailer in this condition!

Remedy:

- Extend prime mover/trailer connection (drive approx. 1 m forwards and then reverse again)
- then **check again**

Closing coupling manually

(e.g. for tow-rope):

Lift coupling pin using suitable tool.

Note: Should the drawbar eye not activate the coupling pin during hitching, this can be because the necessary standby gap (gap between the drawbar eye and the coupling pin) is insufficient (see Fig. 15).

Remedy: Check the drawbar eye and coupling pin.

2.3 Unhitching

Observe the regulations laid down by professional trade associations when hitching and unhitching!

- Secure trailer to prevent it from rolling away.
- Disconnect supply lines to trailer.
- Open coupling.
- Advance prime mover.

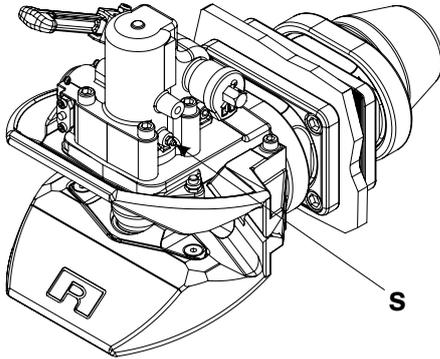


Fig. 11

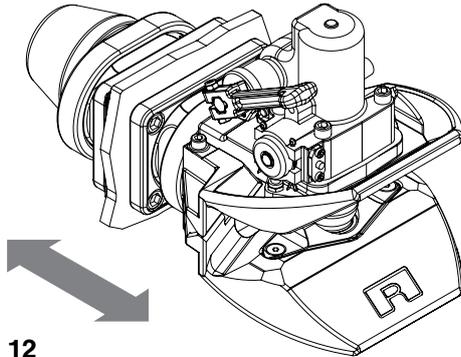


Fig. 12

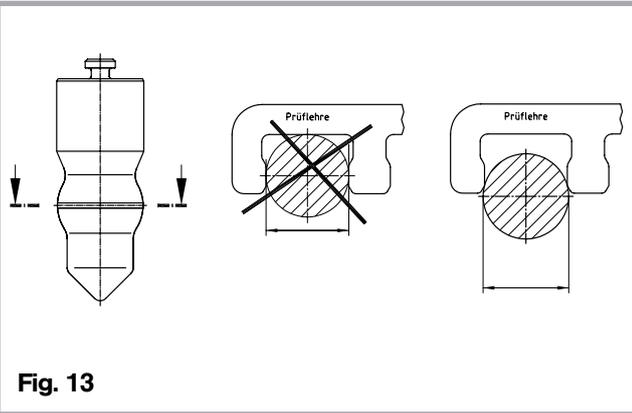
3.1 Maintenance

- Before first use and after extended period of use lubricate coupling pin, support and drawbar eye with viscous grease (EP3) with maximum water repellence.
- Low-maintenance automatic unit has a grease reservoir (regular greasing unnecessary).
Bearing requires no further lubrication.
- Close coupling before cleaning with high-pressure washers (see item 2.2).
- After cleaning, regrease coupling pin and support.
Please note following when carrying out repairs on coupling (e. g. changing coupling pin):
- Remove as much of old grease as possible.
- Please use the enclosed grease.

3.2 Testing

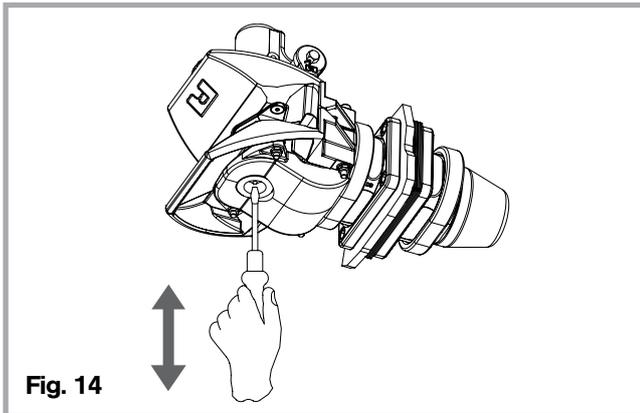
Bearing: Longitudinal play

- Move coupling head (not funnel) vigorously in direction of travel when unhitched (see Fig. 12):
No longitudinal play may be present.



Coupling pin:

- Diameter of crowned part may not be less than **55 mm**.
Otherwise new coupling pin must be used (see Fig. 13).



- Maximum vertical play on coupling pin (see Fig. 14) is **max. 1.8 mm**

Lower bush:

- Internal diameter of lower bush may not exceed **45.7 mm**
- There must be free passage downwards.

Upper bush:

- Internal diameter of upper bush may not exceed **59.5 mm**

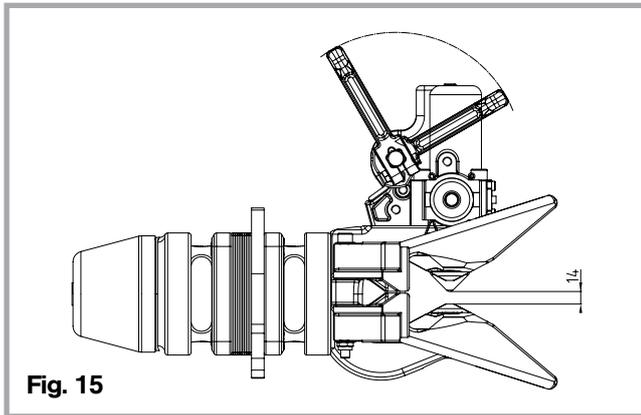


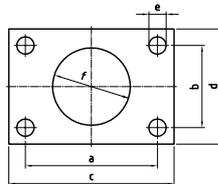
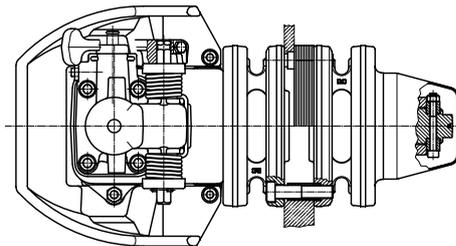
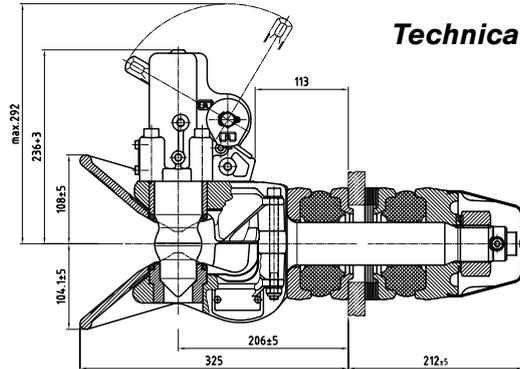
Fig. 15

Standby gap:

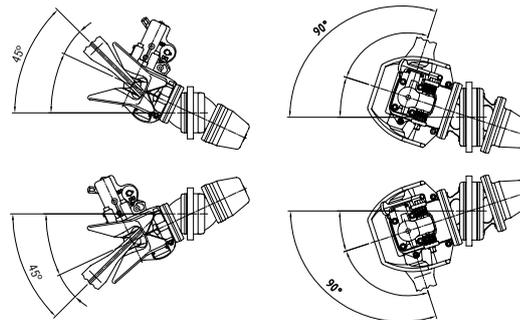
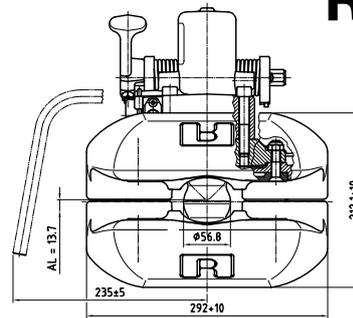
- Gap between lower edge of coupling pin and support must be min. **14 mm** and max. **15.3 mm** (see Fig. 15).
- Always grease support well to reduce wear!



Technical Data



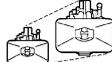
RO★57flex



	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
6	160	100	200	140	21	94

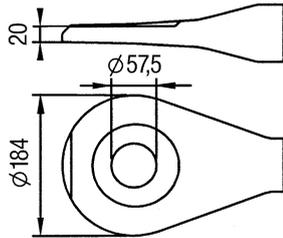
Technical Data

RO★57flex

Order no.					
	C	D	(mm)	D (kN)	(kg)
576C61000	C	6	160x100	260	57
576D61000	D	6	160x100	260	57
576C61400	C	6	160x100	260	63
576C61560	C	6	160x100	260	65

Drawbar eye to fit

RO★57flex



e.g.:
 drawbar eye with flange
 ROE 57370
 ECE (E1) 55 R-011356
 or weldable drawbar eye
 ROE 57384 ECE (E1) 55 R-011659 / 57386 ECE E1 55 R-011658
 or similar type approved drawbar eyes

Upgrade kits

RO★57flex

Pneumatic remote operation upgrade kit

Order no. ROE

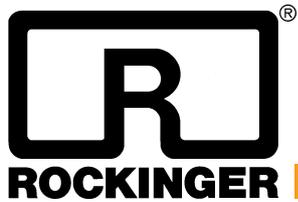
Comfort RO★PC57 power actuating to open and close:
 Content: part-turn actuator, control unit, pneumatic connection kit 71167

Upgrade kit in-cab status indicator

Order no. ROE

Upgrade kit 70936
 For spare parts see catalogue





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