

MOUNTING INSTRUCTIONS

MODIFICATION KIT CONTROL VALVE B->E

This instruction will tell you the right way to mount the Cargo Floor modification kit control valve 02 B-control to E-control, parts no. [7170041](#).

To ensure the proper functioning of the Cargo Floor moving floor transport system you need to follow the instructions mentioned in this manual carefully.

In general is it possible to do this modification without removing the control valve from the Cargo Floor system.

The B-control switches CF3 and CF4 are already suitable for the E-control, for this an extra cable has been laid that ends near the control valve.

If the Cargo Floor moving floor system (after following this mounting instruction closely) does not – or not correctly – function, please contact your trailer builder, he will undoubtedly help you to fix the malfunction.

The measurements given in this instruction start with the metric system after which between brackets [0] the imperial measurement is mentioned.

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IMPORTANT RECOMMENDATIONS AND GUIDELINES FOR THE COMMISSIONING

Before putting the Cargo Floor loading and unloading system into operation, follow the recommendations provided below and check the specified checkpoints to avoid damage to the Cargo Floor system and the vehicle.

Please review the important instructions before operating the Cargo Floor system and loading cargo into the vehicle. Likewise, before loading cargo, check the operation of the various control switches/valves to familiarise yourself with how the system works. We strongly recommend that you perform these checks when picking up the vehicle from the dealer so that your skilled supplier can answer your questions and provide you with any necessary advice or guidance you may require.

Important:

- Always check that the selected loading or unloading direction is actually activated and occurring!!
- If the system fails to start, turn off the Cargo Floor system and the hydraulic pump and follow the recommendations and guidelines provided below. Do not repeatedly try to start the system as this may result in damage to your Cargo Floor system and/or vehicle.
- After use, turn off the Cargo Floor system and hydraulic pump. Set switches to the "0" position and the lever in neutral.

In case of doubt or uncertainty about these recommendations and guidelines, always contact your dealer or an official workshop.

The Cargo Floor system comes standard with an operating manual, but if this has not been supplied, please contact your dealer or download it from the official Cargo Floor website: www.cargofloor.com

- A) Always open the vehicle's doors before turning on the hydraulic pump. Note! Build-up of pressure against the doors can open them with force. Also some of the cargo can fall out of the vehicle by itself after opening the doors, therefore KEEP CLEAR AT ALL TIMES, product could fall on top of you! Both could result in damages and/or injuries! It is always advisable to use the pneumatic door lock, if provided.
- B) 1. Check that the vehicle's (quick-detachable) couplings are properly connected to the P (Pressure line) and the T (tank/return line). Also check that the couplings are fully tightened or slid completely into each other.
IMPORTANT: the pressure and return line connectors may not be reversed or exchanged to prevent dirt or water from entering the lines when connecting them!
2. Before connecting, check that the non-return valves can open easily (check: the non-return valves should open easily when pressed with the finger, if not, potential pressure build-up in the hydraulic lines may be preventing the system from starting).
NOTE: Incorrectly connected or unopened hydraulic couplings will cause serious damage to the Cargo Floor system and the vehicle.
- C) The vehicle (pump) must be fitted with a pressure relief valve that is set at the maximum pressure according to the system, see the technical specs. If fitted, check that the dual-function lever (function: tipper/Cargo Floor) is in the Cargo Floor position. Pressure may not exceed the maximum adjusted and allowable operating pressure of the Cargo Floor system. An incorrectly adjusted pressure relief valve can cause damage to the Cargo Floor system and the vehicle.
- D) During operation, the (hand)brake of the vehicle must always be applied. You must, however, move the vehicle forward on time to unload it quickly in order to prevent unnecessary strain and wear to the floor and the vehicle.
- E) Use of a wireless remote control is permitted only if it is fully tested before the start of each loading or unloading operation. Always check if the function you have selected is actually activated and taking place. If, for example, you have accidentally pressed the load function when you actually meant to press the unload function, irreversible damage may occur to the Cargo Floor system and the vehicle.
- F) During operation of the Cargo Floor system, all existing STOP and control knobs/levers must be freely accessible.

- G) The pressure filter element needs to be replaced at least once a year. If the couplings between the vehicle and the Cargo Floor system are regularly removed, it is advisable to check the pressure filter for dirt build-up and replace the pressure filter element more often, if necessary. If provided, also check the return filter (not supplied with the Cargo Floor). Failure to replace a filter element on time may cause damage to or malfunctions in the Cargo Floor system and the vehicle.
- H) Moving parts must be shielded. Always maintain at least 10 meter [30'] distance from the Cargo Floor system when it is in operation.
- I) In the event of malfunctions/maintenance work, you may approach the Cargo Floor system only if all equipment, including the hydraulic pump, have been shut off, and the Cargo Floor system and the electro-hydraulic aggregate have been disconnected from the power supply and pump.
- J) Regularly check and, if necessary, tighten any loose bolts that secure the aluminium floor profiles to the Cargo Floor system. All such checks can simply be performed inside the vehicle itself by qualified personnel. The Cargo Floor system must, however, be turned on in unloaded condition and the person performing the check must place his finger half on the floor profile and half on the bolt. There should be no appreciable movement/space between the floor profile and bolt. Failure to check these bolts may lead to damage to the Cargo Floor system. During this check, a second person must also be present to switch off the Cargo Floor system.
- K) Check that the minimum required amount of oil is present 150 liter [40 US gallon]. Too little oil in the hydraulic tank will cause damage to both the pump and the Cargo Floor system.
- L) Do not allow the number of strokes to exceed the maximum allowable 16 power strokes per minute. Only a CF500 SLC Power Speed Cargo Floor system may deliver up to 23 beats per minute. A higher number of power strokes can cause damage to the Cargo Floor system and the vehicle.
- M) Hydraulic lines, couplings and hoses with very small diameters will cause damage.
- N) If the Cargo Floor system fails to start or operates incorrectly, the Cargo Floor system and the hydraulic pump must be shut down immediately. Subsequently, check all the checkpoints before switching the pump and the Cargo Floor system back on. To prevent the oil from overheating, regularly check the oil temperature by CAREFULLY and CAUTIOUSLY touching the line and/or oil tank. If either is too hot to the touch, stop touching them right away. **WARNING: TOUCHING OVERHEATED OIL AND COMPONENTS CAN CAUSE BURNS!**
- O) The cause of failure or malfunctioning of the Cargo Floor system may also be due to other hydraulic components that may or may not be connected to the same hydraulic circuit of the Cargo Floor system.
- P) Jamming of the floor profiles caused by the transport of abnormal loads and/or the freezing of the floor or of the product to the floor may result in damage to the Cargo Floor system and the vehicle. Recommendation: in the event of freezing, stop the system and try to find a hall (heated area) to allow the product to thaw.
- Q) Because the electrical power supply of the Cargo Floor system is often connected to the lighting circuit of the vehicle, it is advisable to turn on the lighting throughout the operation of the system.
- R) Maintenance and repairs to the Cargo Floor system may be only performed by qualified personnel. Use only original Cargo Floor components to ensure maximum reliability and long service life.
- S) Maximum cargo weight is subject to the limits set by law and applicable regulations. Even if the system can transport heavier loads, the law determines the maximum limit. Excessively heavy cargo can cause damage to the Cargo Floor system and the vehicle.
- T) Check that the correct type and quality of hydraulic oil is used. The use of incorrect oil type may cause damage to the Cargo Floor system and the pump.
- U) Check the vehicle for correct voltage. Make sure there are no open electrical connections. A faulty electrical system can cause damage to the Cargo Floor system and the vehicle.
- V) Check that the bulkhead, if present, is functioning smoothly and properly. A properly functioning bulkhead ensures that the product is unloaded in a clean and quick fashion. A malfunctioning bulkhead may extend the unloading time and cause damage to the vehicle.
- W) Use of the Cargo Floor system by unqualified personnel can cause damage to the Cargo Floor system and the vehicle.
- X) Excessively high oil temperatures will cause damage to the Cargo Floor system and other hydraulic components, such as the pump.

- Y) It is at all times advisable to stop the Cargo Floor system when all the piston rods are retracted. This is usually the case when the floor profiles are positioned towards the unloading end (vehicle doors). Unretracted piston rods may cause damage to the Cargo Floor system.
- Z) To prevent damage to the floor profiles, exercise caution and limit the dump height as much as possible. The transport of unauthorised goods, such as aggressive, corrosive, hot, hard, sharp and viscous materials may cause damage to the Cargo Floor system and the vehicle. Avoid loading and unloading sharp objects. Loads that are softer than the hardness of the floor profiles will extend the service life of your system; if in doubt, use a protective cloth or consult your dealer.
- AA) Forklift trafficable. In principle, the floors are completely trafficable and can be driven over by forklifts, but always consult your dealer for advice on the maximum loads allowed on your vehicle. Overloading will cause damage to the Cargo Floor system and the vehicle.
- BB) Always return emergency control(s) to their original non-activated position after use.
- CC) During the operation of the system, test the temperature of the oil by touching the side of the tank. If the oil is so hot that you cannot continue to touch the tank, switch off the pump to allow the oil to cool off and determine what is causing the overheating. Stop loading or unloading if the oil is too hot, as this will irreversibly cause damage to the Cargo Floor system and the other hydraulic components.
WARNING: TOUCHING OVERHEATED OIL AND COMPONENTS CAN CAUSE BURNS AND INJURIES!
- DD) During loading and unloading operations, the load should be spread to give an even weight distribution over the floor area, otherwise the load may stall. Tip: when transporting pallets, place softwood boards of 300 x 18 x 2350 mm. [12" x 0.75" x 92.5"] to distribute the pressure more evenly.
- EE) The constant pressing of the load against the head board or the doors can lead to extra wear of the complete system. Also the construction can be damaged. Please consult your supplier about the optimizing possibilities or in order to prevent problems occurring.
- FF) The user/operator/driver that is operating the Cargo Floor system is compelled to remain a safe distance from the Cargo Floor system at all times, from the time of switching on the hydraulic pump until turning it off. He should ensure that no dangerous situations can occur. When the process malfunctions or if other people are present he should shut down the Cargo Floor system, or hydraulic pump, immediately.
- GG) No unauthorized alterations/modifications/changes/adjustments may be made to any part of the Cargo Floor drive unit and system.

WARRANTY

Warranty is subject to prior approval by Cargo Floor B.V.! To request warranty coverage, visit www.cargofloor.com to fill out and submit the warranty application form provided there; do not forget to include your Cargo Floor system number on the form.

EMERGENCY

In the event of an EMERGENCY, operation of the Cargo Floor system can be halted as follows:

- ◆ By pressing the red stop button on one of the control switches;
- ◆ By turning all switches to position “0”;
- ◆ By putting the handle of the control valve in the middle “0” position (only B and A control);
- ◆ Turning off the PTO pump/engine;
- ◆ Turning off the main switch of the power supply;
- ◆ Turning off the motor of the electro-hydraulic aggregate;

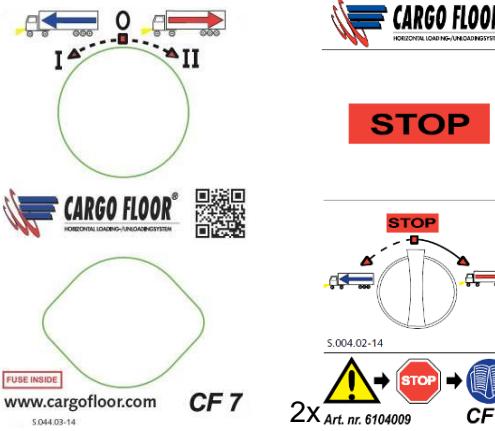
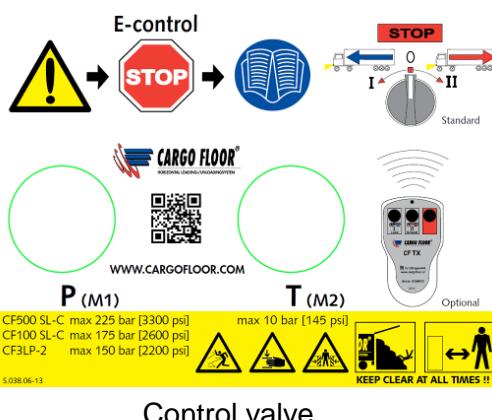
The WARNING STICKER/DECAL is attached near the control cabinet.



CONTENT MODIFICATION CONTROL VALVE 02 FROM B - E

Modification kit control valve B->E, parts no. [7170041](#), consist of following parts:

Parts no.	Description	Amount
6305014	Solenoid Cargo Floor G(+GS)02 24V	1 pc
6305012	Cartridge Cargo Floor (G02)	1 pc
7370107	Choke ø6.5 mm (control valve 02)	1 pc
7071006	Socket screw 3/4 incl. seal	1 pc
7677003	Operational plunger L=195 mm / D=25 mm (with hole M10)	1 pc
9309021	Manual with important instructions	1 pc
9310002	S.004-E Sticker switch 8	2 pc
9310003	S.003-E Sticker switch 7	1 pc
9310014	S.038 Sticker for control valve "E" control	1 pc
9310001	S.036 Sticker Caution English, German, Dutch	1 pc
9310004	S.036.1 S.036 Sticker Caution French, Spanish, Italian	1 pc
9310006	S.009-E Sticker electrical diagram "E" control	1 pc



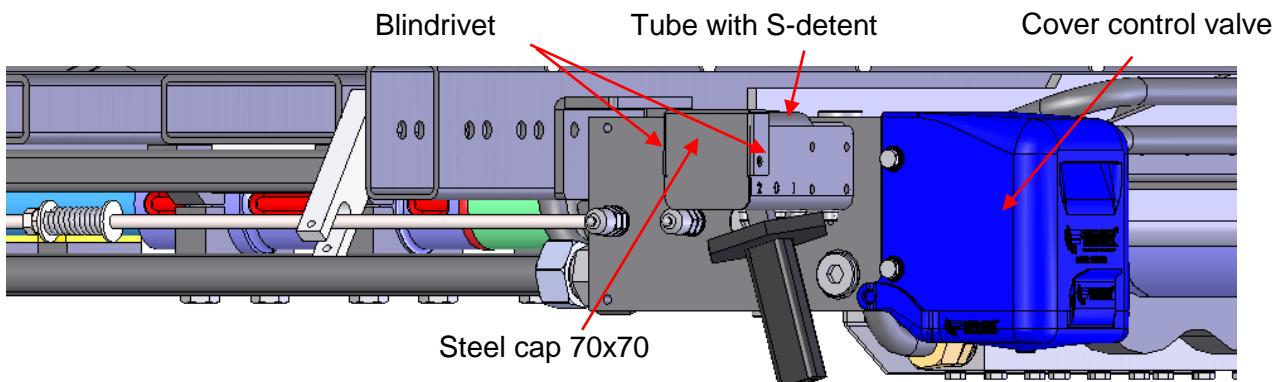
2X Art. nr. 6104009 CF 8

MOUNTING THE MODIFICATION KIT

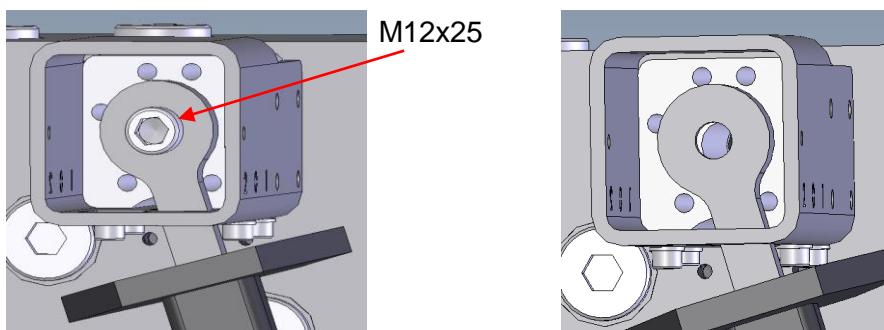
Tools required:

- Allen key 5, 10 en 12 mm
- Ring/fork spanner 13, 22 en 30 mm
- Drilling machine en drill 5 mm
- Oil collection pan

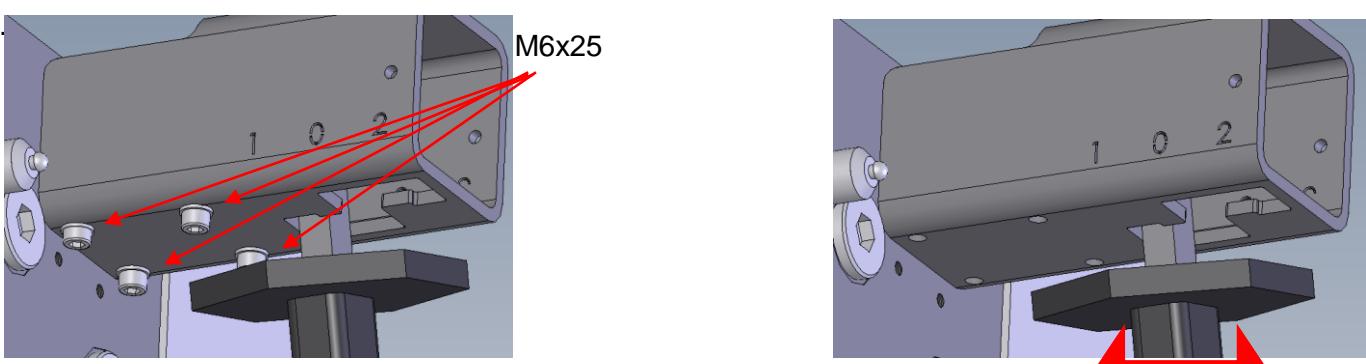
Before installing the modification kit, please check if the hydraulic and electric connections between the pulling vehicle and trailer are disconnected.



Remove the blue cover from the control valve, which has been fastened with 3 M8x12 bolts (fork spanner 13). Drill off the head of the two blind rivets with which the steel cap 70x70 is fastened to the tube.

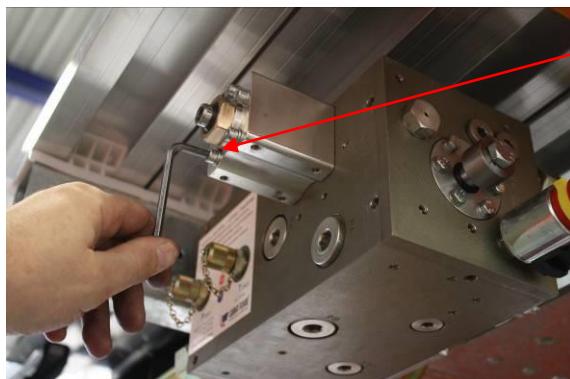


Next screw the allen screw M12x25, with which the handle is fastened, out of the connection rod (allen key 10 mm).

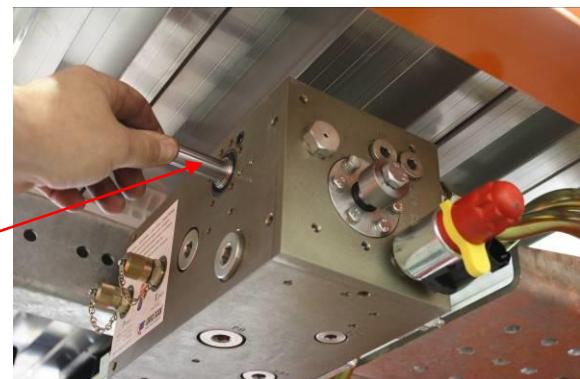


Screw the 4 M6x25 screws (allen key 5 mm) out of the tube with S-detent.

Move the handle back and forth to get it loose from the connection rod and then remove the handle with the tube from the control valve.



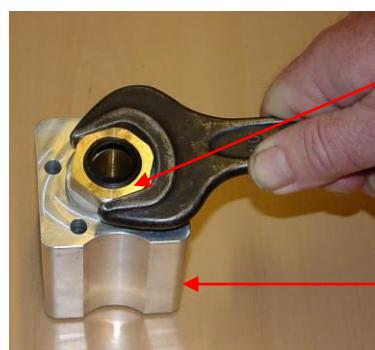
6x M6x80



Connection rod

Unscrew the 6 M6x80 allen screws (allen key 5 mm) and remove the head of the operation plunger housing.

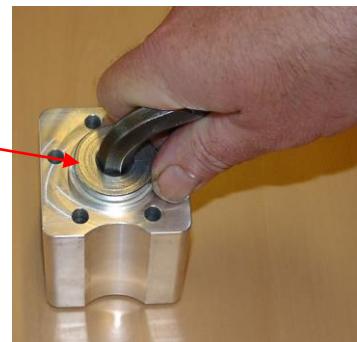
Grab the connection rod which is sticking out of the control valve and pull the operation plunger out of the control valve. A little oil will flow out of the control valve at this point.



Bronze bush

Head for operation plunger

Socket plug with O-ring



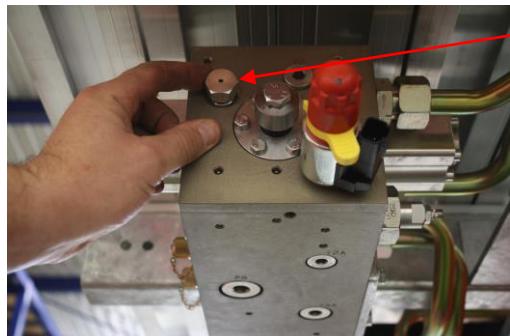
Remove the bronze bush and dirt scraper out of the head of the operation plunger with fork spanner 30 mm and replace it with the socket plug with sealing (allen key 12 mm).



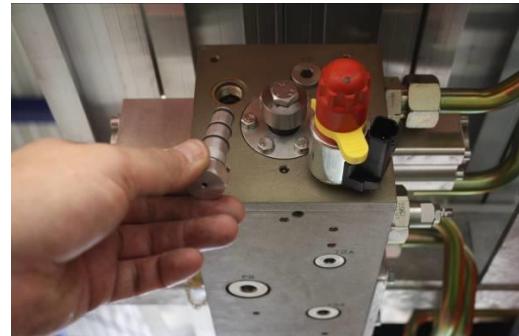
New operation plunger in
The control valve

Head for operation plunger

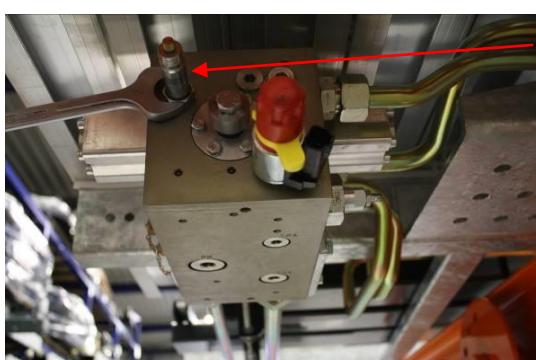
Put the new operational plunger into the control valve, at the same spot where the “old” operational plunger with connection rod was positioned. Then mount the head for operation plunger back onto the control valve with the 6 M6x80 allen screws. Fasten the M6 allen screws with 10 Nm [7 ft lb] (do not forget the spring washers and check whether the O-rings between the head operation plunger and control valve are still in their place).



Plug G02 for B control



Unscrew the plug G02 for the B control (fork spanner 22 mm) and take it out of the control valve.



Cartridge G02 load/unload

Solenoid 24V



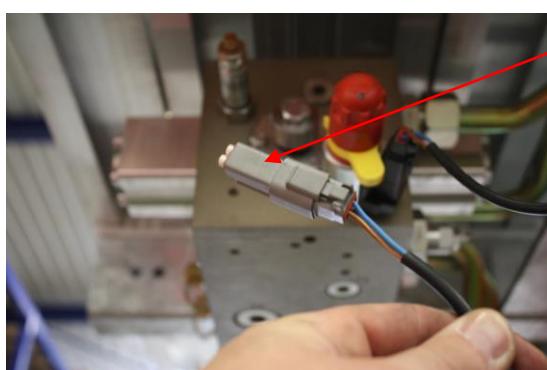
Take the cartridge G02 (load/unload) and screw it into the control valve on the spot where the plug G02 just was and fasten the cartridge with fork spanner 22 mm.

Slide the solenoid over the cartridge G02 and screw by hand the black screwcap on the cartridge to fasten the solenoid.



Attention!

The thicker O-ring should be positioned between the solenoid and the black screwcap.



Blind cap cable G02



Plug in

The already mounted switches CF3 and CF4 are suitable for the E-control, for this an extra cable has been laid that ends near the control valve.

Remove from this cable, for the G02, the blind cap of the grey connector and plug the connector in the solenoid G02 (load/unload).

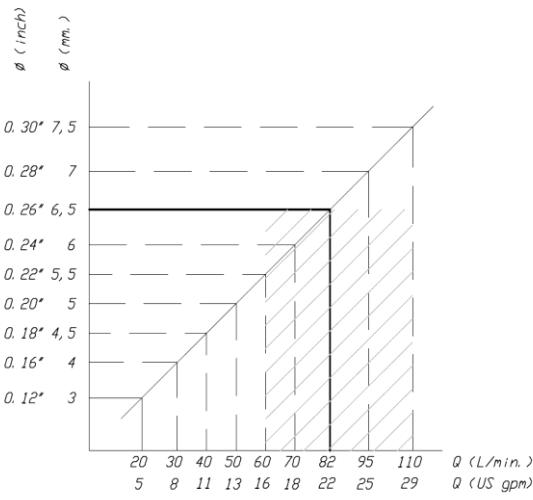
Mount the blue protected cover back on the control valve.

CHOKE

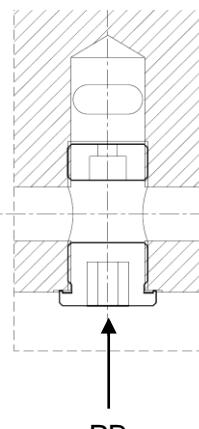
To have the control valve function correctly, a standard choke 6,5 mm [0.26"] must be mounted in the PB channel. This standard choke is suitable for an oil flow level of 60 to 110 litres [16 to 29 gpm] per minute. The function of the control valve can be affected by a deviation from this oil flow level. The oil flow diagram shows which level of oil flow is required by which opening. Adjustment of this is possible by simply changing the diameter of the choke.

Known consequences of a wrong choke diameter are:

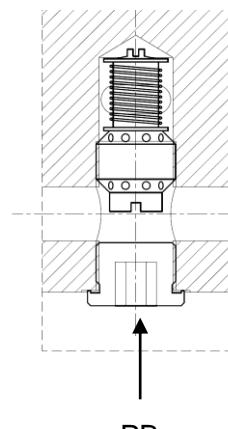
- Oil flow too low: load/unload operational plunger is not switching, system gets pressure less;
- Oil flow too high: noise in system, high heat dissipation and capacity loss.



Standard choke
DIN 906-5.8-3/4"



Choke variable
Art. nr. [7370106](#)



OPTION: choke variable

As an option a flow independent choke can be supplied (choke variable parts no. [7370106](#)) if a wide range of flows is used on one and the same system. The variable choke has a flow range of 20-110 ltr./min [5-31 gpm] and is suitable for a maximal work pressure of 225 bar [3300 psi].



You remove the socket plug out of channel PB (Allen key 12 mm) at the bottom of the control valve. After this you screw the choke in the channel with allen key 12 mm. Keep the allen key pushed in the direction of the yellow arrow to make sure that the choke is staying in the thread. Fasten the standard choke with 50 Nm [37 ft lb].

Screw the new variable choke in the channel and fasten these by hand (about 15 Nm [11 ft lb]).

Screw the socket plug back into channel PB (allen key 12 mm) and fasten these by hand (about 50-75 Nm [37-55 ft lb]). Let the floor run (loading and unloading) in order to check if everything is functioning well and no leakage occur.



Warning

For each type of choke applies: connecting the pressure and return pipe wrongly will result in malfunctioning of the system and the filter element will permanently be damaged.

STICKERS/DECALS

Put the stickers belonging to the e-control on the following spots:

In the control box

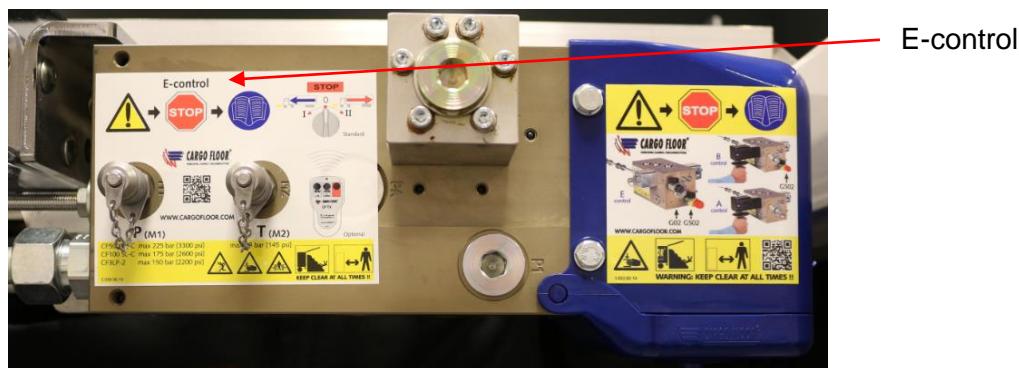
1x CF7 sticker over the CF3 sticker which is on the switch CF3 in the control box.

2x CF8 sticker over the CF4 sticker which is on the remote control with cable.



On the control valve:

1x sticker E-control over the sticker A+B control



The warning sticker below should be put near the control box in such a way that it is easy to read.

