

Type 530 G 6 e1 00-0407
class C 50-X

for drawbar eye 50
DIN 74053 and EC-class D

Fully automatic
trailer coupling

88161 GB 0

KE 0699 | 1248-GB
subject to technical without prior notice
as at 0599



series **RO*530**

Series RO*530
with e1 Homologation



Mounting and Operation

Member of JOST-World

Mounting

Important document!
Must be handed to the customer before the coupling is mounted!

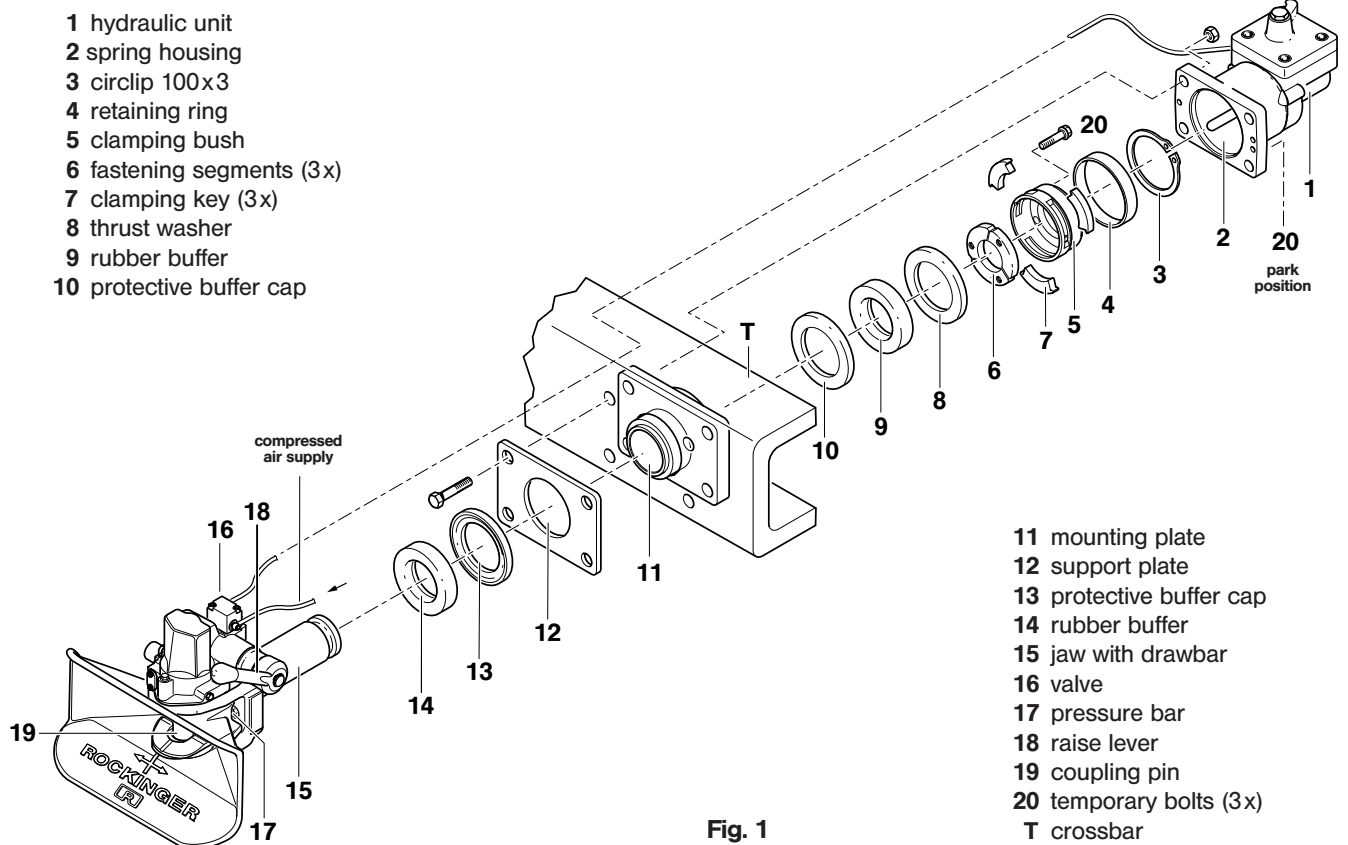


Fig. 1

- 1 hydraulic unit
- 2 spring housing
- 3 circlip 100x3
- 4 retaining ring
- 5 clamping bush
- 6 fastening segments (3x)
- 7 clamping key (3x)
- 8 thrust washer
- 9 rubber buffer
- 10 protective buffer cap

- 11 mounting plate
- 12 support plate
- 13 protective buffer cap
- 14 rubber buffer
- 15 jaw with drawbar
- 16 valve
- 17 pressure bar
- 18 raise lever
- 19 coupling pin
- 20 temporary bolts (3x)
- T crossbar

1. Fitting

1.1 Before installation (see Fig. 1)

Note: Please comply with following when fitting coupling:

- applicable national regulations
- vehicle manufacturer's specifications
- clearance for axial rotation of coupling head of 25°

The pre-assembled coupling must be dismantled before installation:

- Release transport bracket from spring housing (2), mounting plate (11) and support plate (12) (screws no longer required).
- Remove hydraulic unit (1) with spring housing (2) completely.
- Remove circlip (3) with circlip pliers ZGA 4 DIN 5254 and retaining ring (4).
- Unscrew 3 temporary bolts (20) from spring housing (2) (width-across-flats 17 mm).
- Screw 3 temporary bolts (20) gradually into clamping bush (5) as far as stop (approx. 80 Nm) until the 3 clamping keys (7) can be easily removed.

Mounting

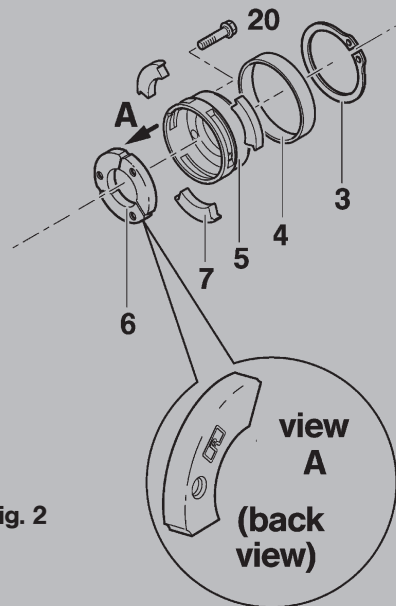


Fig. 2

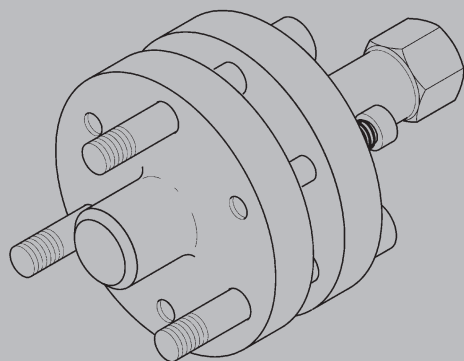


Fig. 3

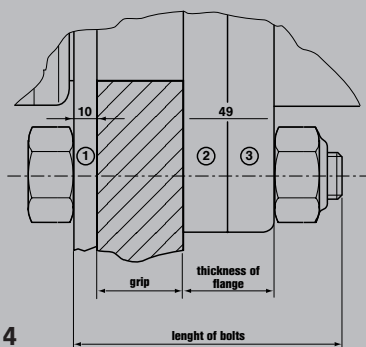


Fig. 4

- ① support plate
- ② mounting plate
- ③ spring housing

- Unscrew 3 temporary bolts (20) again and withdraw clamping bush (5), remove 3 fastening keys (6).
- Withdraw thrust washer (8), rubber buffer (9), protective buffer cap (10) from jaw with drawbar (15).
- Withdraw mounting plate (11) with support plate (12) and protective buffer cap (13) from drawbar (15), while rubber buffer (14) remains on drawbar (15)

1.2 Installation (see Fig. 1)

- Attach mounting plate (11) preliminarily from inside to crossbar (T) and support plate (12) from outside to crossbar (T) using 2 of 4 mounting screws (please refer to p.3 for size and grade).
- Fit protective buffer cap (13) onto mounting plate (11) with concave side towards rubber buffer (14).
- Slide jaw with drawbar (15) and rubber buffer (14) into mounting plate (11):
 - **Note:** Do not remove special grease.
 - Fit protective buffer cap (10) onto mounting plate (11) with concave side towards rubber buffer (9).
 - Slide rubber buffer (9) onto drawbar (15).
 - Slide on thrust washer (8) with concave side towards rubber buffer (9).

Fitting of fastening keys (see Fig. 2)

Recommendation: Use fitting tool order no. 57351 (see Fig. 3) for facilitating mounting when standard equipment

- **Note:** Locate fastening keys (6) in splines of drawbar (15): the inscribed surface in the direction of the hydraulic unit (2).
- Slide clamping bush (5) carefully over fastening keys (6) onto drawbar (15):
 - Observe the locking snugs in clamping bush (5) and verify that bores of clamping bush (5) and fastening keys (6) mate.
- Lightly grease end face and thread of 3 temporary bolts (20), screw them in by hand as far as stop and tighten alternately until slots in clamping bush (5) are free.
- Insert 3 clamping keys (7) into slots and hold in place.
- Slide retaining ring (4) over clamping bush (5).
- Fasten circlip (3) with circlip pliers ZGA 4 (see above).
- Unscrew 3 temporary bolts (20) from clamping bush (5) and fastening keys (6), generously grease and screw into spring housing (2) (required for later dismantling).
- Apply thorough coat of grease (NLGI3) to retaining ring (4), clamping bush (5), fastening keys (6) and clamping keys (7) (to protect against corrosion).
- Unscrew 2 bolts from mounting plate (11).
- Slide on hydraulic unit (1) with spring housing (2):
 - **Caution:** Take care not to damage bellows!
 - Fasten with (not supplied):
 - 4 hexagon head cap screws to DIN 931, grade 8.8 or 10.9
 - 4 self-locking nuts to DIN 6925, grade 8 or 10
 Please see table for details of nut and screw size, and Fig. 4 for screw length.

Note: Please comply with vehicle manufacturer's specifications regarding nut and screw grade if these differ from above!

Caution: Screw heads should be on coupling head side (outer side of crossbar) to avoid impairing movability of coupling.

Tightening torques when attaching screws to mounting plate:

Coupling size	Screw size	Tightening torque (Nm)		Width across flats S (mm)	ROCKINGER screw set Order no.
		Grade 8.8	Grade 10.9		
6	M 20	410	580	30	70252*

*Grade 8.8

Grip (see Fig. 4)

- central-axle trailer: 11 – 28 mm
- drawbar trailer: max. 28 mm

Mounting

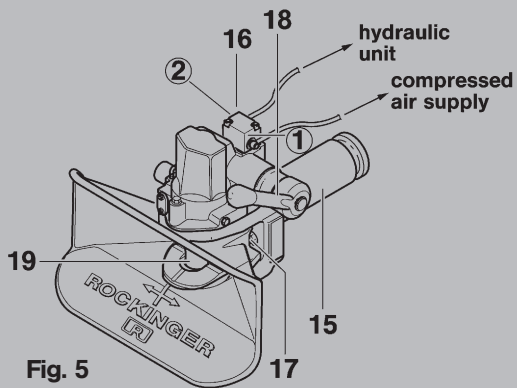


Fig. 5

- Fit pneumatic connection set 70981 (Voss system, not supplied) (see Fig. 5).
- Remove plastic plugs.
- Locate right-angle plug on valve. Connect right-angle plug to hose.
- From valve (16) connection ② to hydraulic unit.
- From valve (16) connection ① to compressed air supply (secondary consumer – max. 10 bar, min. 5 bar).

1.3 Verification (with compressed air)

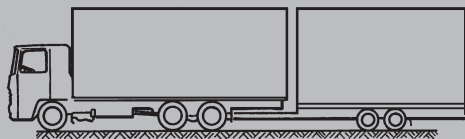
- Coupling closed: pressure bar (17) protrudes 15 mm.
- Raise lever (18) slightly: compressed air can be heard to escape and relieves hydraulic unit, pressure bar (17) can be pressed back (use tool, danger of accident).
- Open coupling with hand lever (18).
- Close coupling, see para. 2.2: pressure bar (17) moves in direction of coupling pin.

Note: Before later painting, it is essential to close coupling and grease or cover coupling pin, head of pressure bar and valve.

Operation



Tractor unit with drawbar trailer



Tractor unit with central-axle trailer

Fig. 6

2. Operation

2.1 Hitching

Note: The regulations of the relevant employer's liability insurance association must be observed when hitching and unhitching.

- Push hand lever upwards (lever engages, residual area escapes via 16) for fully automatic hitching.
- Check whether funnel is locked.
- Release brake on front axle of drawbar trailer (see Fig. 6).

When hitching a central-axle trailer (see Fig. 6) please note following:

- Slowly reverse tractor unit.
- Drawbar eye must mate with centre of funnel. If not, this can result in damage to funnel, drawbar eye and support unit.

Check

After every hitching operation it is essential to check that the coupling is engaged as required by regulations. The check pin **must be flush** with its guide bush after hitching (see Fig. 7).

If the check pin protrudes from its guide bush (this can also be established by touch if 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:

- Advance tractor unit approx. 1 m and then reverse again.
 - Then check again.
- In-cab status indicator upgrade kit available for retrofitting.

2.2 Closing coupling manually

(e.g. for tow-rope)

- The coupling pin is to be raised by means of the suitable auxiliary tool (e.g. mounting tool) **or**
- Carefully strike hand lever knob briefly in **opening direction** with heel of hand.

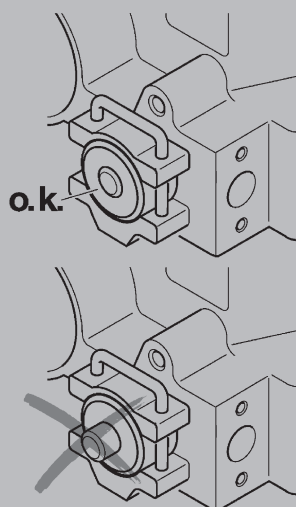


Fig. 7

Maintenance

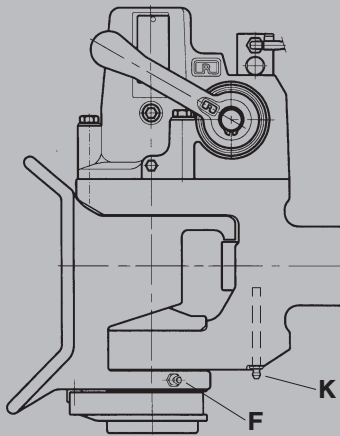


Fig. 8

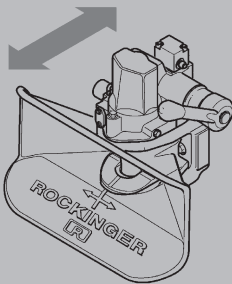


Fig. 9

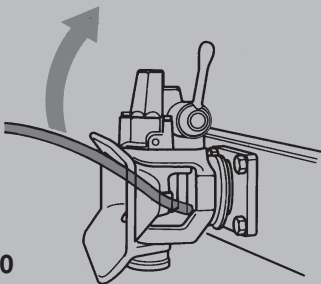


Fig. 10

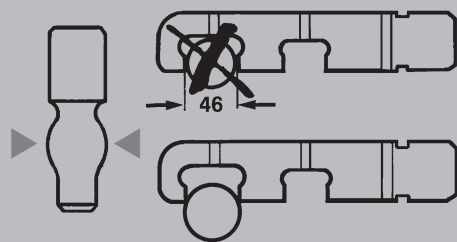


Fig. 11

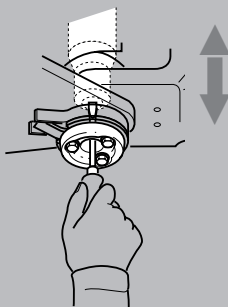


Fig. 12

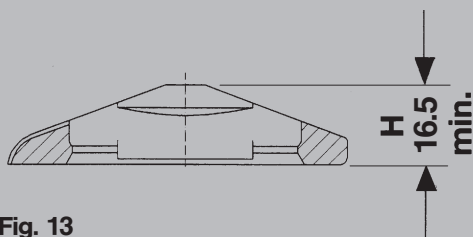


Fig. 13

3. Maintenance

3.1 Care

- Lubricate coupling pin, support ring and drawbar eye with heavy-duty grease (EP3) which is waterproof if possible before first use and after extended period in use.
- Low-maintenance automatic unit has a grease reservoir (regular regreasing unnecessary, please see below for repair information).
- Lubricate lower funnel bearing (F) and pressure bar on underside of coupling (K) with EP3.
- Close coupling before cleaning with high-pressure washers (see para. 2.2).
- After cleaning, relubricate coupling pin and support ring.

Please note following when carrying out repairs on coupling (e.g. changing coupling pin):

- Remove old grease and relubricate thoroughly (see above).

3.2 Testing

Bearings:

Longitudinal play

- Grip coupling head (not jaw funnel) with both hands when uncoupled and move vigorously in direction of travel (see Fig. 9):
No longitudinal play is allowed.

Vertical play

- Open coupling.
- Move coupling head up and down with appropriate tool (see Fig. 10):
Vertical play may not exceed 3 mm measured at coupling head (centre axis of coupling pin).

Coupling pin:

Check wear using ROCKINGER reference gauge (order no. 57122) (see Fig. 11):

Coupling pin may be used until diameter of crowned section has worn to less than 46 mm, after which it must be replaced.

Vertical play in coupling pin (see Fig. 12) may not exceed 2 mm.

Lower bush:

Check wear using ROCKINGER reference gauge (order no. 57334). Max. admissible internal diameter of lower bush is 35.9 mm.

Passage below pin must be free.

Please consult repair leaflet (available on request) for details of replacing.

Support ring:

Support ring for drawbar eye must be replaced if drawbar eye could touch lower bush because of wear or if wear limit H min. of 16.5 mm (see Fig. 13) has been reached.

Lower bush must not be damaged under any circumstances as this will impair closure of coupling.

Take care to prevent **risk of accident!**

Always grease support ring to reduce wear (please consult repair leaflet (available on request) for details of replacing).

Hydraulic connection:

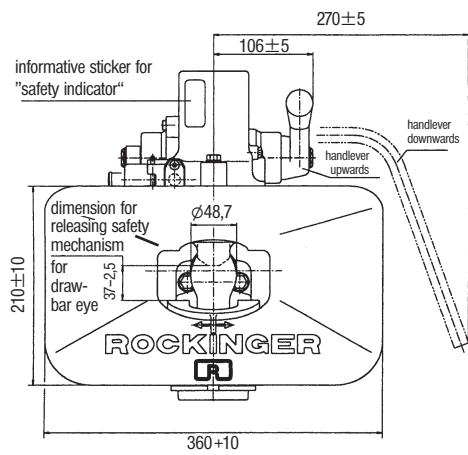
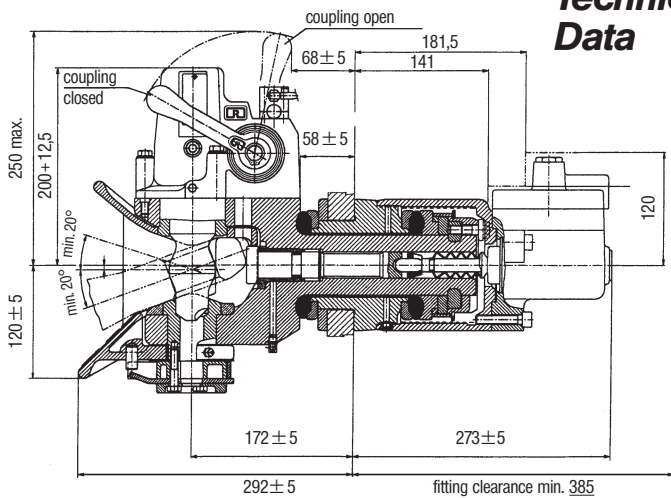
No oil mist may escape from valve (16) when coupling is opened. Hydraulic unit contains no user-serviceable parts.

Pressure bar:

In event of pressure loss, check for wear:

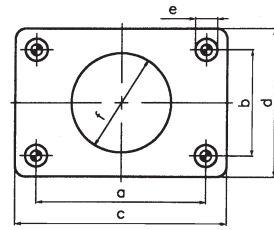
- drawbar eye
- coupling pin (see above)
- pressure bar end face to max. 2 mm

Technical Data



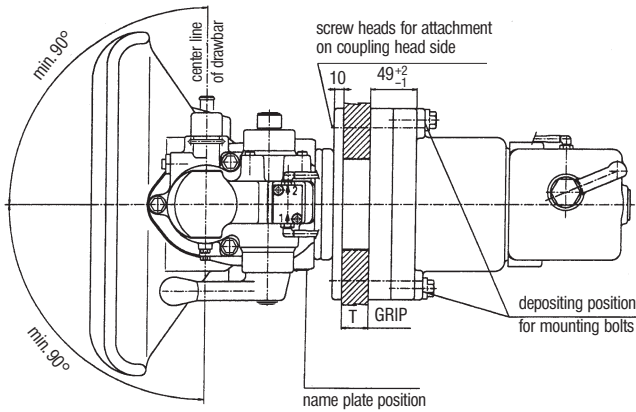
Series RO*530

Type 530 G 6 e1 00-0407
class C 50-X
for drawbar eyes 50
DIN 74053,
EC 94/20 class D,
ISO 1102,
ROCKINGER Type 57005



Flange size
to 94/20/EC

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



part no.		size	hole pattern (mm)	maximum D-value* (kN)	CENTRAL - AXLE TRAILER			weight (kg)
hand lever upwards	hand lever downwards				maximum Dc-value* (kN)	maximum static vertical load** (kg)	maximum V-value* (kN)	
530A6000	530B6000	6	160x100	190	115	1000	50	54

* Calculation see list A

** When using a central-axle trailer, the vertical load should amount to atleast 4% of the trailer weight, in order to prevent increased wear caused by bouncing of the drawbar eye.

Upgrade kits

- mechanical remote operation part no. 70962
- electropneumatic remote operation part no. 70844
- hydraulic remote operation in preparation
- in-cab status indicator part no. 70936
- turn-angle alarm system part no. 70935
- pneumatic connection set part no. 70981
(for VOSS system 230, it is not supplied together with the coupling)



Available from your specialist dealer:

Spezialfabrik für Anhängerkupplungen GmbH & Co Postfach 45 04 64
D-80904 München · Waldmeisterstr. 80 · D-80935 München · Tel. 089/3 54 94-0 · Fax 089/35 49 41 99