

ROCKINGER

Montage- und Betriebsanleitung
Installation and operating instructions

DE

EN

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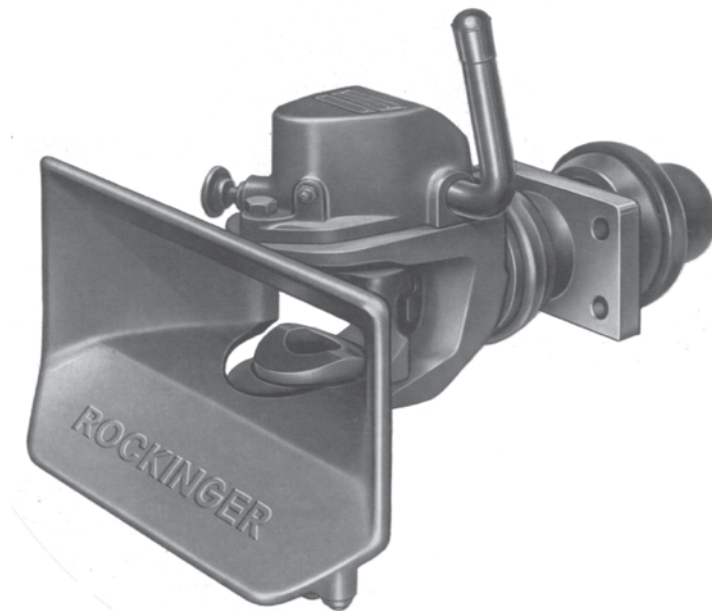
Modellreihe

Series

RO*256

Automatische Anhängerkupplung

Automatic Trailer Coupling



Series RO*256

Automatic Trailer Coupling

Type RO*256 G113 ECE (E1) 55R-01 0432

Type RO*256 G135 ECE (E1) 55R-01 0453

Suitable for:

Drawbar eyes 40 DIN 74054, class S (ECE) and ISO 8755



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 7 of Directive ECE R 55-01 and the national regulations for commercial vehicles must be observed.

Subject to technical changes without prior notice

Actual information see www.jost-world.com

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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 7 of Directive 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.

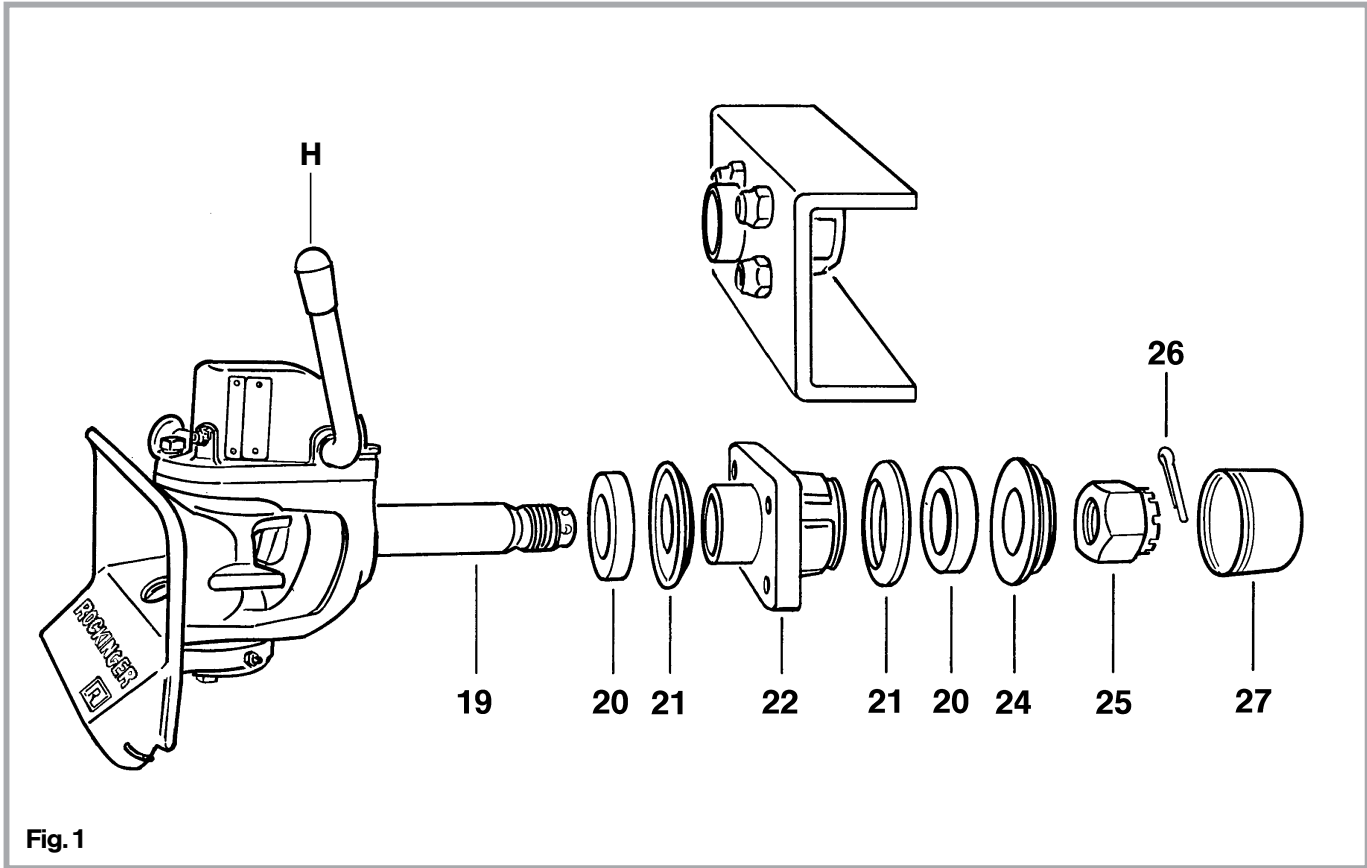


Fig. 1

The towing hitch series RO★256 is especially made for vehicles where normal shaped towing hitches have no accessibility.

Article Number	Hole pattern (mm)	Permissible D-Value (kN)	CENTRALAXLETRAILER			Weight (kg)
			Permissible Dc-Value (kN)	Permissible vert. load (kg)	Permissible V-Value (kN)	
RO 256 A11020	83x56	66	42,5	500	12	24
RO 256 B11020	83x56	66	42,5	500	12	24
RO 256 A35020	120x55	70	70	700	19	24
RO 256 B35020	120x55	70	70	700	19	24

Article Number	Handlever upwards	Handlever downwards	admissible for mounting to the trailer
RO 256 A11020*	●		●
RO 256 B11020*		●	●
RO 256 A35020**	●		
RO 256 B35020**		●	

* Grip thickness of cross member max 17 mm

* Grip thickness of cross member max 20 mm



Fig. 2

1.1 Before installation

Note: Please comply with following when fitting hitch:

- applicable national regulations
- vehicle manufacturers specifications
- clearance for axial rotation of coupling head of at least $\pm 25^\circ$
- Take away the nut cover (27) including the split pin (26) and loosen the castle nut (25) (see Fig. 1).
- Remove parts (24, 20, 21) from the body shaft.
- Tear the body shaft and the front parts (20) and (21) out the bearing (22).

Note: Do not remove the special grease from the body!

1.2 Installation

- Install the bearing (22) onto the inner side of the cross member.
- Secure with 4 hexagon bolts DIN 931, grade 10.9 and 4 hexagon nuts, grade 10.

Bolts, nuts and torque to be chosen, see table (Order no. 57237 or 58094).

Note: Observe manufactures' instructions in case different bolts and nuts are recommended!

Tightening torque of screws at the fastening bearing:

Coupling-size	Size of screws	Tightening torque (Nm)	ROCKINGER-Order no.*
256A11020	M 10	73	57237 (M 10x50)
256B11020	M 10	73	57237 (M 10x50)
256A35020	M 14	135	58094 (M 14x60)
256B35020	M 14	135	58094 (M 14x60)

* Tightening torque (friction coefficient $\mu = 0,14$) for screws use a torque meter to fix according to DIN ISO 6789, class A or B.

**Use bolts with sufficient length. Observe the thickness of the cross member!

- Insert body shaft (19) with parts 20 and 21 into bearing (2).
- Fit rear buffer cap (21), rubber buffer (20), washer (24) and castle nut (25).

● Tighten castle nut Tightening torque **min. 350 Nm**.

Attention: If the position of the castellated nut does not allow insertion of split pin, tighten castellated nut further to next hole for split pin.

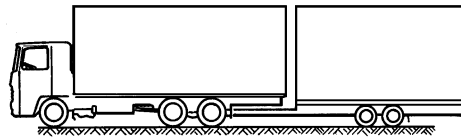
Never let torque fall below the value shown in the above table!
Never loosen castellated nut!

- Insert split pin (26) and bend correctly (see Fig. 2).
- Fit the nut cover (27) to protect against corrosion.

Before painting, close coupling; coupling pin must be covered or greased!



Tractor unit with drawbar trailer



Tractor unit with central-axle trailer

Fig. 3

OK

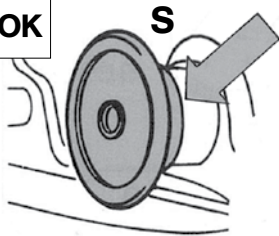


Fig. 4

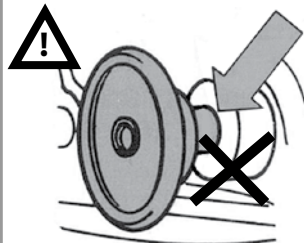


Fig. 5

For a safe and secured hitching it is essential that the trailer has a drawbar fitted with a 40 mm drawbar eye according to DIN 74054 (ISO 8755, see Fig. 3) with bush f.e. **ROE 57270**.

Note: The relevant national regulations (f.e. safety-at-work) must be observed when hitching and unhitching.

No one must stand between the vehicles!

2.1 Hitching

- Pull safety pin (**S**) and press hand lever upwards until it engages (see Fig. 4).
- Check whether funnel is fixed.
- Disengage brake on front axle of turntable drawbar trailer.
- Set drawbar eye to height of coupling point (centre of funnel).
- Slowly reverse prime mover.

When hitching to a central-axle trailer (see Fig. 3):

- The drawbar eye must be inserted into the middle of the funnel. Otherwise the funnel, the drawbar eye or the drawbar support legs **might be damaged**.

Check

After each hitching procedure, it is essential to check that the hitch is correctly closed and locked. The safety pin must not protrude out of its guide after hitching (see Fig. 4).

If the safety pin protrudes from its guide (in the dark detectable by touching it), the hitching procedure has been carried out incorrectly and there is the **risk of an accident!**

2.2 Closing hitch manually

Lift coupling pin using suitable tool.



Warning:

Don't put your hands into the funnel/bolt area!

Danger of injury due to automatically closing!

2.3 Unhitching

- Pull safety pin (**S**) and press hand lever upwards until it engages (see Fig. 4).
- Disconnect supply lines to trailer.
- Advance prime mover.

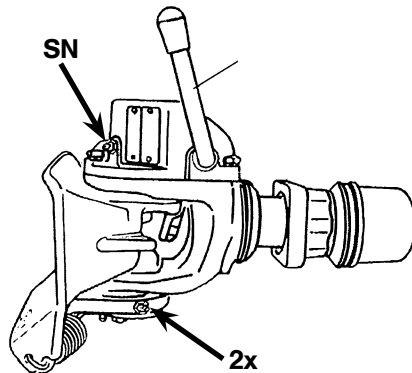


Fig. 6

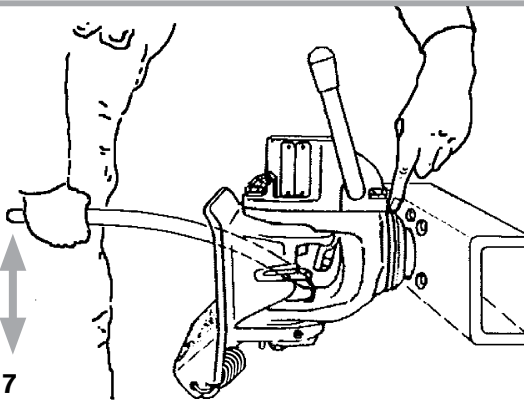


Fig. 7

3.1 Servicing

The normal operational wear and tear of moving parts can be reduced considerably by appropriate care and by regular lubrication of the coupling with multi-purpose grease.

Before first use and after extended period of use lubricate coupling pin, support and drawbar eye with viscous grease (EP3).

With maximum water repellence. We recommend JOST High Performance Lubricant (Item number SKE 005.670 000).

- Only lubricate coupling when open (coupling pin in up position) to prevent excessive lubrication of automatic coupling unit.
- Lubricate via grease nipples (**SN**) (see Fig. 6).
- Close coupling (see 2.2).

After cleaning, regrease coupling pin, support and automatic unit if necessary.

Where a center-axle trailer is used, lubricate underside of drawbar and point of contact with tow hitch (lower bush).

3.2 Testing

For safety reasons the condition of the coupling must be inspected regularly as follows:

Vertical play in bearing

- Open coupling.
- Insert curved steel bar (see Fig. 7) such that top of bar is flush against jaw and bottom rests on BODY of coupling (not on lower bush).

Coupling bolt must not be released – **risk of accident!**

- Push bar upwards and observe coupling movement (see Fig. 8). If wear-induced play is greater than **1 mm** (equal **3 mm** at centre axis of coupling pin), coupling must be dismantled and bearing must be inspected.

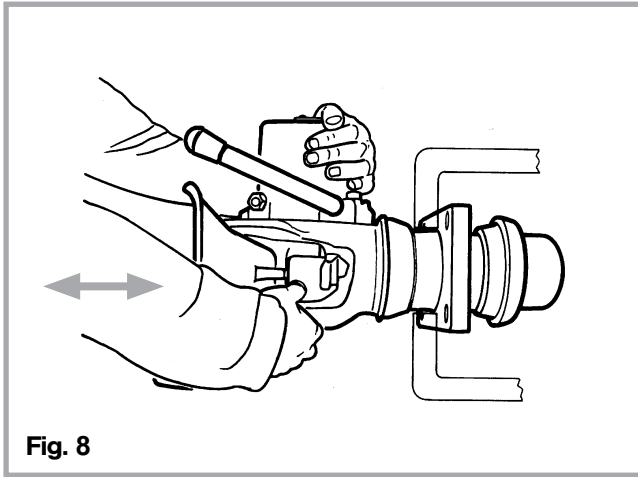


Fig. 8

Longitudinal play in bearing:

- Grip coupling head (not funnel) with both hands and move in longitudinal direction (see Fig. 8):
No longitudinal play is allowed!

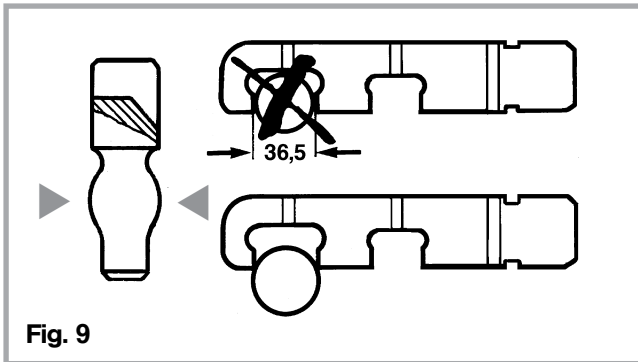


Fig. 9

Coupling pin:

- Check wear using ROCKINGER reference gauge (order no. 57026).
- Coupling pin may be used until crowned section has worn to less than \varnothing 36,5 mm, after which it must be replaced.
- Check vertical play (see Fig. 10): vertical play in coupling **may not exceed max. 2 mm.**

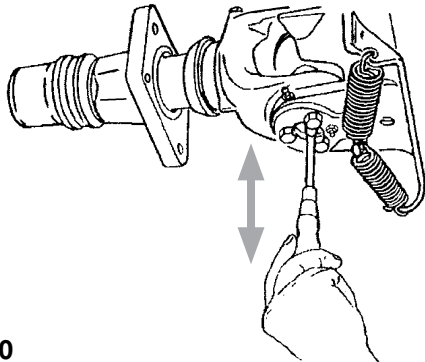


Fig. 10

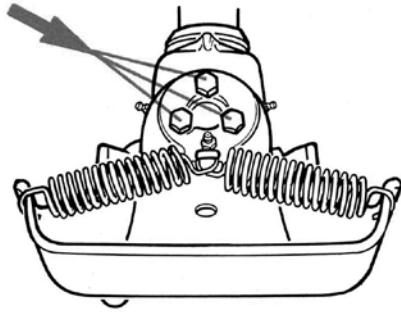


Fig. 11

Adjustment of the funnel:

The funnel must be automatically locked in its central position for hitching (coupling pin up). If not, the central position must be corrected as follows:

- Open coupling (see 2.1).
- Loosen screws in lower section (see Fig. 11).
- Push funnel to left/right until release lever engages.
- Tighten screws (tightening torque approx. **58 Nm**).

Check:

- Close coupling (see 2.2).
- Push funnel slightly to left or right and release funnel.
- Open coupling: Release lever must lock the funnel in central position again.

Tension of rubber buffers:

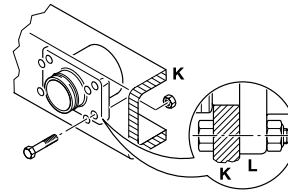
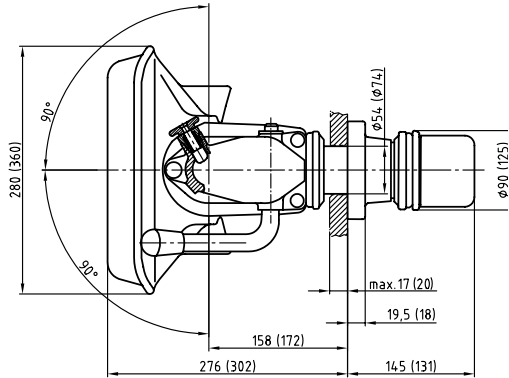
- Axial torque of coupling when new: **min. 100 Nm**. It must not be possible to turn coupling head by hand except by force.

Lower bush:

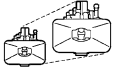


- Check wear using ROCKINGER reference gauge (order no. 57290)
Max. admissible internal diameter **31.2 mm**.

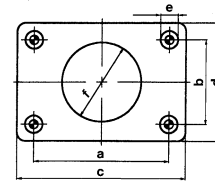
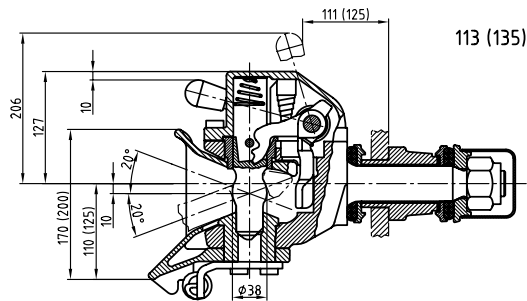
Lower bush must not be damaged under any circumstances as this will impact closure of tow hitch.

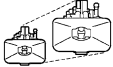
Take care to prevent risk of accident!

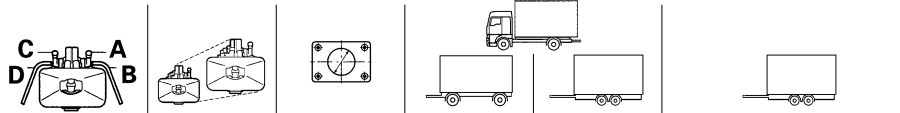


Technical Data RO*256

		
	K (mm)	K (mm)
113 135	17 20	17 20



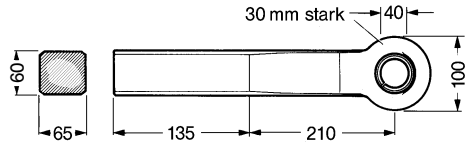
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
113 135	83 120	56 55	110 155	85 90	10,5 15	55 74



			(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)	ECE
RO 256 A 11020	A	113	83x56	66	42,5	500	12	24	010432
RO 256 B 11020	B	113	83x56	66	42,5	500	12	24	010432
RO 256 A 35020	A	135	120x55	70	70	700	19	24	010453
RO 256 B 35020	B	135	120x55	70	70	700	19	24	010453

Drawbar eye to fit

RO*256



Suitable for: Drawbar eyes 40 DIN 74054, class S (ECE) and ISO 8755 (f.e. ROE 57270)
or similar type approved drawbar eyes!





ROCKINGER

JOST-Werke · Siemensstr. 2, D-63263 Neu-Isenburg · Telefon +49 (0)61 02 2 95 - 0 · Fax +49 (0)61 02 2 95 - 298 · www.jost-world.com

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