

CARGO FLOOR INSTRUCTIONS FOR USE

We would like to introduce to you the right operation of our Cargo Floor system with the help of the following data and we also want to point out to you the steps that you can take to solve malfunctions.

Please read and follow our instructions carefully so that the Cargo Floor system will give you reliable and trouble free service for many years.

If the Cargo Floor system does not operate at all (or properly) after following the instructions, please do not hesitate to contact your nearest agent, who will with no doubt assist you in solving the problem.

Please pay particular attention to the contents of the “Important recommendations and guidelines” on page 2 and further!

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INSTRUCTIONS FOR USE SL-2

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 a resident expert 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 force them open, which may cause some of the cargo to fall out of the vehicle. That is why it is always advisable to use the pneumatic lock, if provided.
- B) 1. Check that the vehicle's (quick-detachable) couplings are properly connected to the P (Pressure line, min. 20mm) and the T (tank/return line, min. 25mm). 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 to 250 bar. 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 10m 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 (150L). 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 Powerspeed 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 to distribute the pressure more evenly.


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.

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

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

The **WARNING STICKER** is attached to the outside of the control cabinet.

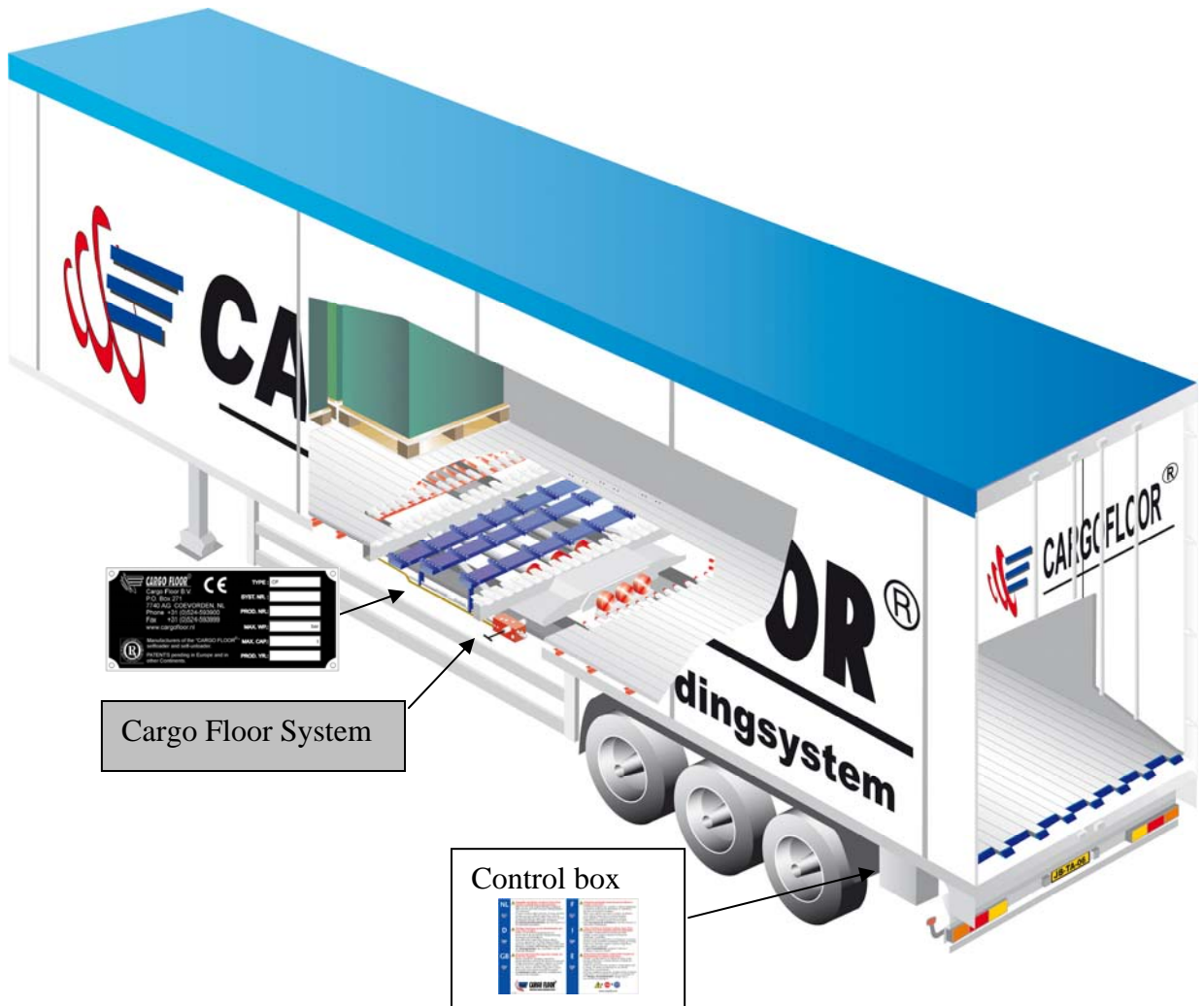
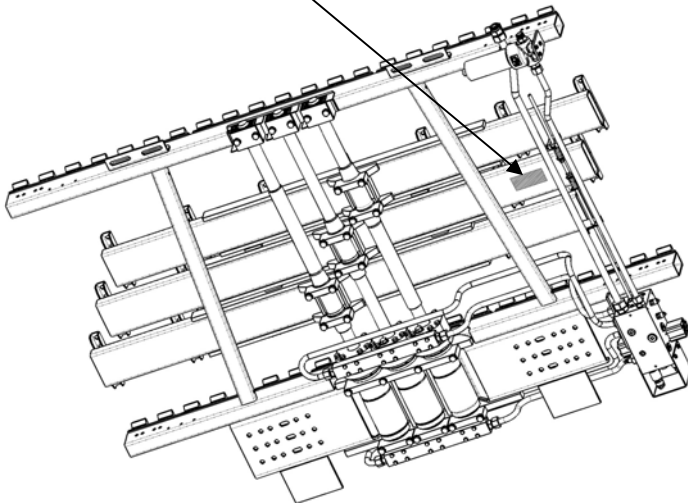
<p>NL</p>  <p>D</p>  <p>GB</p> 	<p>Belangrijke aanwijzing voordat het Cargo Floor-systeem in gebruik mag worden genomen:</p> <ul style="list-style-type: none">- altijd eerst de bedieningshandleiding raadplegen.- altijd eerst de gewenste transport richting bepalen en controleren.- Personen moeten altijd tenminste 10 meter afstand houden van een werkend Cargo Floor systeem.- Na gebruik altijd het Cargo Floor systeem in de niet geactiveerde neutrale (0) positie terugzetten- Bij onderhoudswerkzaamheden; alles uitschakelen en de hydrauliek loskoppelen <p>Wichtige Anweisung vor der Inbetriebnahme des Cargo Floor Systems:</p> <ul style="list-style-type: none">- Immer erst die Bedienungsanleitung lesen.- Zuerst immer die gewünschte Transportrichtung bestimmen und kontrollieren.- Vom aktivierten Cargo Floor System müssen Personen mindestens 10 Meter Abstand halten.- Nach dem Einsatz das Cargo Floor System in die nicht aktivierte, neutrale Null-Stellungen (0) zurücksetzen.- Bei Wartungsarbeiten, alles ausschalten und die Hydraulik abkuppeln <p>Important tips before the Cargo Floor system can be put into operation:</p> <ul style="list-style-type: none">- Always consult the operation manual first.- Always determine and check the direction of transport.- People must always maintain a distance of at least 10 metres from a working Cargo Floor system.- After use, always switch the Cargo Floor system back to the non-activated neutral (0) position.- By maintenance work, switch off everything and disconnect the Hydraulics.  <p>S 006</p>	<p>F</p>  <p>I</p>  <p>E</p> 	<p>Indications importantes avant de pouvoir utiliser le système Cargo Floor:</p> <ul style="list-style-type: none">- Commencez toujours par consulter le manuel d'utilisation.- Commencez toujours par déterminer et contrôler la direction de transport souhaitée.- Tenez-vous toujours à au moins 10 mètres de distance d'un système Cargo Floor en fonctionnement.- Après utilisation, remettez toujours le système Cargo Floor en position neutre (0) non activée- Pour tous travaux de maintenance, tout déconnecter et débrancher l'hydraulique <p>Prima di mettere in funzione il sistema Cargo Floor, prendere nota delle seguenti indicazioni importanti:</p> <ul style="list-style-type: none">- Consultare sempre prima il manuale operativo.- Stabilire sempre prima la direzione di trasporto desiderata e controllare.- Quando il sistema Cargo Floor è in funzione, le persone devono sempre mantenere una distanza di almeno 10 metri- Dopo l'uso, riportare sempre il sistema Cargo Floor nella posizione neutra (0).- In caso di manutenzione, spegnere il sistema e scollegare l'impianto idraulico <p>Instrucciones importantes a seguir antes de poner en funcionamiento el sistema Cargo Floor:</p> <ul style="list-style-type: none">- Siempre consulte primero el manual de instrucciones.- Siempre determine y controle primero el sentido de transporte deseado.- Cuide de que las personas siempre se mantengan a por lo menos 10 metros de distancia de un sistema Cargo Floor en movimiento.- Una vez concluida la operación, siempre retorne el sistema Cargo Floor a las posiciones neutrales no activadas (0)- Por trabajos de mantenimiento, apagar todo y desconectar los hidráulicos.  <p>www.cargofloor.nl</p>
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IDENTIFICATION TAG



MEANINGS OF THE FIELDS:

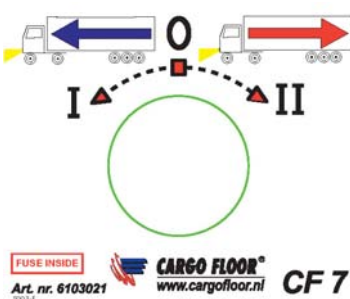
- TYPE** : System type
- SYST. NR.** : Serial number
- PROD. NR.** : Production number
- MAX. WP.** : Maximum workload
- MAX. CAP.** : Maximum load
- PROD. YR.** : Production year



FUNCTION OF “E”-CONTROL SWITCHES

CF 7 SWITCH (EMERGENCY CONTROL)

The CF 7 switch is the permanent switch which is mounted on the frame/vehicle and has 3 switch positions with the following functions:



← (Pos I) = loading

is activated when you turn the rotary switch to the left.

Pos 0 = stop

the rotary switch automatically returns to this position when the switch is released.

→ (Pos II) = unloading

is activated when you turn the rotary switch to the right.

In the interest of safety this switch is fitted with an automatic spring-back for positions I and II, so that it always returns to the central “0” position. This is necessary to prevent conflict situations arising when using the CF 8 remote control.

Mounted below the CF 7 switch, is a connector to which the CF 8 switch or the RX RECEIVER can be connected without the need for any adjustments.

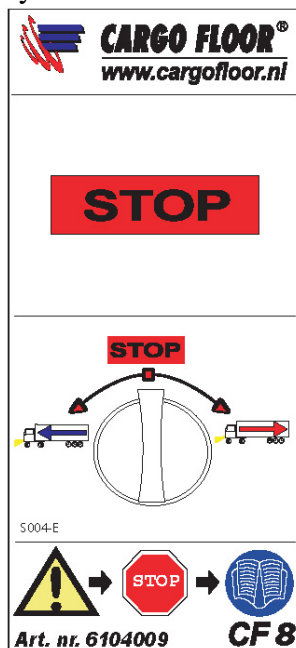
Normally, the CF 7 switch should only be used if the CF 8 switch is defective.

If, after the initial assembly, the switch does not work it is probably because the connections for the + (brown) and the – (blue) have been swapped around. The supply cable contains a blocking diode which prevents damages arising from the + and - from being connected in reverse.

A 2 Amp fuse has been mounted in the CF 7 switch. Never mount a fuse over 3A, this can cause damage to the electrical installation

CF 8 SWITCH (MAIN CONTROL)

The standard supplied remote control CF 8, with 10 m. of cable, is used for the day-to-day control of the system.



The CF8 switch is fitted with the following control buttons:

Red button: the stop button. Press the button to activate it, and deactivate it by turning it to the right, the button will go back by itself.

Rotary switch. This is a rotary switch with three positions.

← (Pos I) = loading

is activated when you turn the rotary switch to the left. The button will automatically go back to the middle position when the button is released.

Pos 0 = stop

→ (Pos II) = unloading

is activated when you turn the rotary switch to the right to the stop position. This position is provided with a position lock.

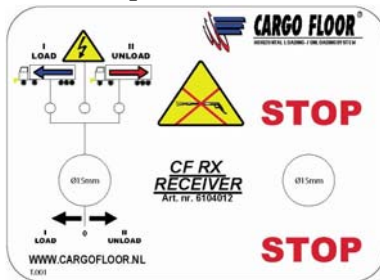
The CF 8 switch has a plug connector, which can be inserted into the connector of the CF 7 switch and screwed tight.

To disconnect this, the duct must be unscrewed, after which the plug can be pulled out. Normally, this plug should always be connected to the connector.

OPTIONAL

A radio controlled remote control is available as an option.

This incorporates:



CF RX Receiver which has a plug connector which can be inserted into the connector of the CF 7 switch and screwed tight.

To disconnect this the duct must be unscrewed, after which the plug can be pulled out. Normally, this plug should always be connected to the connector.

Red stop button

On the receiver RX a red stop button is mounted, by pushing this button you can stop the system in case of emergency. By pulling it the system will be activated again. Do take care, with reference to the accessibility, that when using a remote control, the door of the switching box CF7 is opened so the red stop button can be operated. This receiver is also supplied with a tilting switch with which the system can be switched.

CF TX Remote Control, this has 3 buttons, which work as follows:



Button one (loading). By pushing this button the system will load, by releasing it the system will stop (or you push to stop the big stop button).

Button two (unloading). By pushing this button the system will unload, by pushing it again the system will stop (or you push to stop the red marked stop button).

Button three (stop). With this button you stop the system.

The switching positions I-0-II (applicable to all switches) energize the following solenoids (provided that they have been connected correctly):

- **Position II (unloading):** only the solenoid of valve A (GS02) is energized. A voltage of 24 VDC (12 VDC) is supplied to the solenoid
- **Position I (loading):** the solenoids of both valve A (GS02) and valve B (G02) are energized. A voltage of 24 VDC (12 VDC) is supplied to both solenoids
- **Position 0:** stop, the solenoids are not energized

IMPORTANT

Before starting to load or unload you must check the following:

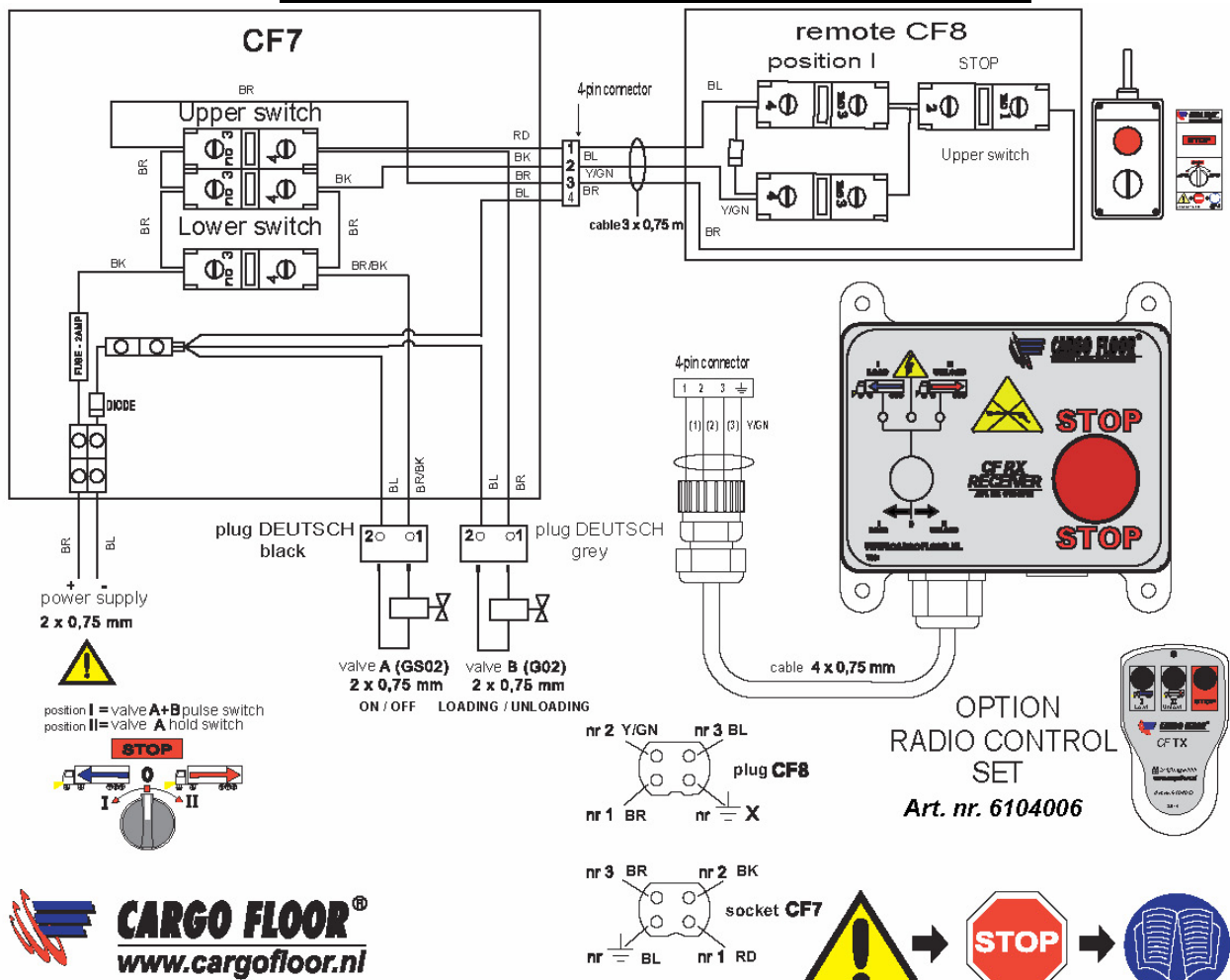
- there must be no people in the vicinity of the system;
- there must not be anything to obstruct the transport of the product (are the doors open?);
- bear in mind which action you want the system to carry out: Loading or Unloading? Immediately check, and continue to check, whether the system is transporting the product in the correct direction.

When loading pay special attention to ensure that the product is not pressed up against the bulkhead.

- Turn on the pump;
- Turn on the light and check that there is a supply of power.
- Keep your distance from the vehicle and operate it by means of the remote control CF 8 or the CF RX.

In the event of malfunctions in the electrical system, the standard manual operation mode can be used to activate the On/Off functions. See page 23. **When using this manual control you must always ensure that it is switched back to the original NON-ACTIVATED condition after use.**

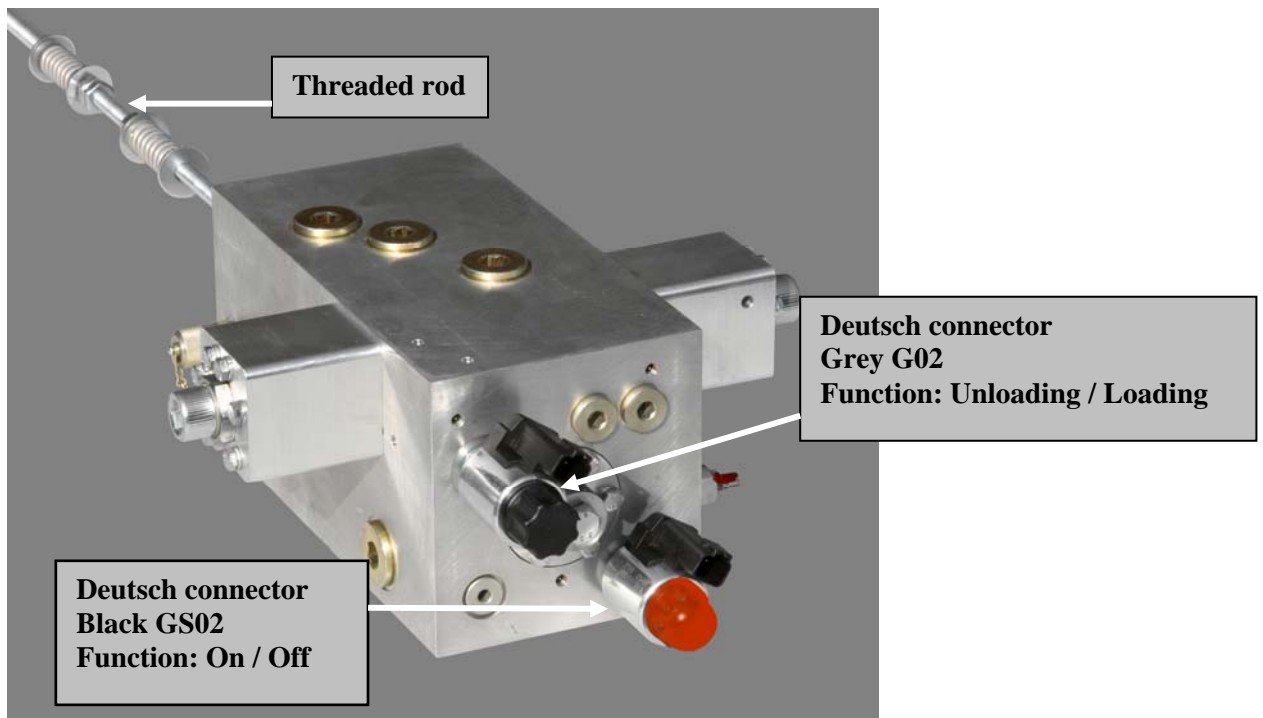
ELECTRICAL CIRCUIT DIAGRAM "E"-CONTROL



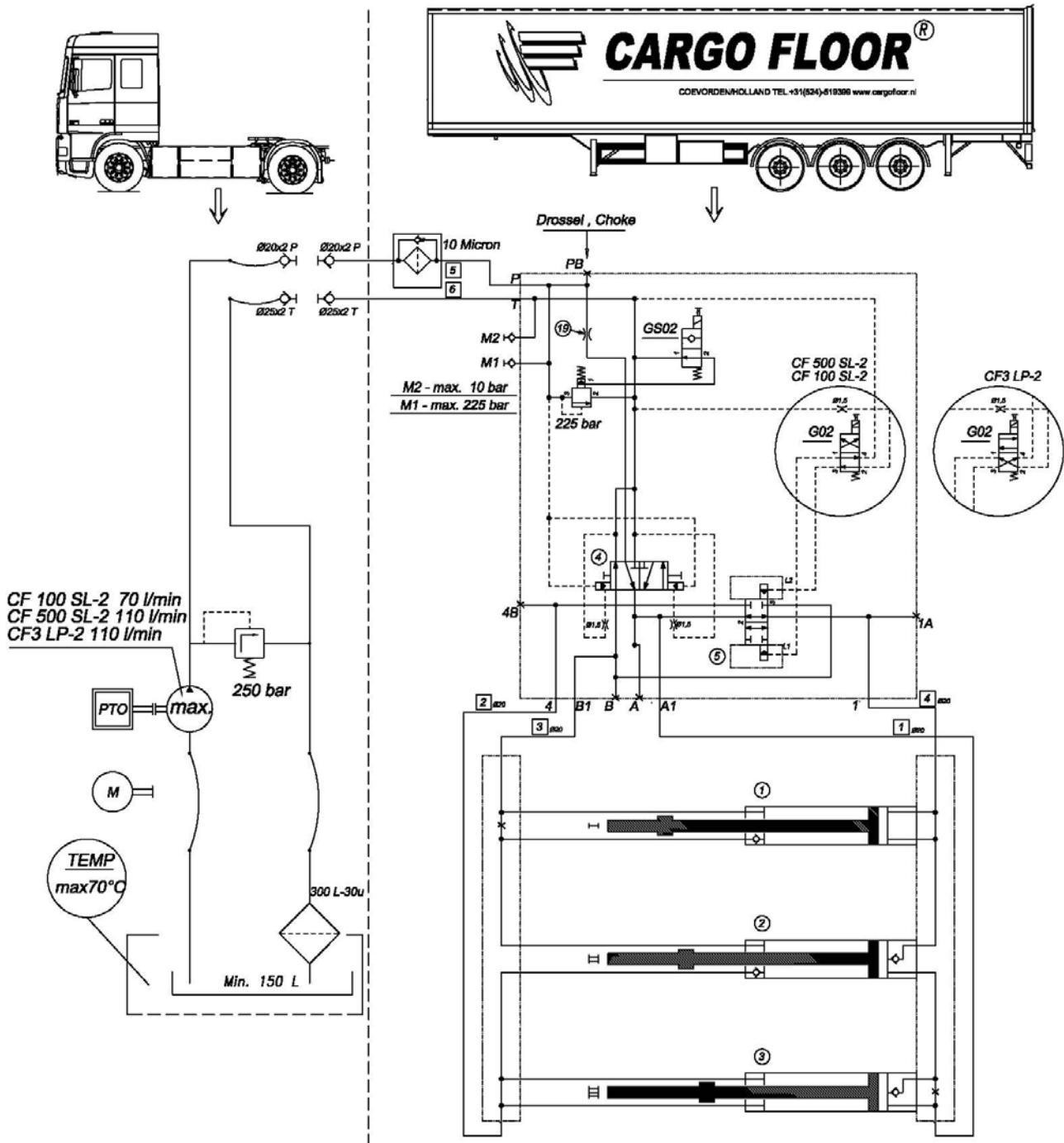
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CONTROL VALVE "E"-CONTROL



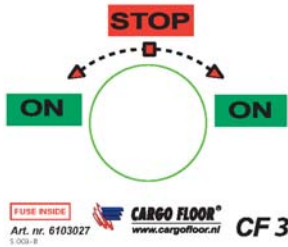
HYDRAULIC CIRCUIT DIAGRAM “E”-CONTROL



FUNCTION OF “B”-CONTROL SWITCHES

CF 3 SWITCH (EMERGENCY CONTROL)

The CF 3 switch is the permanent switch which is mounted on the frame/vehicle and has 2 switch positions with the following functions:



Middle position = **STOP**

The rotary switch automatically returns to this position when the switch is released.

→ = **ON**

From this position the switch will go back to the stop position when released.

← = **ON**

From this position the switch will go back to the stop position when released.

In the interest of safety this switch is fitted with an automatic spring-back for position I, so that it always returns to “O” position. This is necessary to prevent conflict situations arising when using the CF 4 remote control.

Mounted below the CF 3 switch, is a connector to which the CF 4 switch or the RX RECEIVER can be connected without the need for any adjustments.

Normally, the CF 3 switch should only be used if the CF 4 switch is defective.

If, after the initial assembly, the switch does not work it is probably because the connections for the + (brown) and the - (blue) have been swapped around. The supply cable contains a blocking diode which prevents damages arising from the + and - from being connected in reverse.

A 2 Amp fuse has been mounted in the CF 3 switch. Never mount a fuse over 3A, this can cause damage to the electrical installation

CF 4 SWITCH (MAIN CONTROL)



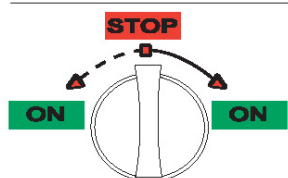
The standard supplied remote control CF 4, with 10 m. of cable, is used for the day-to-day control of the system.

The CF 4 switch has the following buttons:



Red button: the stop button. This is activated by pushing it in and deactivated by turning it;

Rotary switch. This is a rotary switch with three positions. Activating this switch the system will, depending on the position of the operational lever, start loading or unloading. When this switch is deactivated the system stops.



Middle position = **STOP**

→ = **ON**

In this position the switch will stay in the position (position lock).

← = **ON**

From this position the switch will go back to the stop position when released.

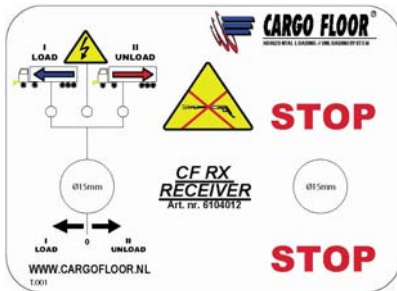


The CF 4 switch has a plug connector, which can be inserted into the connector of the CF 3 switch and screwed tight.

To disconnect this, the duct must be unscrewed, after which the plug can be pulled out. Normally, this plug should always be connected to the connector.

OPTIONAL

A radio controlled remote control is available as an option.
This incorporates:



CF RX Receiver which has a plug connector which can be inserted into the connector of the CF 3 switch and screwed tight.
To disconnect this the duct must be unscrewed, after which the plug can be pulled out. Normally, this plug should always be connected to the connector.

Red stop button

On the receiver RX a red stop button is mounted, by pushing this button you can stop the system in case of emergency. By pulling it the system will be activated again. Do take care, with reference to the accessibility, that when using a remote control, the door of the switching box CF7 is opened so the red stop button can be operated. This receiver is also supplied with a tilting switch with which the system can be switched.

CF TX REMOTE CONTROL

Fitted with three control buttons with the following functions:



Button one (on ON PULSE as pulse contact). By pushing this button the system will be activated, by releasing it the system will deactivate (or you push to stop the stop button).

Button two (aan/ON HOLD as hold contact). By pushing this button the system will be activated, by pushing it again the system will deactivate (or you push to stop the stop button).

Button three. With this button you stop the system.

The switching positions 0-II (applicable to all switches) energize the following solenoid (provided that they have been connected correctly):

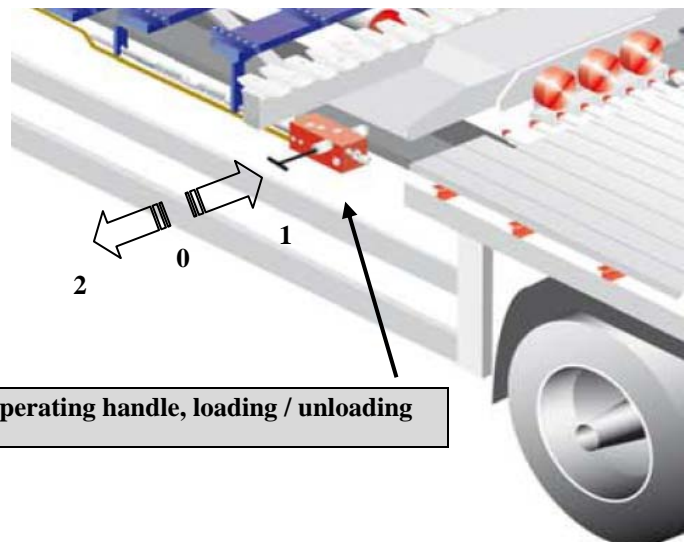
- **Position I (On):** only the solenoid of valve A (GS02) is energized.
- **Position 0 (Stop):** no solenoids may be energized.

LOADING – UNLOADING FUNCTION

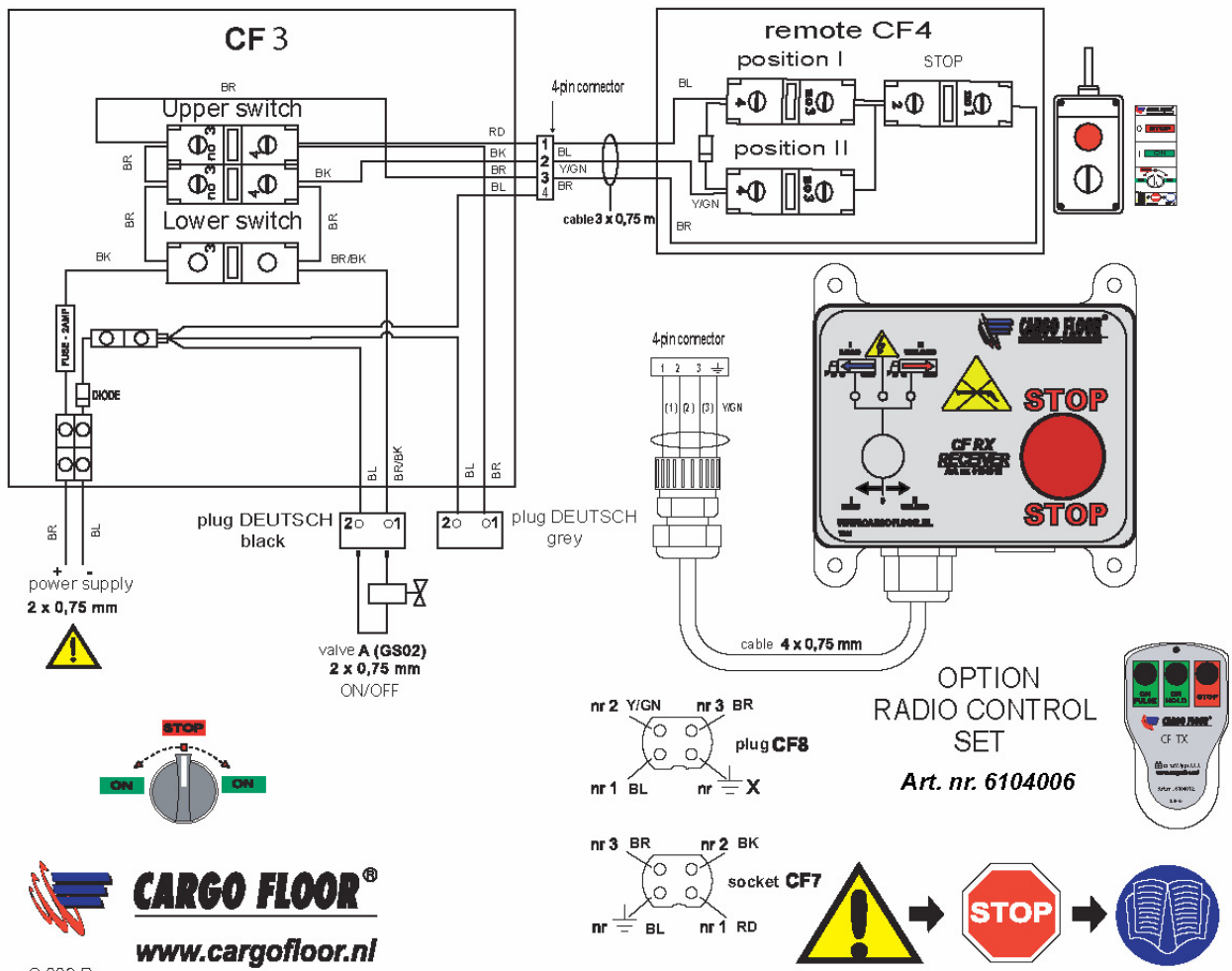
The loading or unloading modes can be selected using the handle located under the trailer, see the illustration.

The position of the handle:

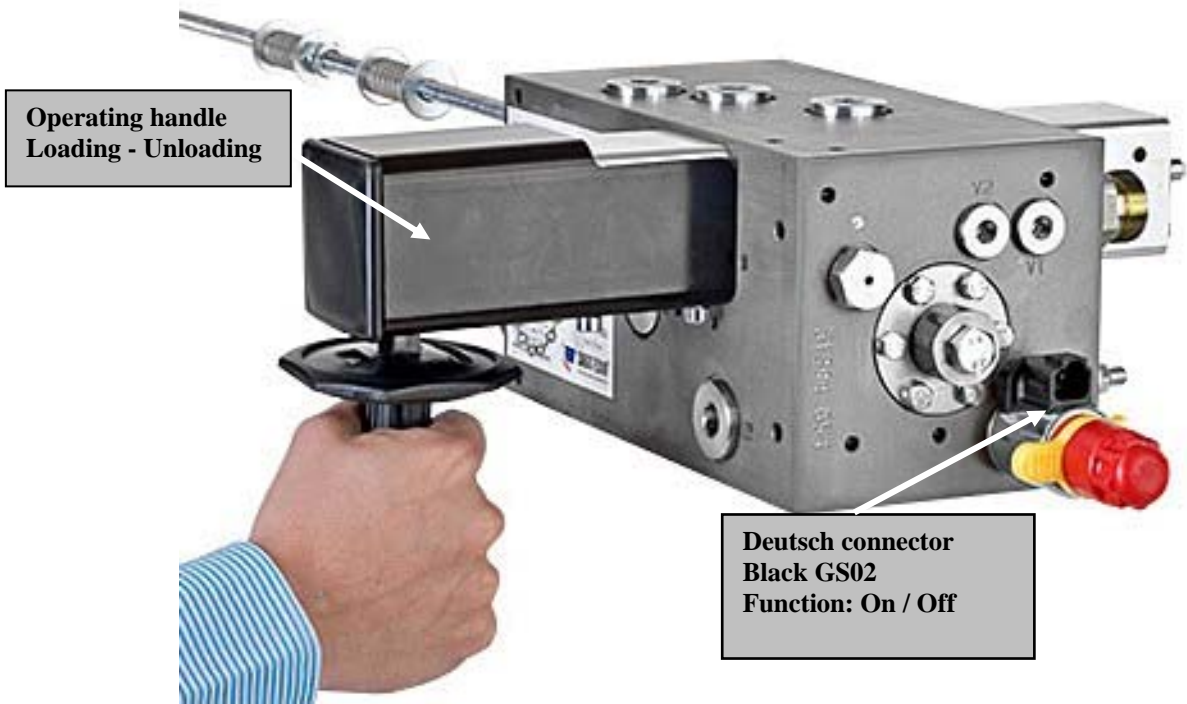
- 0** handle in the middle position; floor is stationary
- 1** handle pushed in; floor will unload
- 2** handle pulled out; floor will load



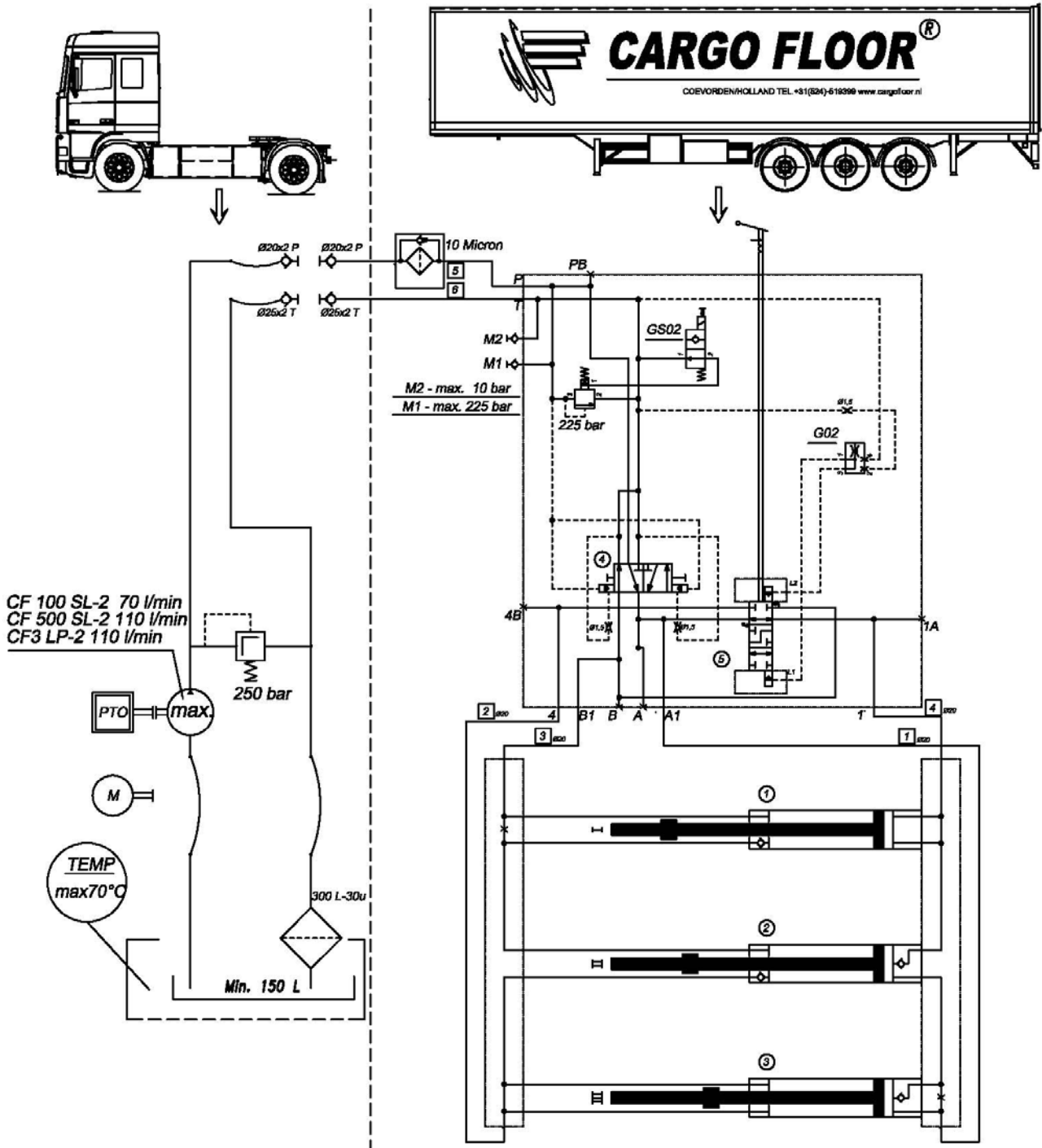
ELECTRICAL CIRCUIT DIAGRAM “B”-CONTROL



CONTROLE VALVE “B”-OPERATION



HYDRAULIC CIRCUIT DIAGRAM “B”-CONTROL



CONTROL OPTIONS “A”-CONTROL

Units fitted with A-controls do not include a separate on/off switch for the Cargo Floor system; the floor will begin to move once the Pump/PTO is switched on. The direction in which the floor moves will depend on the position of the operation valve mounted under the trailer.

LOADING – UNLOADING FUNCTION

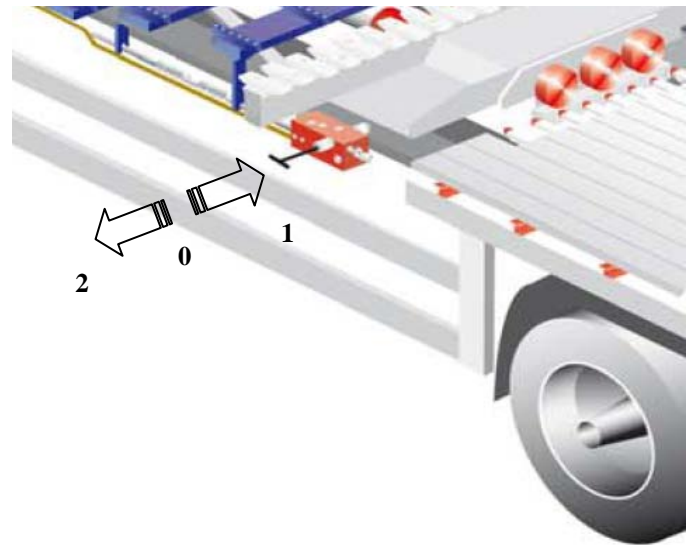
The loading or unloading modes can be selected using the handle located under the trailer, see the illustration.

The position of the handle:

0 handle in the middle position; floor is stationary

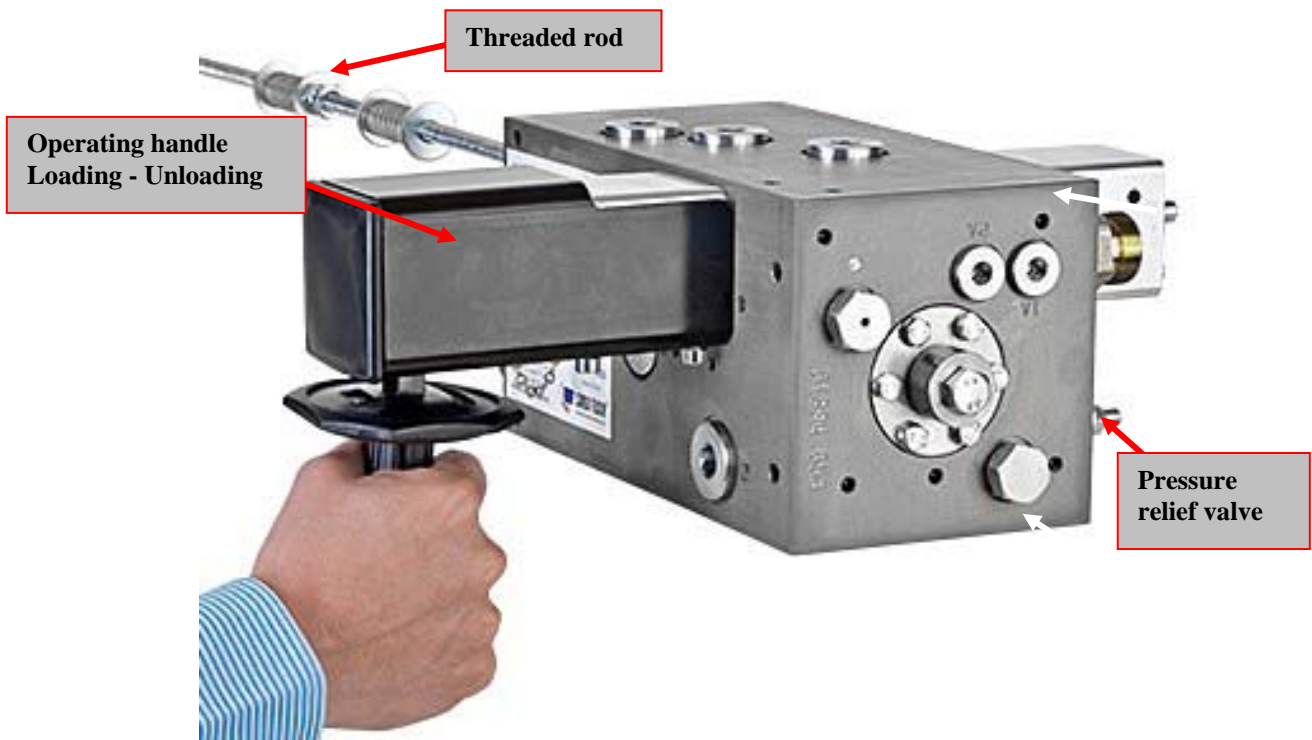
1 handle pushed in; floor will unload

2 handle pulled out; floor will load

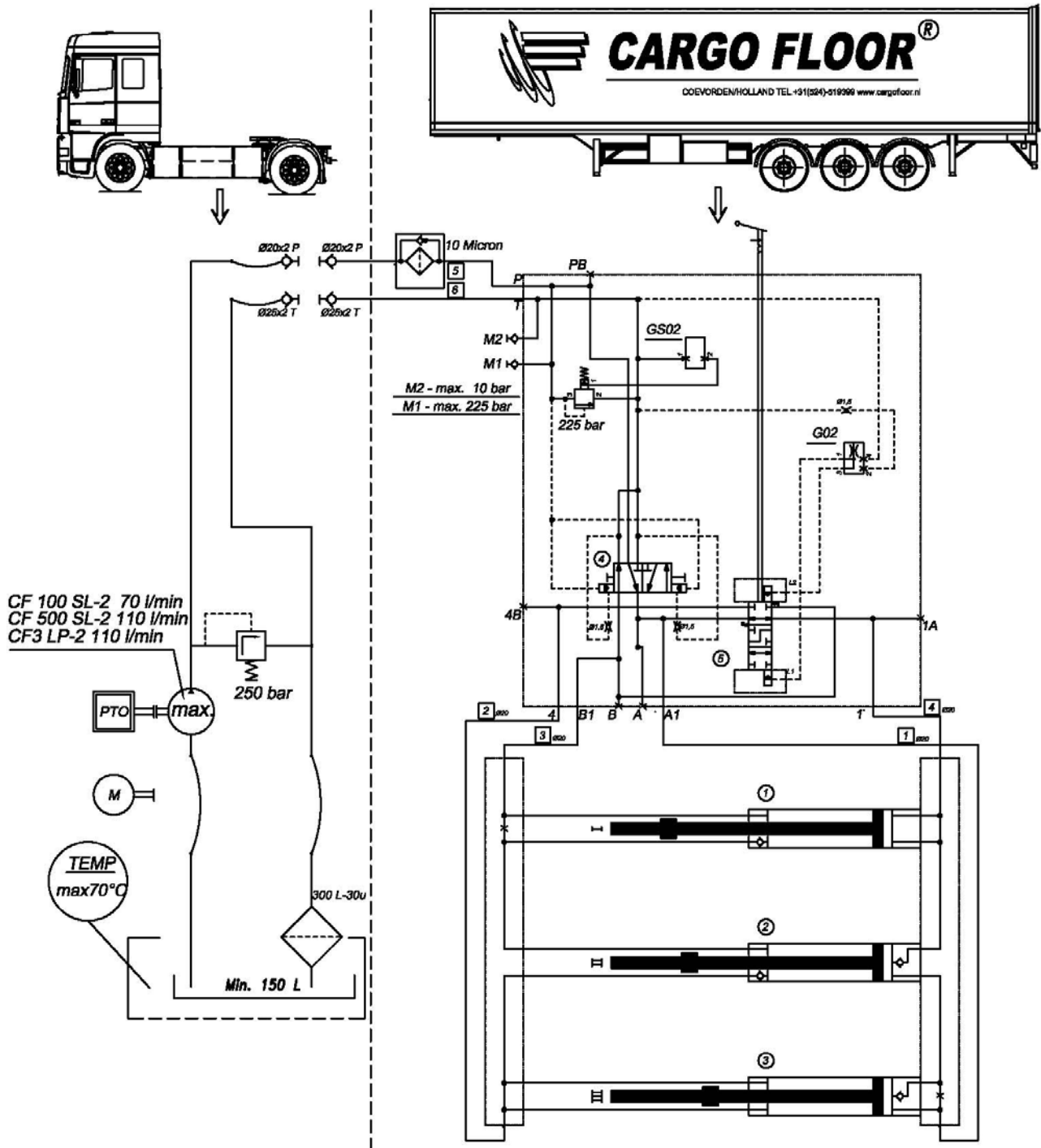


WARNING ! SWITCHING ON THE PUMP/PTO WILL START THE FLOOR MOVING!

CONTROL VALVE “A”-CONTROL



HYDRAULIC CIRCUIT DIAGRAM "A"-CONTROL



CARGO FLOOR TECHNICAL SPECIFICATIONS

- System operation** : completely hydraulic, with three double-action cylinders.
System control : completely hydraulic mechanical.
Operation control : fully automatic loading – stop – unloading or manually loading – unloading electrically on – off (option A/B control)

	CF500 SL-2(i)	CF100 SL-2(i)	CF500 SL-2 Power Speed	CF3 LP-2 (leak proof)
Bore (mm)	100	80	100	125
Piston rod diameter (mm)	45	35	45	60
Stroke (mm)	200	150	200	150
Cylinder volume (ltr.)	2.82	1.36	2.82	3.26
Oil volume per cycle (ltr.)	8.46	4.09	8.46	9.77
Over pressure valve threshold, max. operational pressure (bar)	225	175	225	150
Strokes per minute with advised pump capacity	13	17	21	11
Speed (mtr. / min) with advised pump capacity	2.6	2.6	4.2	1.7
Advised pump capacity:				
Flow (ltr./min)	110	70	180	110
Pressure (bar)	250	200	250	175
Max. pump capacity:				
Flow (ltr./min)	130	80	200	170
Pressure (bar)	250	200	250	175
Speed at maximum pump capacity (mtr. / min.)	3.1	2.9	4.7	2.6

- Control valves** : 24V DC (Applies only to E and B control.)
Throughput variation : Completely variable speed by use of oil flow determined by the revs of the motor or by various pumps. Pay attention to the diameter of the choke, see page 22.
Drive : use of the PTO/pump on the truck; an electro-hydraulic aggregate or an hydraulic aggregate with an external combustion engine.
Filter : pressure filter type: high-pressure 10 micron (part number 7372005).
Pressure piping : Ø 20 x 2 feed through 16 mm
Return piping : Ø 25 x 2,5 feed through 20 mm
Oil ISO VG 32 b.v. : Shell Tellus T32 or ESSO Unavis 32 (or equivalent).
Only use biological oil after agreement by Cargo Floor
Biological oil : A biological oil of the type synthetic ester (HEES) can be used as standard with the Cargo Floor system. **We advise you not to use other types of biological oil.**
Oil temperature : max. 70 ° C

Floor

Aluminium floor profiles : - plank length negotiable
- floor thickness 3, 6, 8, 10, HDI 8/18 mm. HD 8/20 mm; Semi Leak Proof.
- profile width 111,9 mm / double seal profile 114,8 mm
- moving floor width standard 2.355 mm for an inner width of 2.500 mm

Extrusion alloy : high quality Aluminium-alloy, weldable, very wear-proof and tensile

Guiding : The aluminium floor profiles are borne by wear-free plastic guides (TWISTER) or by plastic guide cams.

Guide bearing surface : the total bearing surface of each guide (TWISTER) is 87 cm²
Total bearing surface of each guiding block of the plastic cam guide is 60 cm². Total guide surface area is determined by the total number of guides, which can be varied as required.

Under floor : Steel as well as aluminium. The plastic guiding can be provided with square tubes 25x25x2 or the plastic cam guides can be mounted directly on the under floor.

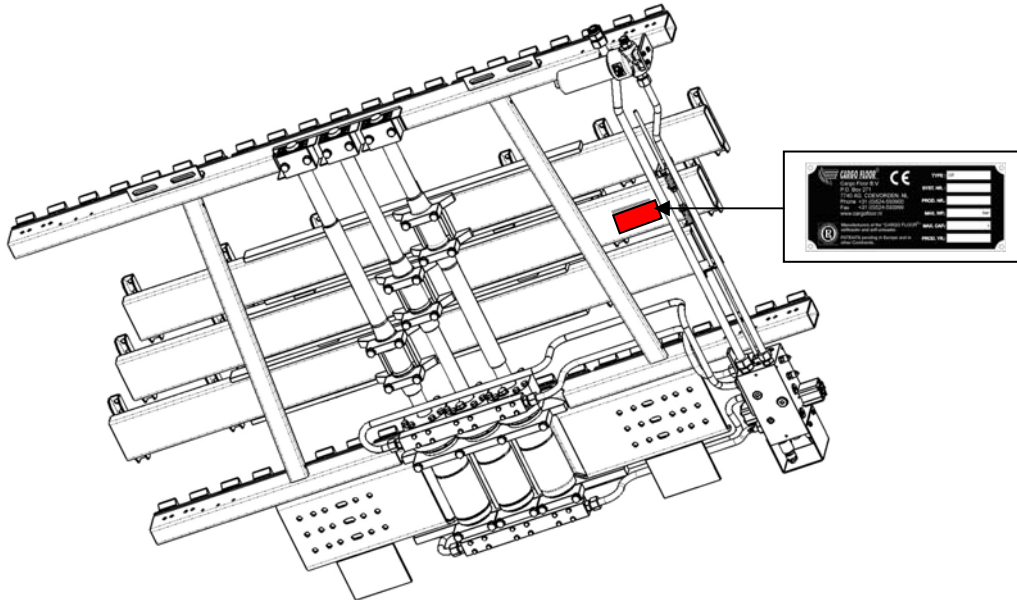
OPTIONS:

- (i) module for connecting to Blackbox
- Variable stroke from 10 mm to 200 mm
- Can be connected to PLC
- Solenoids 12 V or 220 V (24 V=standard)
- Steel floor parts, steel clad floor parts
- Floor width and length in consultation, can be any width required
- Aluminium end caps for floor profiles
- Completely smooth profiles are available for special products. Floor thickness 6, 8 and 10 mm.
- Protective roll-up cover;
- Wireless remote control with on/off and/or loading/unloading functions (part number 6104006);
- Cargo Floor in combination with other loading/unloading systems
- Stationary applications in all versions
- Extra plastic guides.
- Electro- / hydraulic aggregates
- Diesel hydraulic aggregates
- Multiple bulkheads for partial loads
- Termically zincd subframe
- Lacquered preserved moving cross members

PUMP SPECIFICATIONS

The pump unit used to power the Cargo Floor system must comply with the following specifications:

NOTE! Verify which unit is fitted!



	CF500 SL-2	CF100 SL-2	CF500 SL-2 Power Speed	CF3 LP-2
Pump capacity (in ltr./min)	110	70	180	110
Max. pressure (bar)	250	200	250	175

Oil tank, contents of min. 150 ltr. provided with:

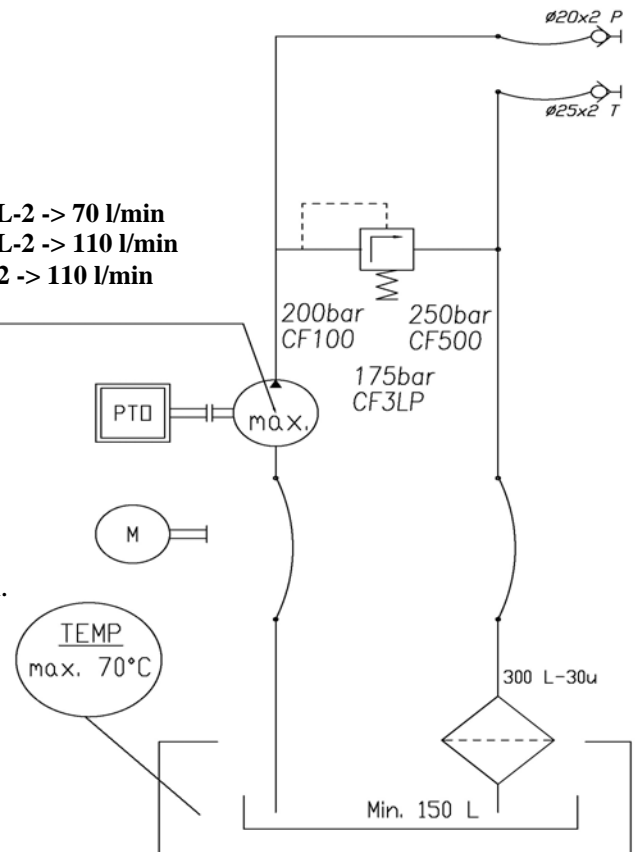
- return filter (30 micron) 300 ltr/min.
- tank cover
- oil level glass
- draining tap
- filling cap

CF 100 SL-2 -> 70 l/min
CF 500 SL-2 -> 110 l/min
CF 3 LP-2 -> 110 l/min

Pipes complying with the following requirements:

- pressure line min. 20 x 2 mm
- return line min. 25 x 2,5 mm
- quick-detachable couplings (suitable for 110 l/min.).

The pump volume determines the transport speed;
The pressure determines the force applied to the system.

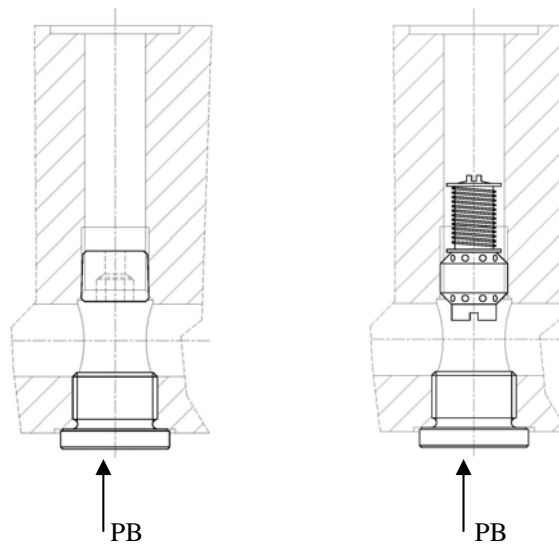
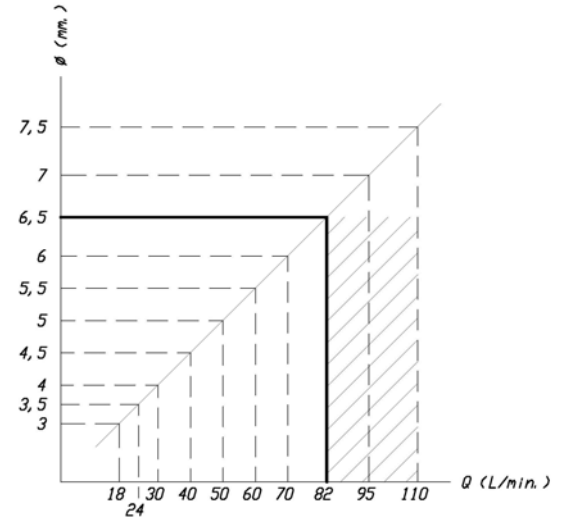


CHOKE:

There is a choke mounted as standard in the PB channel of the control valve. This allows the control valve to function correctly. This choke is suitable for an oil flow level of 80 to 110 litres per minute. The function of the control block 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 valve not switching;
- Oil flow too high: noise in system, high heat dissipation and capacity loss.



Flow independent choke

As an option a flow independent choke can be supplied (Article number 7370106). The standard mounted choke can simply be changed with these. You remove the cap out of channel PB (Allen key 12 mm) at the bottom of the control valve. After this you screw the choke out of the channel with allen key 12 mm. Screw the new (flow independent) choke in the channel and fasten these by hand (about 15 Nm.). Screw the cap back into channel PB (allen key 12 mm.) and fasten these by hand (about 50-75 Nm). Let the floor run (loading and unloading) in order to check if everything is functioning well and no leakage occurs. The flow independent choke has a flow range of 20-110 ltr./min. and is suitable for a maximal work pressure of 225 bar.

For both types of chokes applies: connecting the pressure and return wrongly will result in a malfunctioning of the system and the filter element will permanently be damaged.

B- control

An other possibility to be independent from a variable oil flow is using a B-control. With this the loading/unloading direction is determined by a handle.

Transforming the E control to a B control (or the other way around) can simply be done with a so called transformation set (set from E to B: part number 7170039).

EMERGENCY CONTROL

In the event of a malfunction in the electrical system the electric valve can still be operated by activating the cartridge fitted for that purpose (manual control, see photo).

MAKE SURE THAT THE DOORS ARE OPEN!

When using this manual control you must always ensure that it switched back to the original, NON-ACTIVATED condition after use.

Activation of the emergency control on:

Remove the yellow security clip and turn in (clockwise) the red button on top of the GS02 solenoid till the stop (first remove the yellow security clip and put it back in place after the action).

Deactivation of the emergency controls:

Turn out (counter clockwise) the red button on top of the GS02 solenoid until the click and place back the yellow security clip.



Activation of the emergency control loading (floor will only be able to load):

Screw the black cap off (pay attention to the O ring).

Turn out (counter clockwise) the screw under the cap of the G02 till the stop.

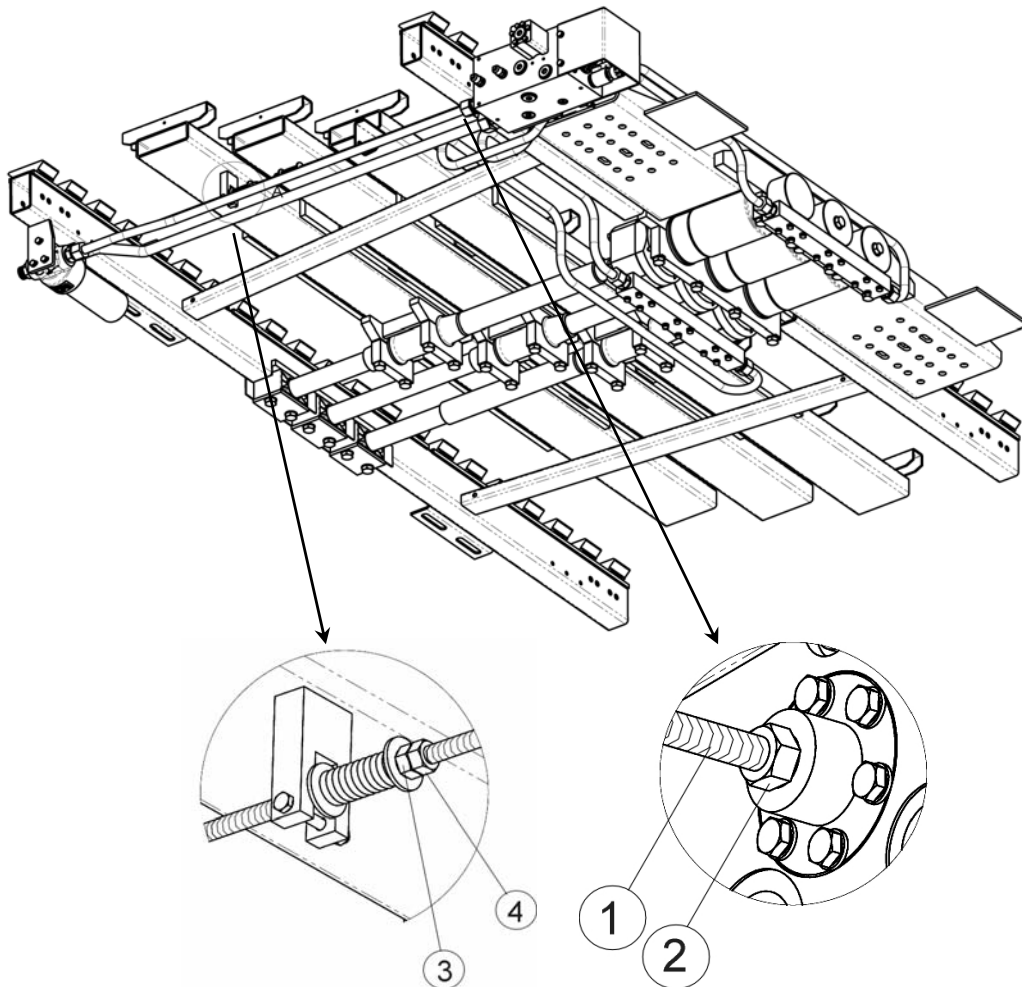
Deactivation of the emergency control loading:

Turn in (clockwise) the screw under the cap of the G02 till the stop.

Screw the black cap back on (pay attention to mounting the O ring).



ADJUSTMENT OF THE THREADED ROD OF THE STEERING VALVE



The Cargo Floor systems are already adjusted and tested when you take them over. You therefore do not need to adjust them anymore, but in certain circumstances (moved combination valve) it may be necessary to check the adjustment.

The pump and electrical installation must always be switched-off when working on the system; in addition, the hoses and/or pipelines between the pump and the Cargo Floor should also be disconnected. Check the oil level after when the work on the system is done.

Necessary tools:

- 2x spanner 17;
- High viscosity oil;
- Copper grease;
- Steel brush.

Check that the wire rod is fastened securely to the steering valve, stroke exactly 12 mm. If not, then screw the wire rod (1) as far as possible into the plunger and secure this with the contra nut (2) (spanner size 17). Loosen nuts (3 and 4, spanner size 17) and move these about 3 cm in the direction of the steering valve. Now switch the pump on. The system will stop now at the point where the command lip no longer operates the switchover valve. Switch off the pump.

Now push the wire rod (1) in until the spacer ring touches the switchover valve. Tighten nuts (3 and 4) so that the spring is fully pushed in, and secure them by tightening them against one another. Repeat this procedure for the other side.

N.B. It is worthwhile spreading some copper grease on the wire rod (1).

MAINTENANCE INSTRUCTIONS

When works require turning on the floor you should take care of that the floor can be shut down immediately at any time. Places where clamping/clasping of body parts is possible may not be approached when the system is moving.

For more detailed explanation of the execution of the works we would like to refer you to our website:

www.cargofloor.nl  

Check for the end user after receipt of the new trailer:

Check the join between the aluminium floor profiles and the Cargo Floor-system. You do this by placing your finger half on the bolt and half on the floor profile when the floor is operating. If you feel movement in the bolt connection then the bolt should be removed, cleaned, fitted with Loctite and mounted again, or be replaced. Do not simply just tighten the bolts, the Loctite connection will be broken. If bolts are loose, we would like to refer you to our website:

www.cargofloor.nl  

. Check this a couple of days after receipt of the trailer, after 10 loads / unloads and after one month.

Specifications of the screws: M12 x 30 countersunk screws with hexagon socket, class 10.9, galvanized. DIN 7991. (dacromet). The torque is 100 – 140 Nm.

Regular checks:

To ensure that your Cargo Floor system operates reliably and has a long life, it is important that you regularly perform careful checks on the following aspects:

- The quality of the oil; this must be cleaned regularly (check every ½ year)
- Replace the filter element every year;
- Change the oil every 2 years, or more frequently if required;
- The level of oil in the tank. In order to prevent heat developing it is required to have at least 100 liters of oil in the tank. Out of practical experiences (high flow, frequently loading and unloading) we advise you to have at least 150 liters of oil available. Use a good quality, hydraulic oil in accordance with the ISO VG 32 norm.

Check and, if necessary clean the following components:

- Floor profiles: are they still fixed, replace screws/bolts if necessary!
- Check the ducts and joints of all hydraulic components, and adjust if necessary!
- Oil tank: by taking the lid off the tank, you can remove any remains (condensation, dirt etc.) from the bottom.
- Return-/pressure filter: by removing the filter lid/ chamber you can check the filter element, or after about one year replace it.
- Check the seal between the two fixated floor profiles and the moving profiles. If a margin exist in between, then adjust the fixated floor profiles, in order for the sealing to be optimal and leakage via the side walls is prevented.

This is all necessary to avoid internal wear (of the pump/cylinders etc., for example).

New filter parts are available at your system builder. For the right type we refer you to our “exploded views” which you can find on our website:

www.cargofloor.nl    

We want to emphasize that the minimal costs of replacing dirty parts or oil do not match the costs and discomfort that can proceed out of this.

- Adjusting the threaded rod of the steering valve;
It is important that the steering valve is correctly adjusted and that the switchover moment occurs according to the procedures. See page 22.

Cleaning the floor parts with a steam cleaner is also part of the regular preventative maintenance, especially with the so called SLP profiles this is mandatory to clean the large gully regularly.

TROUBLESHOOTING

In the event of the failure of the Cargo Floor system to operate (in the correct manner) when used in accordance with the operating instructions carry out the following checks:

malfunction	cause	remedy
1. floor does not move in either the loading or unloading direction	No hydraulic pressure	<ol style="list-style-type: none"> 1. Switch on PTO / pump 2. Check quick-detachable couplings between tractor unit and trailer; where relevant, lock in position
2. floor does not move in either the loading or unloading direction; the hydraulic system is at working pressure	No power supply	<ol style="list-style-type: none"> 1. Switch on lights 2. Switch on control cabinet 3. Measure power supply to control cabinet
3. no power supply to the control cabinet; the lights are switched on	Break in cable, contact points corroded, system connected wrongly	Trace the cause of the electrical malfunction in the circuit between the control cabinet and the trailer lighting. See 6 and 7 also.
4. floor does not move in either the loading or unloading direction; the hydraulic system is at working pressure, and power is supplied to the control cabinet	Blocked quick-detachable coupling – note, also the return line!	Check the quick-detachable couplings, and unblock if necessary
4a. floor does not move in either the loading or unloading direction; the hydraulic system is at working pressure, and power is supplied to the control cabinet	Hydraulic oil released via the pressure relief valve fitted to either the tractor unit or the system	Check whether oil is released via the pressure relief valve fitted to either the tractor unit or the trailer. This can be determined from the hissing sound made by the valve.
4b. pressure relief valve on the tractor unit is activated	System does not achieve working pressure	<ol style="list-style-type: none"> 1. If a tipping valve is fitted, is it in the correct position? 2. Measure the pressure at the pump, have the pressure adjusted if necessary.
4c. pressure relief valve on the semi-trailer switches	Measure the pressure at measurement point M1, pressure (above) 225 bar	<ol style="list-style-type: none"> 1. Check the setting of the threaded rod 2. Capacity of the system is insufficient to move the load.
4d. capacity of the system is insufficient to move the load	<ol style="list-style-type: none"> 1 frost 2 overloaded 3 floor is dirty 	<ol style="list-style-type: none"> 1. Thaw 2. Remove part of the load 3. Clean the floor once the load has been removed
5. floor does not move in either the loading or unloading direction; the hydraulic system is at working pressure	Measure pressure at M1 Pressure = 0-10 bar	<ol style="list-style-type: none"> 1. Move threaded rod backwards and forwards 2. GS02 on/off cartridge does not switch Activate the emergency control.

malfunction	cause	remedy
6. GS02 on/off cartridge does not switch	No power	<ol style="list-style-type: none"> 1. Check power supply 2. Check voltage across solenoid Activate the emergency control.
7. GS02 on/off cartridge does not switch	Solenoid inoperable <ol style="list-style-type: none"> 1. Corroded contacts 2. Solenoid defective 3. Breach in the cable 	<ol style="list-style-type: none"> 1. Clean contacts 2. Use emergency control, see Emergency control section 3. If the loading function is not used, then swap the solenoids for GS02 and G02; note the plugs must also be swapped
8. floor moves in loading direction when either loading or unloading is selected	Emergency control G02 is in the loading position, the extreme position	Deactivate the emergency control.
9. floor moves in the loading direction when loading is selected, but does not move when unloading is selected	Plugs are connected the wrong way round on the solenoids	Reverse the plugs
10. floor does not move when loading is selected, but does move when unloading is selected	See point 6 or point 7	See point 6 or point 7. <ol style="list-style-type: none"> 1. Check the flow, see page 21.
11. all three floor groups simultaneously move backwards and forwards under high pressure when unloading is selected	Capacity of the system is insufficient to move the load.	See point 4d <ol style="list-style-type: none"> 1. Thaw 2. Remove part of the load 3. Clean the floor once the load has been removed
12. all three floor groups move correctly when unloading is selected, the individual groups move slowly whereby group 2 and 3 move together	Capacity of the system is insufficient to move the load.	See point 4d <ol style="list-style-type: none"> 1. Thaw 2. Remove part of the load 3. Clean the floor once the load has been removed
13. other malfunction	-	Contact your body builder; make sure you have the system number available when you do so

GUARANTEE CONDITIONS

Guarantee shall only be given with the prior consent of Cargo Floor B.V.! With guarantee requests always fill in and send a guarantee request form to Cargo Floor B.V. beforehand. You can fill in a request for guarantee simply on our website:

www.cargofloor.nl  >  TECHNICAL INFO & DOWNLOADS  Guarantee form 

The guarantee conditions, as specified in the most recent “Metaalunie” conditions, filed with the registrar of the District Court of Rotterdam, are applicable in unabbreviated form. On request available.

A short extract of these conditions follows:

A guarantee period of 12 months (starting directly after installation) applies for all Cargo Floor system materials supplied by us. In the case of malfunction and/or manufacturing faults we are only responsible for the costless supply of replacement parts, if:

- The Cargo Floor system is installed by your trailer builder according to our installation procedures.
- Our maintenance and control procedures have been followed.
- In the case of a malfunction, the system builder, or Cargo Floor have been informed

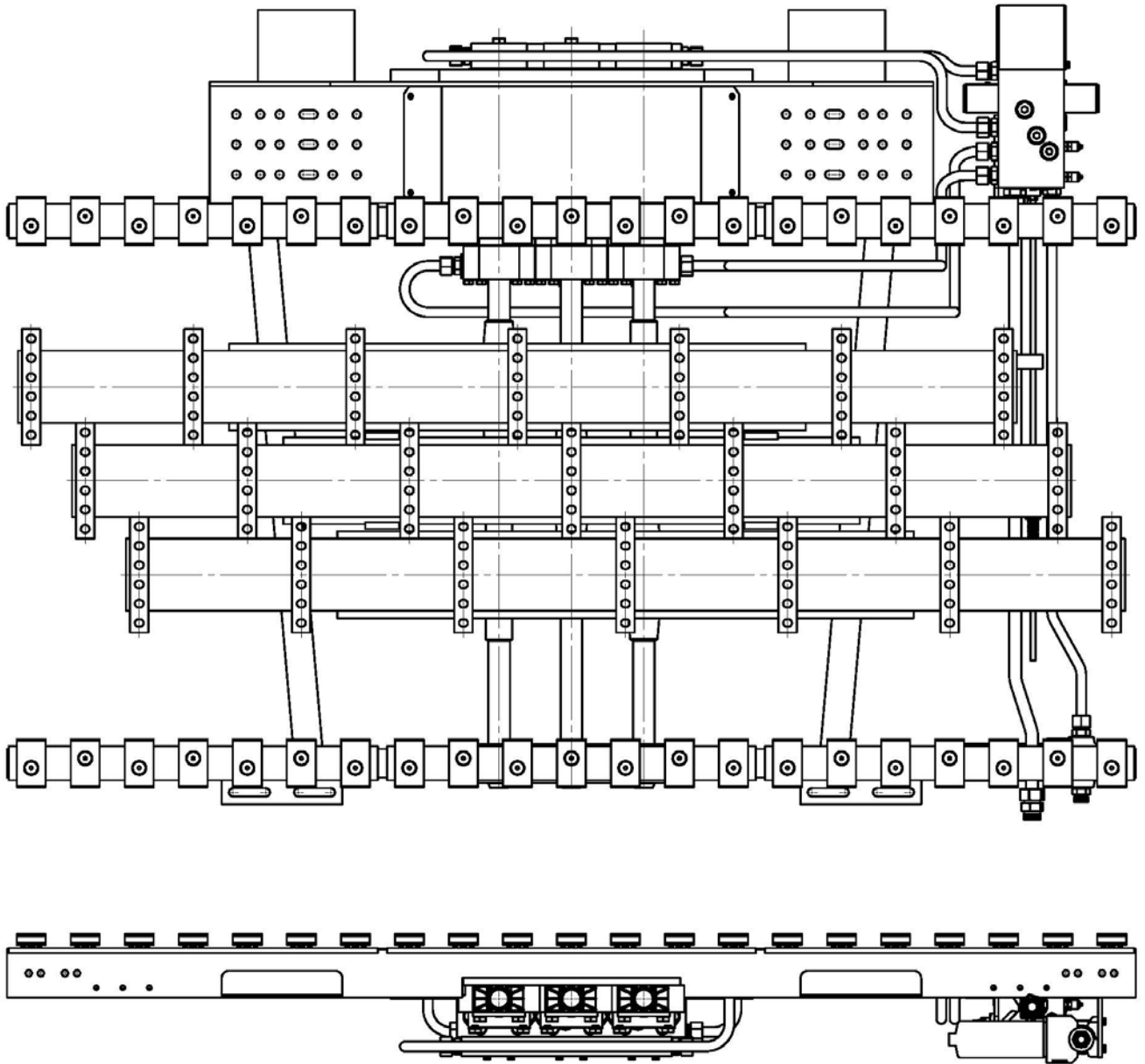
The following components are not covered by the guarantee:

- Malfunction of equipment, or caused by equipment, which was not supplied by Cargo Floor.
- Malfunction caused by the use of dirty oil, or oil of the wrong type.
- Malfunction caused by overheated oil, T. max. ≤ 70 °C.
- Malfunction caused by overloading or injudicious use.
- Malfunction caused by repair work, which is carried out by third parties.
- Filter elements and components, which are subject to wear-and-tear.
- Defects in electrical components due to incorrect connection and/or incorrect voltage levels.
- Resulting damages

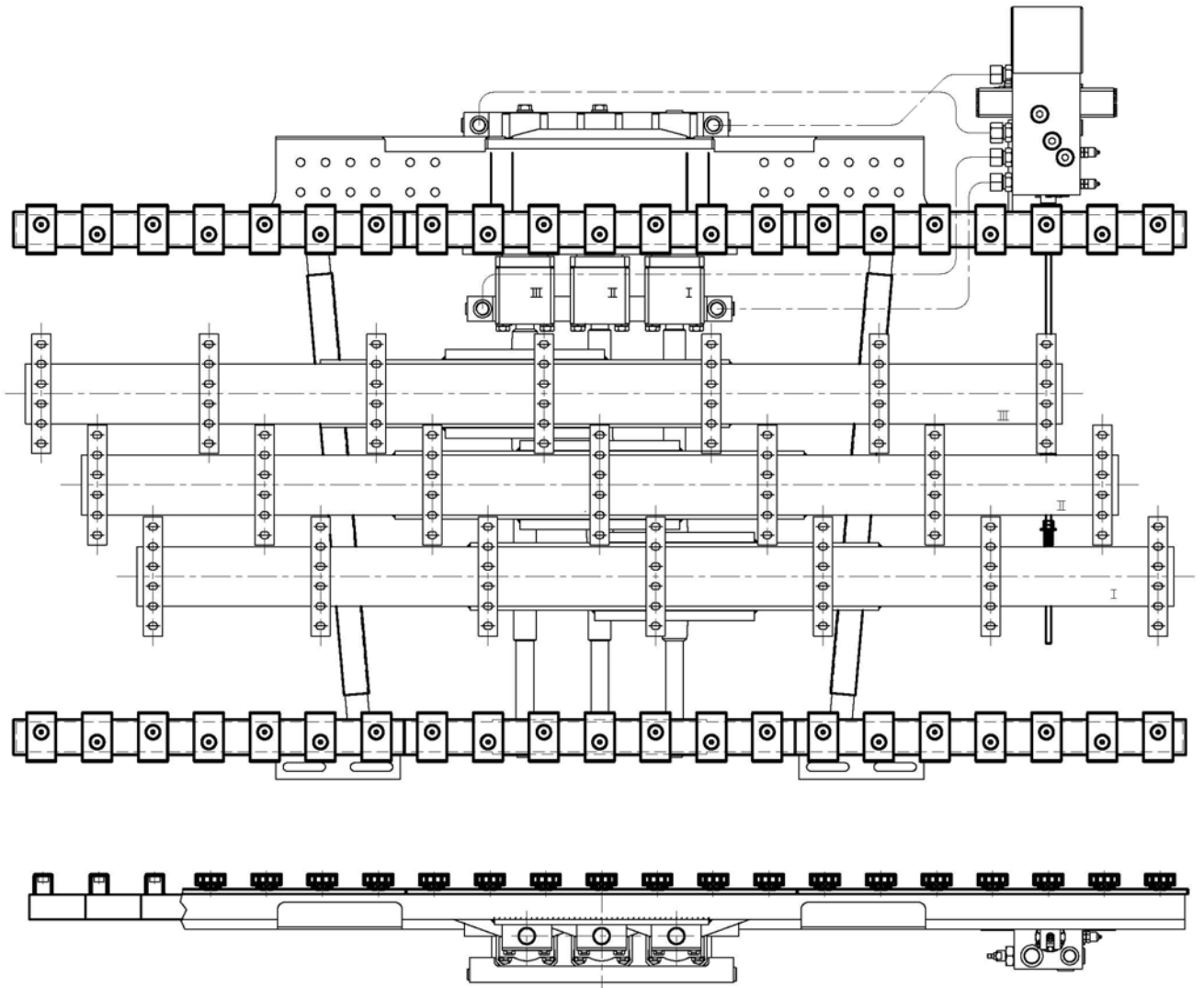
The guarantee is void if:

- The system is used for purposes, which have not been recommended by Cargo Floor
- The Cargo Floor system has not constructed correctly by your trailer builder, insofar as this has a negative influence on the operation of the system.

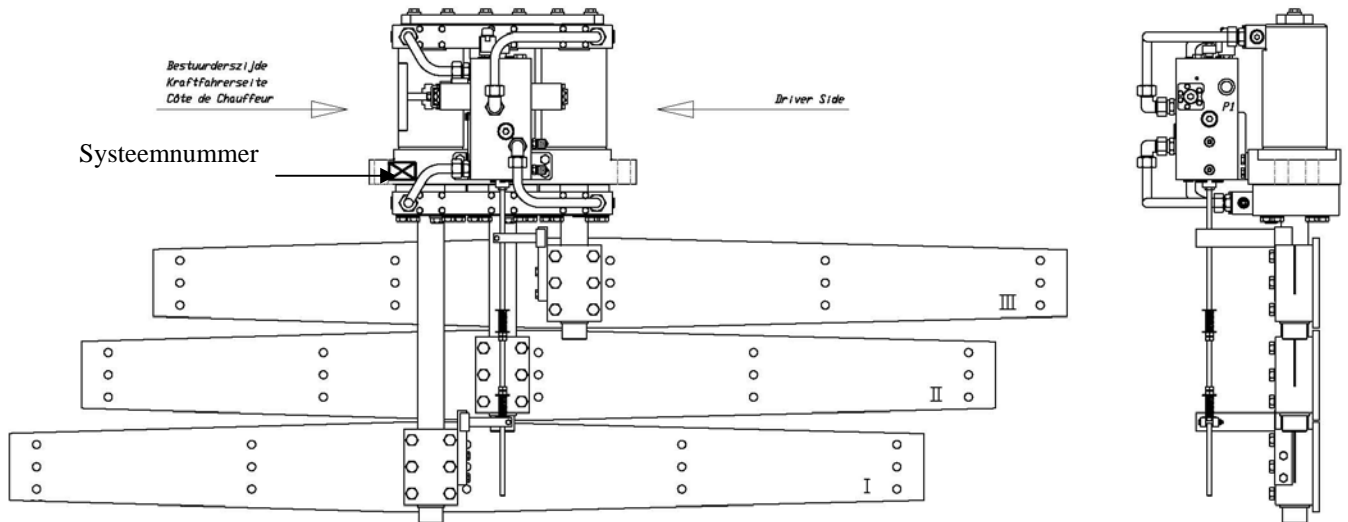
DRAWING OF THE CARGO FLOOR CF500 SL-2



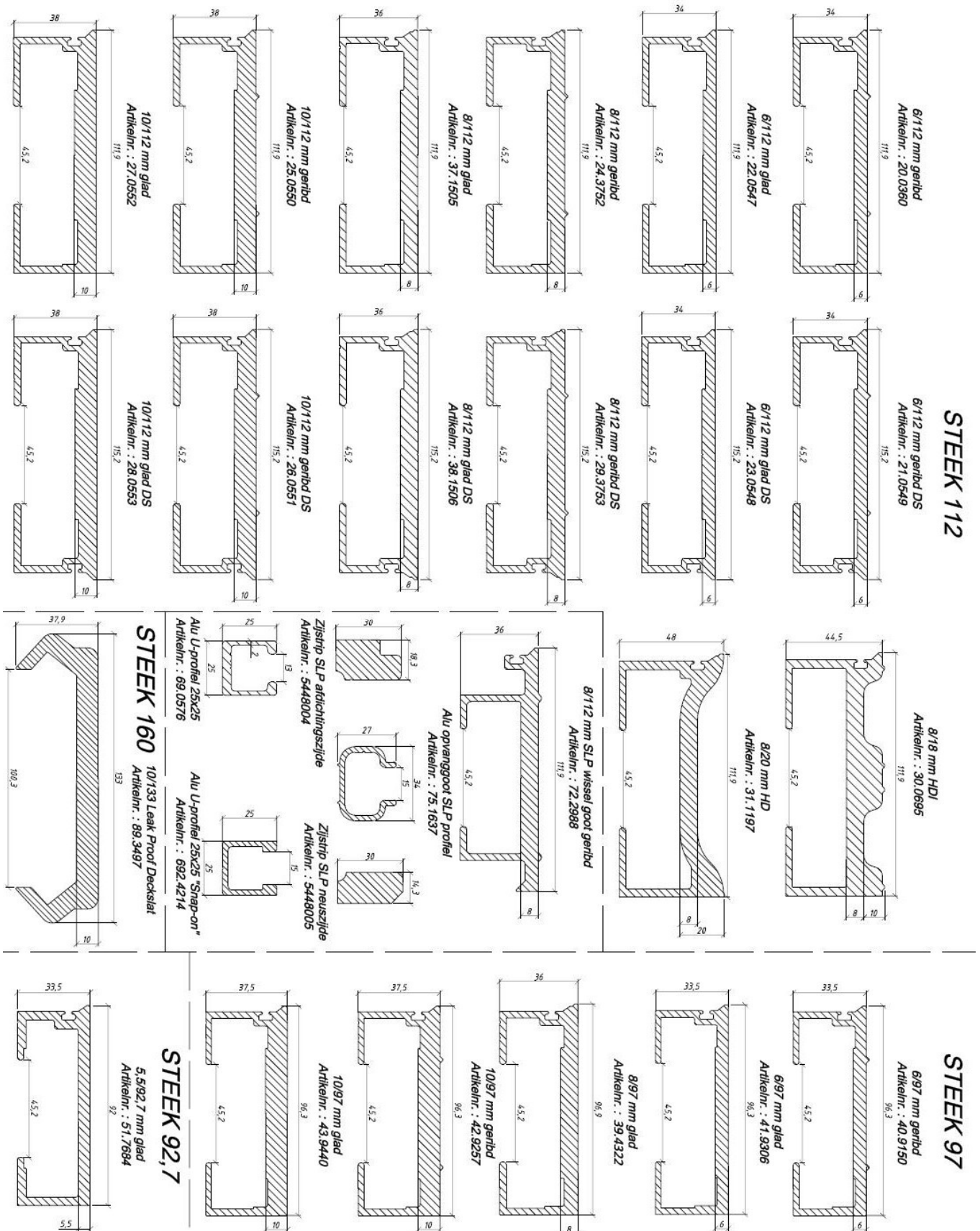
DRAWING OF THE CARGO FLOOR CF100 SL-2



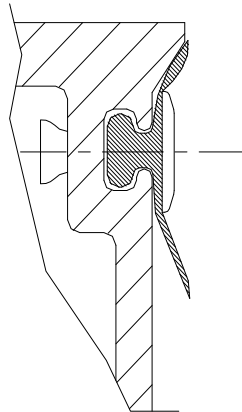
DRAWING OF THE CARGO FLOOR CF3 LP-2 15/160



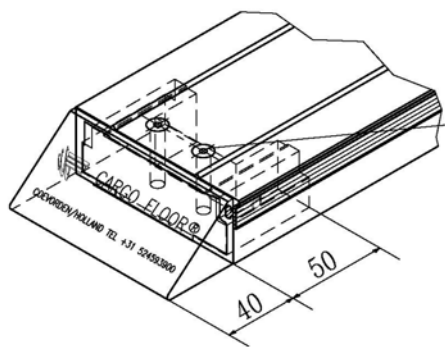
PROFILES TYPES



ATTACHMENT OF FLOOR PROFILES, SEALS AND END CAPS



Plastic end cap



Aluminium end cap

