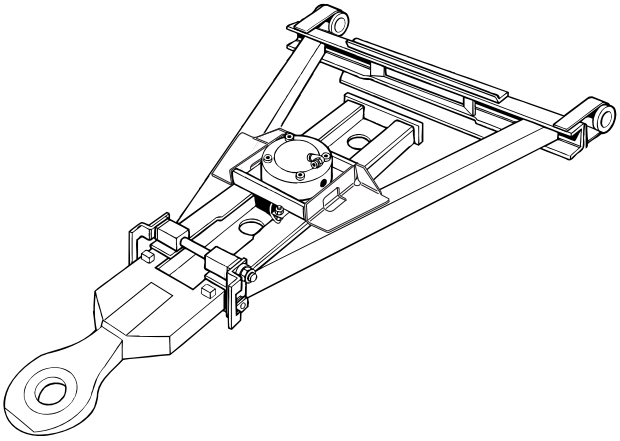
MOUNTING INSTRUCTION

2014-09-16 38-161805e

Automatdragstång 26-100000



Description

The VBG Automatic Drawbar 26-100000 is an extendable drawbar with two or more individual length settings with pneumatic locking. The drawbar is tested and approved for D-value 152 kN and 18 ton bogie front carriage, ECE approval no. E11 55R-014456. Note that the drawbar is intended for installation with the air cylinder on the top side.
The drawbar is always supplied with the rear brackets welded on.
Identify all parts before installation. Installation and maintenance shall be done in a proper and competent manner. Always follow the instructions.

During welding on the vehicle, extreme care must be taken that electrical cabling is not damaged. Connect the welder minus cable to the chassis close to the welding point.

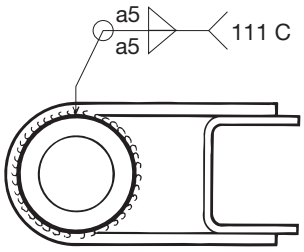


Figure 1

Welding the rear hinge sleeves

- Install the sleeves. Fit the drawbar between the bracket plates on the trailer and install the spring shackles.
- Centralise the drawbar on the trailer.
- Attach the sleeves to the rear bracket.
- If vibralock or nylon bushes are mounted in the sleeves these must be removed prior to welding to prevent damage from the welding heat.
- Remove the drawbar and weld round the sleeves on both sides. Suitable welding rod according toISO E515B120 20 H or AWS E 7018. See *figure 1*.

Welding the drawbar bracket - trailer section

- Make sure the brackets are equidistant from the centreline of the drawbar trailer. Push a pipe or similar tool through the two sleeves to ensure that they are correctly aligned.
- Weld the drawbar brackets to the front crossmember of the drawbar trailer at the c/c-measurement stated. Weld all around the sides of the drawbar brackets. See *figure 6*. Use a suitable welding rod according to ISO E515B120 20 H or AWS E 7018.

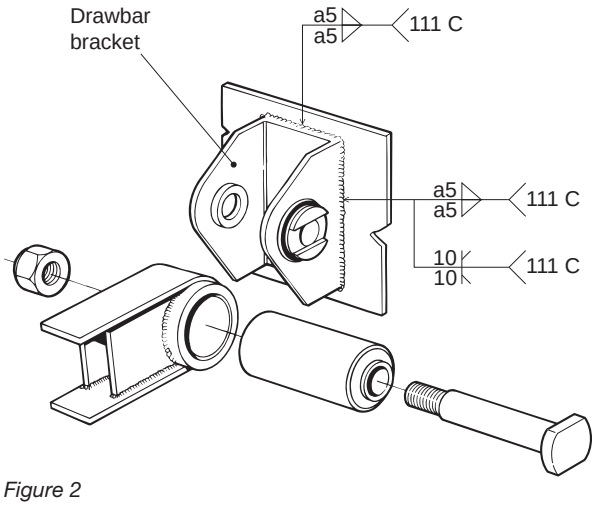


Figure 2

Assembly of drawbar mounting parts - trailer section

Mount the parts according to seperate instruction which is included in the mounting parts kit.

Installation of piping and cables

VBG does not permit welding or drilling in the drawbar rear crossmember or legs for the attachment of holders but recommends that pipes and cables are clamped to the profiles with separate ties.

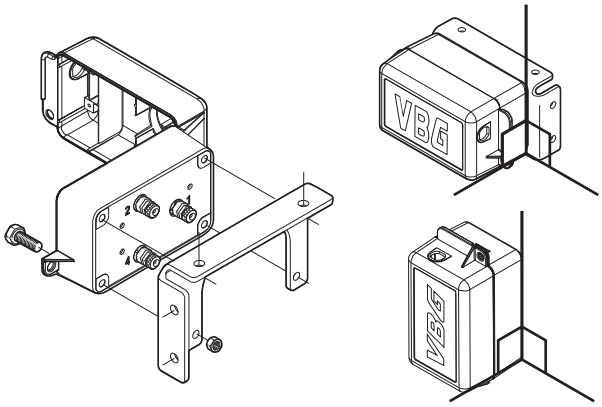


Figure 3

Installing the valve box

The drawbar air cylinder can be operated by a two-position manual valve. We do not recommend the use of electrical valves together with the drawbar.
Mount the valve box as shown in alternative A or B.
Use the VBG original manual valve box, part no 07-108000 for secure function.
The valve box must be located so that it is protected from blows, dirt and ice.
N.B. When the unit is connected to the vehicle air system a pressure switch must be installed before the valve so that the braking system is not affected in the event of a failure.
Always follow the manufacturers instructions.

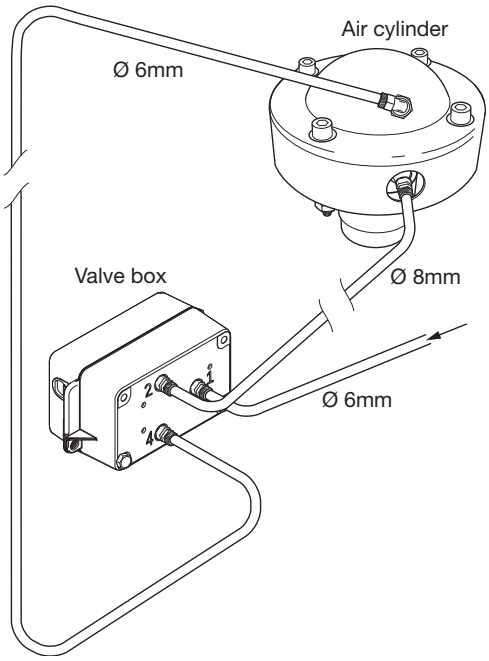


Figure 4

Fitting the Pipes

• Turn the handle on the control box to service position according to figure 5.
• Connect the other 2 pipes to the control box outputs (2 and 4). Fit the protective cover.
• Connect the pipe from output 4 on the control box to the front output of the actuator. The pipe from output 2 is connected to the rear output of the actuator.
• Connect the supply line to the vehicle´s auxiliary air system. Working pressure 8 bar.
Maximum pressure 10 bar.
Always follow the truck manufacturer's body building instructions.
NOTE! Do not connect to the braking system.

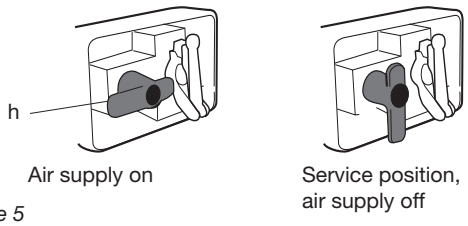


Figure 5

Service position control box

Before any work or service is carried out on the coupling all air supply to the coupling must be cut off. Cut off the air supply by turning the control box' red handle a quarter turn anti-clockwise to OFF.

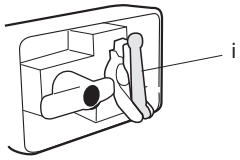


Figure 6

Operation check - power actuator

• Fold out the yellow handle (i). Simultaneously press on the mark "Press" on the handle and turn the handle anti-clockwise to "OPEN". Then turn it back to "CLOSE".

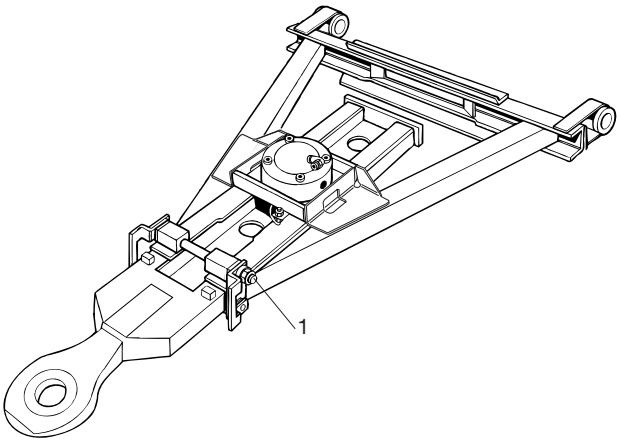


Figure 7

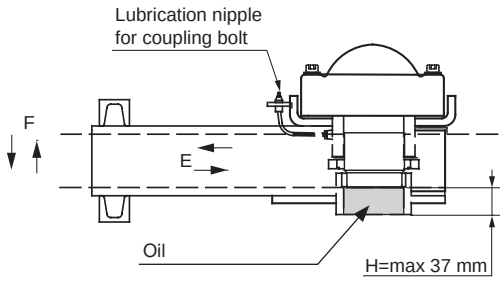


Figure 8

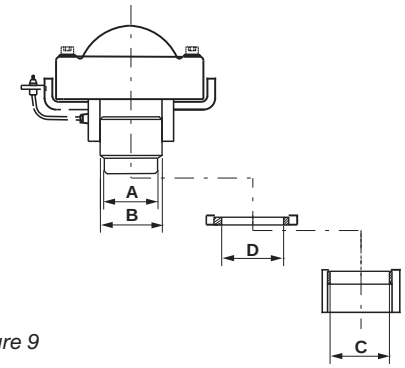


Figure 9

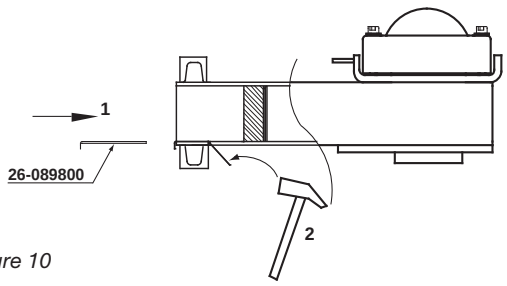


Figure 10

Installation of piping and cables

VBG does not permit welding or drilling in the drawbar rear crossmember or legs for the attachment of holders but recommends that pipes and cables are clamped to the profiles with separate ties.

Functional checks

- Tighten the adjustment bolts (see *figure 7*, item 1) until there is no slack. Check that the front slider section can be adjusted lengthwise.
- Check that the coupling bolt of the air cylinder drops into place in its locking location at each position. Dimension H (see *figure 8*) must be max. 37 mm when locked.
- The lubrication point indicated on *figure 8* must be lubricated once a week. *Lubrication must be carried out with the coupling bolt raised.* Check the operation of the coupling bolt after lubrication. The coupling bolt and bush must be lubricated from below with VBG oil between service intervals.

Warning! The mechanism can cause personal injury.

Wear limits

Coupling bolt, top	A	min. 72.5 mm
Coupling bolt, waist	B	min. 78.5 mm
Bottom bush	C	max. 75.0 mm
Bush, front section	D	max. 81.5 mm
Horizontal play, total (*fig 6*)	E	max 5 mm
Wear plates (*fig 9*, item 3)		min 3 mm
Vertical play front/rear sections	F *	
Sideways play front/rear sections	see below	
Vertical play, coupling bolt	The coupling bolt is continually under air pressure thus eliminating play.	

* Play can be reduced by using wear plates 26-089800. These can be added both above and below and if necessary more than one wear plate at each location. See *figure 10*.

Sideways play

For maximum length of life there should be no sideways play between front and rear sections. See *figure 11* for adjustments. Bolts etc. must be regularly checked for tightness. If driving is carried out for longer periods in one position, the adjustment bolts should be tightened to reduce wear and play.

Changing wear plates

• Remove the adjustment bolts (see *figure 11*, item 1), stop plates (2) and wear plates (3) plus any wear sheets if installed, see *figure 11.*

• Re-mount new wear plates and wear sheets.

• Re-mount the adjustment bolts as per *figure 11*.

• Tighten the adjustment bolts (1) so that there is no play. Check that lengthwise adjustment of the front slider can be carried out. *Checking, cleaning and adjustment must be carried out regularly.*

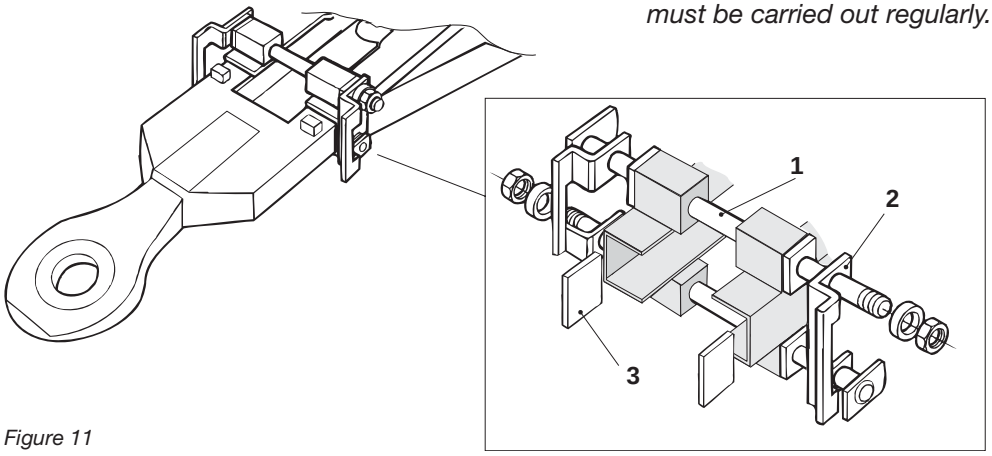


Figure 11

When carrying out service work on the air cylinder, disconnect the air supply.

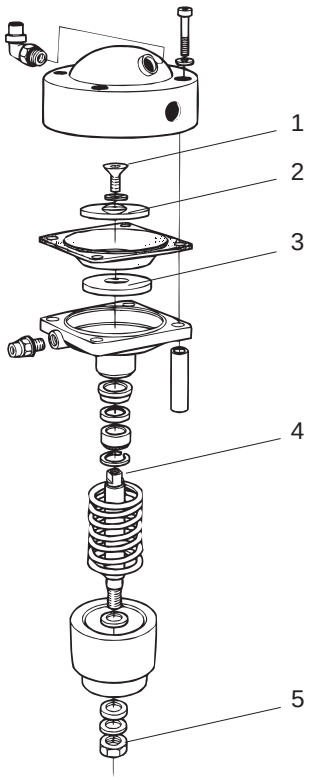


Figure 12

Changing the diaphragm

• Dismantle the air cylinder and lift off the upper section.

• Remove the allan screw (1). Use the flats on the cylinder rod (4) to stop rotation.

• During reassembly check that the sealing rings (2, 3) are not damaged. The washer with the O-ring chamfer (2) must be installed above the diaphram, see *figure 13*. When tightening the allan screw, use the flats on the cylinder rod (4) to stop rotation.
Tightening torque 50 Nm.

• During reassembly of the aircylinder-cover the screws must be tightened alternately to avoid the risk of air leakage and damage to the diaphragm.

• Check function

Changing the coupling bolt

• Dismantle the air cylinder from the drawbar.

• Remove the lock nut (5). Use the flats on the cylinder rod (4) to stop rotation.

• Reassemble with the new coupling bolt. The coupling bolt must be able to rotate on the cylinder rod after the nut (5) has been tightened.
Tightening torque 50 Nm.

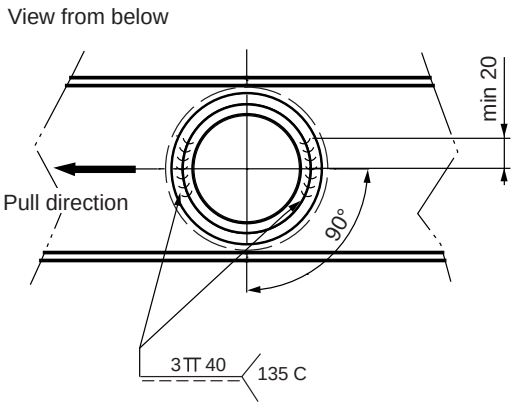


Figure 13

Changing the lower bush

- To change the lower bush in the A-frame, the bush in the front slider must first be removed, see section 13 below.
- Drive out the bush from underneath.
- Reassemble with new bush 26-084400.

Changing the bush in the front slider

- Grind off the welding holding the bush.
- Drive out the bush from underneath.
- Prepare the bush weld area.
- Reassemble and weld the bush 26-083000 as per *figure 13*.
- Surplus weld material must be ground off.

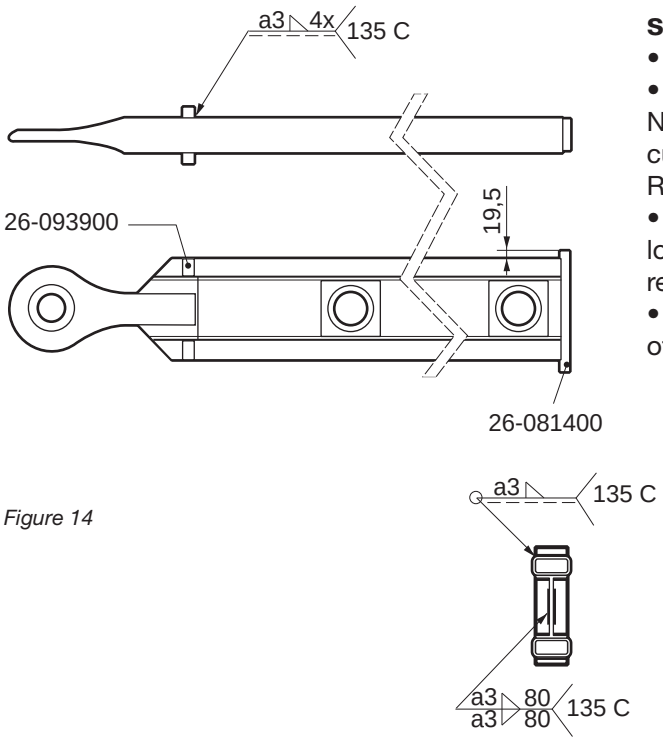


Figure 14

Disassembly/reassembly of the front slider

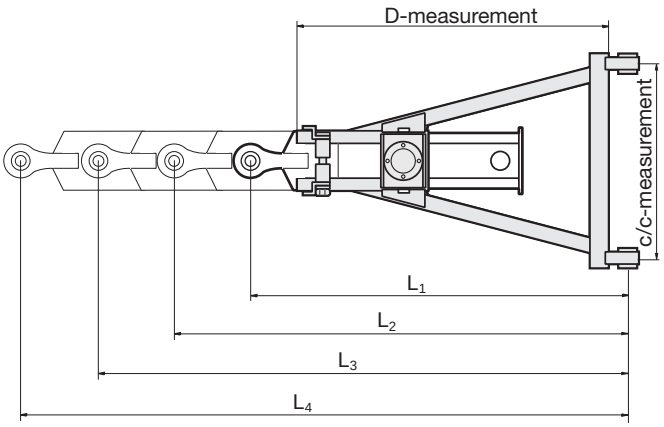
- Loose the adjustment bolts.
- Cut away the rear stop 26-081400, see *figure 14.*

N.B. If the front slider is to be reused be careful to not cut away any material from the front section profile. Remove any wear plates.

- Reassemble the front slider, lock the front slider in its longest location with the coupling bolt and attach the rear stop.
- Move the front slider backwards to enable welding of the stop as per *figure 14*.

Ordering of Automatic Drawbar

Make sure to fill in the measurements exactly.



Complete drawbar part no: 26-100000

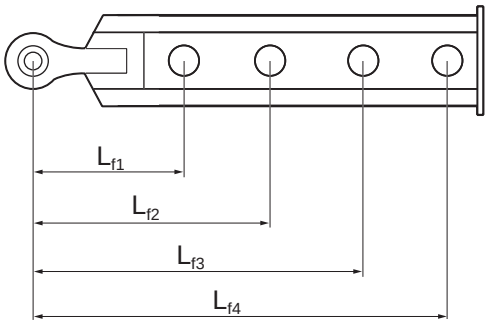
c/c measurement:.....mm

Hinge bracket: ☐ VBG standard ☐ Type Briab

Drawbar eye: ☐ *57.5 mm* ☐ *50 mm*

Length: L_1=..... *mm* L_2=..... *mm*

L_3=..... *mm* L_4=..... *mm*

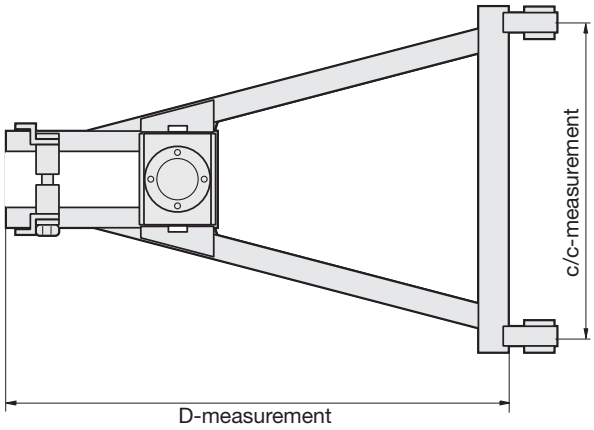


Front Slider

Drawbar eye: ☐ *57,5 mm* ☐ *50 mm*

Length: L_{f1}= ..... *mm* L_{f2}=..... *mm*

L_{f3}= ..... *mm* L_{f4}=..... *mm*



A-frame

D-measurement:.....mm

c/c-measurement: .....mm

Hinge bracket:
☐ VBG standard ☐ Type Briab

Customer:

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The strong connection