



Montage- und Betriebsanleitung

D

Installation and operating instructions

GB

Instructions de montage et d'utilisation

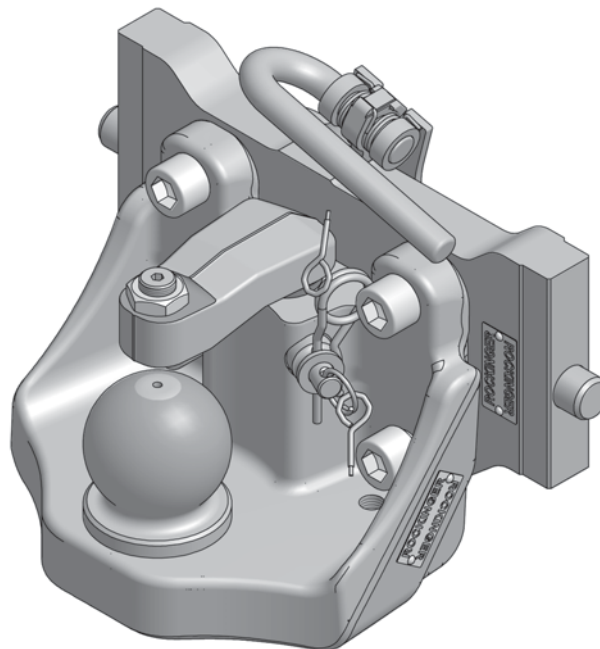
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Für Modellreihen
for Series
pour les séries

RO*825 B

Manuelle Kugelkupplung
Non-automatic ball coupling
Attelage à boule verrouillage manuel



Series RO★825B

Non-automatic ball coupling

Ball system 80 mm in accordance with ISO 24347

Type 825 B 50 A

EC-nº. e1★89/173/IV-0400 ABG: M 9887



The installation and operating instructions must be carried in the vehicle.



The coupling must be installed by qualified personnel.

Read these instructions carefully before installation.

Note:

When installing the trailer coupling, the EC Directive 89/173 and the relevant national regulations must be observed. The installation must correspond to these installation and operating instructions.

If the installation of the trailer coupling changes the load values (e.g. permissible axle load, total weight, permissible vertical load) of the vehicle, the vehicle documents must be altered accordingly.

We reserve the right to make technical alterations.

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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 trailer couplings, tractor vehicles and trailers, the relevant safety regulations in the respective country must be observed. 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 trailer coupling may only be operated by authorised persons.
- The installation and operating instructions of the respective trailer coupling retain their validity and must be observed.
- Only use the trailer coupling 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
- **Never reach into the opened coupling.**

Safety instructions for maintenance

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

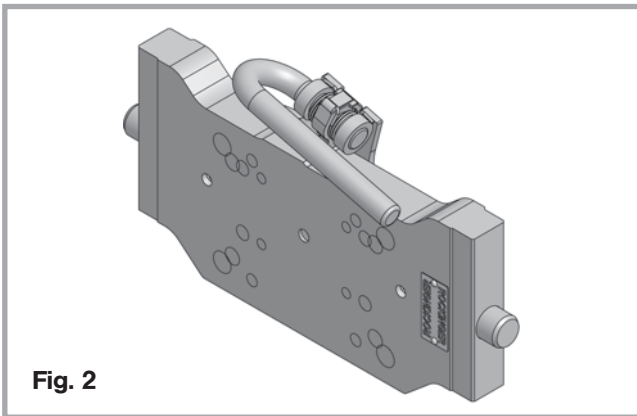
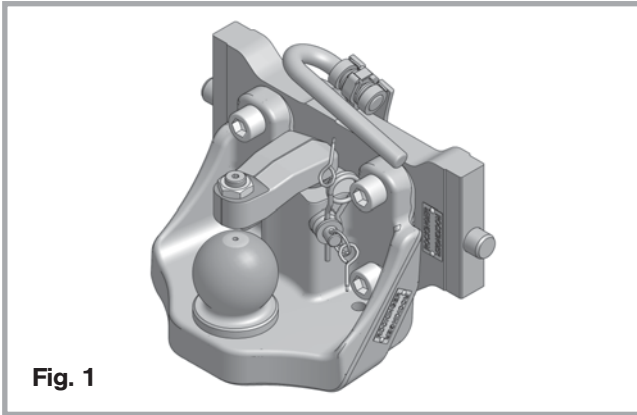
Safety instructions for installation

- 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 ROCKINGER 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 injury!**
- The trailer coupling must be installed in accordance with these installation and operation instructions and may only be carried out on agricultural or forestry tractor machines in accordance with Directive 74/150/EEC.
 - Type plates and warnings must be clearly visible before the coupling or drawbar eye are used and must not be rendered illegible in any way. Paint residues or protective foils must be removed.



Trailer couplings are vehicle connection parts 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 model approval, which in turn invalidates the vehicle operation permit.



1. Installation

The ball coupling is supplied in a ready-to-use condition.

Note: When installing the coupling please observe:

- Relevant regulations (e.g. accident prevention regulations for vehicles, VBG 12, Federal Motor Vehicle Authority (KBA) code of practice), regulations of the vehicle manufacturer
- Mount the coupling ball 80 with holder on the cross bar or hitch bracket:
- Fasten with 4 cylinder head bolts DIN 912 M20 8.8 or 10.9.
- Tightening torque of the bolts: **420 Nm.**
- If fastening on the cross bar with through-holes, use 4 self-locking nuts DIN 6925, quality 8 or 10.
- The length of the bolts used depends on the actual installation situation.
- Observe any deviating fastening instructions of the vehicle manufacturer.
- Fastening bolts and nuts are not supplied.

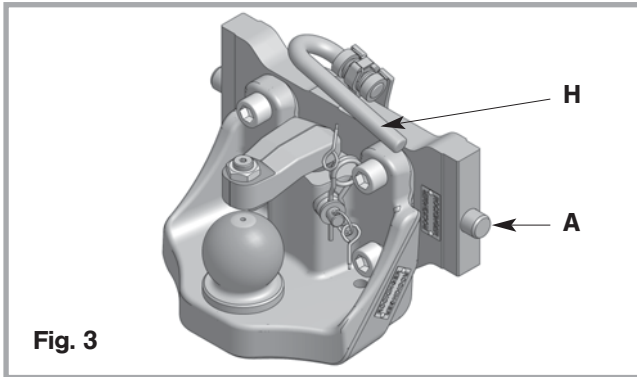


Fig. 3

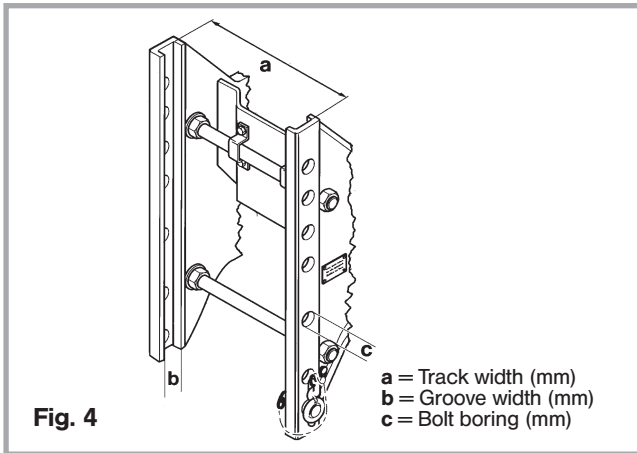


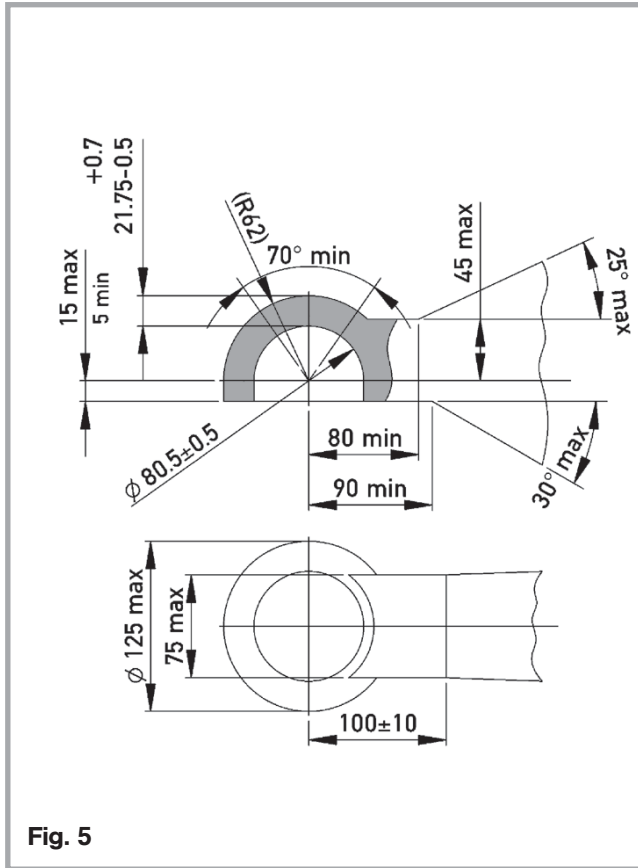
Fig. 4

Installation with ROCKINGER hitch bracket RO★899D and use in height adjustable ladders

For the fastening on ROCKINGER hitch bracket, type 899D30 with a hole pattern 160x100/M20, 4 bolts M 20 x 55 are required:
e.g. RO bolt set 74L052

- Insert the ball coupling with hitch bracket into the guide rail of the ladder.
- **ATTENTION!** Hold the coupling firmly. **Risk of injury!**
- Turn the hand grip (**H**) of the cam plate upwards and press to the left. The arresting bolts (**A**) move inwards.
- Insert the coupling in the desired position in the ladder, hold it in position and turn the hand grip (**H**) back to the right so that the bolts are engaged.
- When the arresting bolts are engaged, release hand grip (**H**). The hand grip must engage in the locked position.

Check: The hand grip must be folded down, and in the locked position it should not be possible to push it more than **ca. 3–4 mm** to the left.



Swivel angle

- With the version **A** it must be possible to achieve the following swivel angles:
horizontal min. $\pm 60^\circ$
vertical min. $\pm 20^\circ$
axial min. $\pm 20^\circ$
- With the hitch heads, 2 swivel angles can be achieved simultaneously, e.g.
horizontal 80° / vertical 20°
horizontal 60° / axial 20°
- In the case of a horizontal swivel angle up to $\pm 30^\circ$, the hitch heads types 59343 and 59344 allow a vertical swivel angle up to 28° .

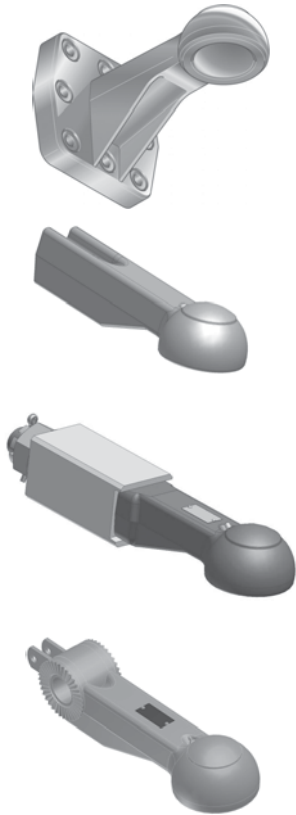


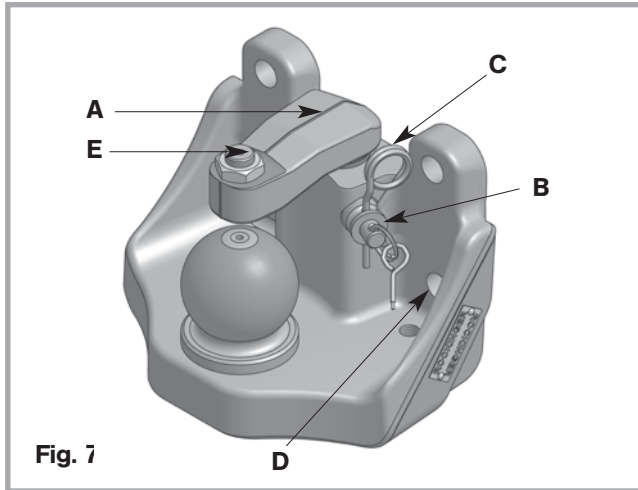
Fig. 6

1.1 Hitch heads

ROE	Hole pattern (mm)	Dc (kN)	S (t)	ABG M
59344	100 x 110	89,3	2,5	9680
59347	100 x 110	89,3	2,5	9680
59339	130 x 130	97,1	4,0	9679
59343	145 x 145	97,1	4,5	9679
59346	145 x 145	97,1	4,5	9679
57L013 ¹	145 x 145	97,1	4,5	9679

¹ Long-hole centre borings

ROE	D (kN)	S (kg)	ABG	EG
57391	120	2500	Not required	
57L007	125	1000	9813	0353
57L005	46	750	EA	EA



2. Operation

The versions **A** to **C** differ only in terms of the bolting hole pattern. The operation is the same in all versions. The coupling has a bolt-locked latch.

For hitching and unhitching, the regulations of the relevant authorities must be observed.

2.1 Hitching

No personnel may be standing between the vehicles! **Risk of accident!**

- Remove the locking bolt (**B**) (see Fig. 7).
- Lift the latch (**A**) and turn to the side.
- Place the towbar over the ball.
- Lower it using a suitable device.
- Turn the latch (**A**) to the front over the ball or towbar and slide in the locking bolt (**B**) and secure it with the spring cotter (**C**).

2.2 Unhitching

- Secure the trailer against rolling away or extend the support feet.
- Remove the spring cotter (**C**) (see Fig. 7).
- Remove the locking bolt (**B**) (see Fig. 7).
- Pull the latch (**A**) upwards and turn to the side.
- Use a suitable device to lift the towbar.
- Move the tractor vehicle forwards.

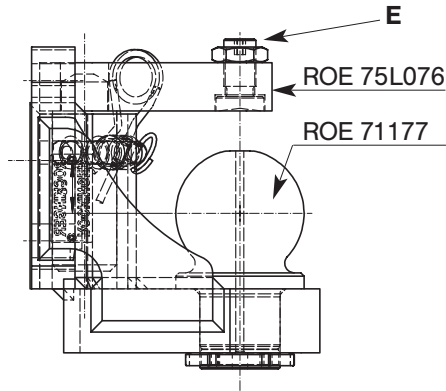


Fig. 8

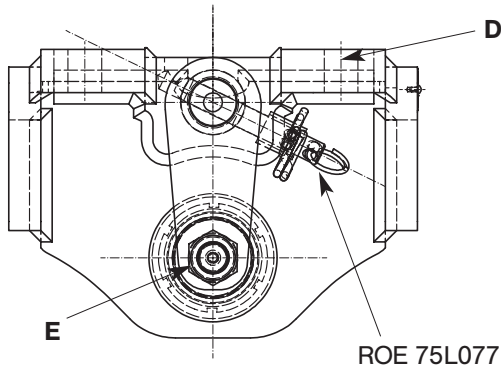


Fig. 9

3. Maintenance

Ball coupling, hitch head

- To reduce the wear and tear on the ball coupling and towbar, lubricate the contact surfaces with multipurpose grease at regular intervals depending on the deployment conditions and after cleaning with high-pressure washers.
- Lubricate the contact surfaces at the lubrication point on the hitch head or via the central lubrication system. If there is no lubrication point on the hitch head, the lubrication nipple order no. 65018 must be fitted to the underside of the ball and used for lubrication.
- When the ball wears below 78.5 mm, it must be replaced. Only replace the ball twice at the most, then fit a new ball coupling.

Repairs may only be carried out by a qualified workshop!

Works steps to replace the ball:

- Remove the slotted nut.
- Press out the ball from below – Insert a new ball.
- Screw on the slotted nut: tightening torque **160 to 180 Nm**.
- Secure thread with metal adhesive (Loctite).
- The vertical play of the connected hitch head may not exceed 7mm. When the wear limit is reached, the corresponding parts (ball, latch and hitch head) must be replaced.
- At the latch with the adjustment screw (E) the vertical play for a hitched hitch head can be limited to a minimum of 0.5 mm:
 - Release the locking nut.
 - Hold the bolt (2) with gentle pressure on the upper side of the hitch head.
 - Turn back by ½ a turn.
 - Secure the nut.

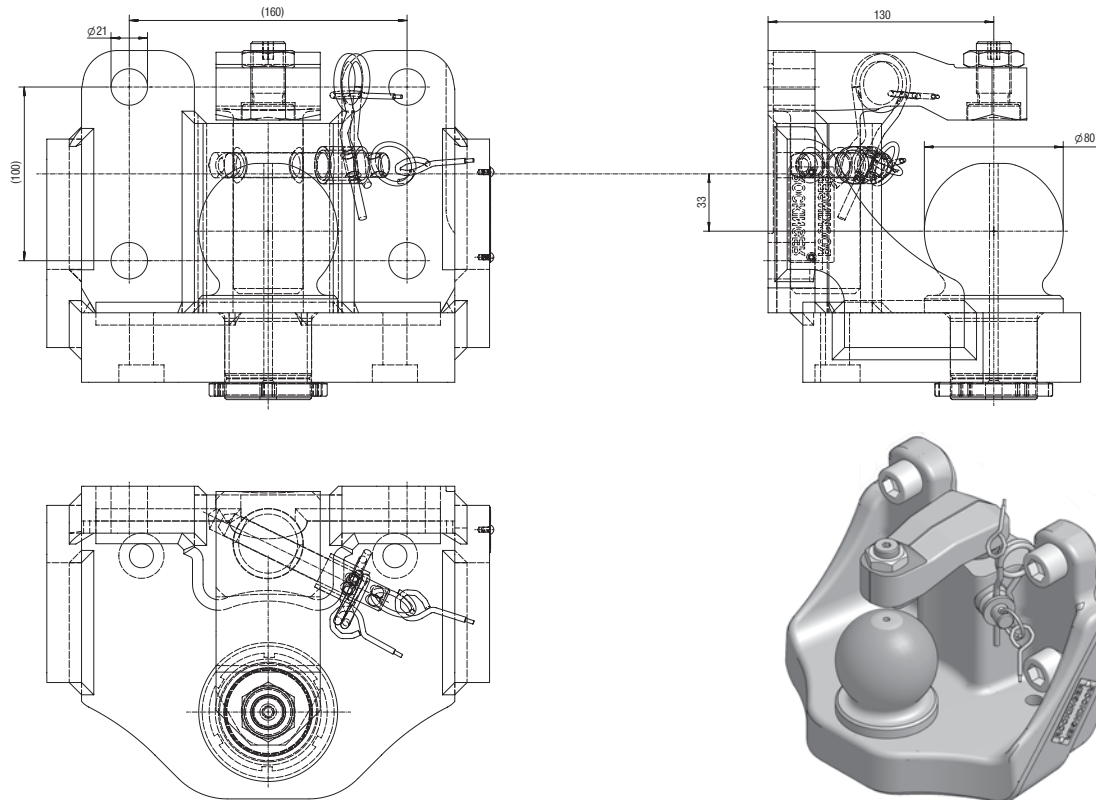


Fig. 10



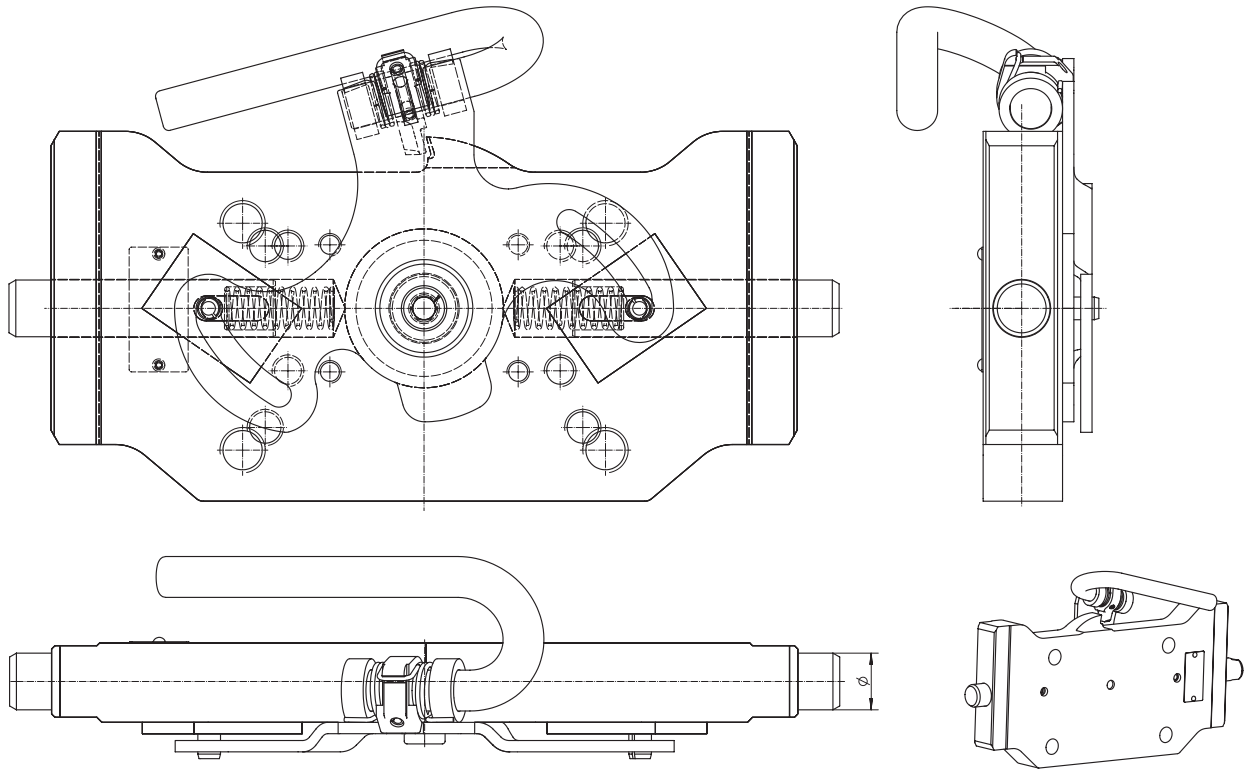


Fig. 11

- Non-automatic ball coupling for flanging onto the ROCKINGER hitch bracket 899D.
- In accordance with ISO 24347.
- Type 825 B50A

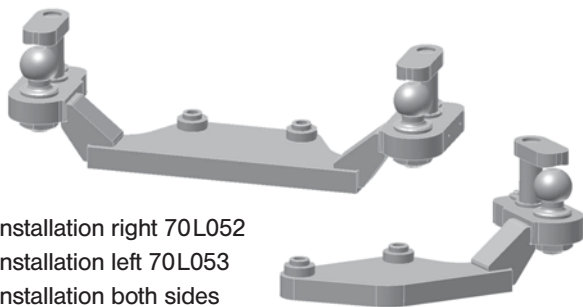
RO	Hole pattern (mm)	S (t)	D (kN)	ABG M	EG e1
825 B5000C	160 x 100	3	98,1	9887	0400

- Ball RO★825 B
mounted on hitch bracket RO★899.

ROE	Track width (mm)	S (t)	D (kN)
74L044	330	3	89,3
74L045	310	3	89,3
74L046	323	3	89,3
74L047	336	3	89,3
74L106	390	3	98,1
74L109*	330	3	89,3

* For CBM ladders with 20-mm bolt





Installation right 70L052

Installation left 70L053

Installation both sides
74L026

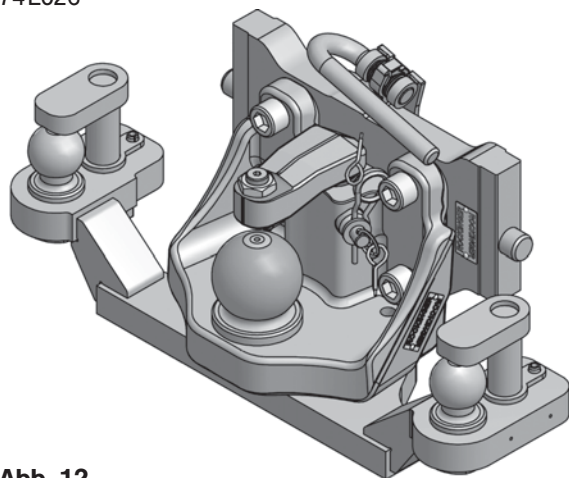


Abb. 12

Retrofit options

The ball coupling can be supplied optionally with two borings M16 (D) (see fig. 7). These are provided for the fastening of a ROCKINGER adapter for control of trailer-side power steering (e.g. RO★70L053, RO★70L054, RO★74L026).



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