

CARGO FLOOR®

Assembly instructions

CF100 SLL

Cargo Floor B.V.

World's leading manufacturer and supplier of horizontal loading- and unloading transport conveyor systems.

INTRODUCTION

The assembly instructions outlined in this book will enable you to assemble the Cargo Floor moving floor system you have purchased correctly. Every effort has been made, by means of diagrams and text, to ensure a clear and simple installation. To ensure the durability and reliability of this revolutionary loading and unloading system, it is important that you follow the assembly instructions as outlined in this book completely, and use quality materials in accordance with the specifications. Please note that the guarantee is only valid if the Cargo Floor transportsystem has been assembled in accordance with these assembly instructions. The latest available version can always be found on our internet site:

[www.cargofloor.com, downloads](http://www.cargofloor.com/downloads)

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

(ADDITIONAL) INSTRUCTIONS

The following (additional) instructions are available next to these instructions:

Assembly CF500 SLC

Assembly CF500 SLC Power Speed system

Assembly CF500 SLC Leak Resist Centre drive

Assembly CF500 SLC 15/156,8 XHDI / HD

Assembly CF3 LP-2 15-160

Assembly CF800 system

Assembly Semi Leak Proof (SLP) system

Assembly Protected Seal 156,8 mm. [6.17"]

Assembly steel L-shape 4 mm. [0.16"] floor

The latest available version can always be found in the downloads section on our internet site:

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ATTENTION: CHOOSE THE SYSTEM TYPE THAT YOU ARE BUILDING IN!!

Subject	Drawing
System CF100 SLL 21-112	S1
System CF100 SLL 21-112 WLB	S2
Hydraulic drawing CF100 SLL A	H1-A
Hydraulic drawing CF100 SLL B	H1-B
Hydraulic drawing CF100 SLL E	H1-E
Proposal drawing hydraulic connections CF100 SLL	H2
Electric drawing E	E1
Electric drawing B	E2
Control valve E	BV1
Control valve B	BV2

IMPORTANT RECOMMENDATIONS AND GUIDELINES

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/downloads

- 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 moving 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 moving 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 transport conveyor 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 you 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.

 **If the indications in this manual, as well as those stated in the user manual, are not followed this could result in damages and/or injuries.**

WARRANTY

Warranty is subject to prior approval by Cargo Floor B.V.! To request warranty coverage, visit www.cargofloor.com, After Sales, guarantee request 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 STOP

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;

IDENTIFICATION PLATE

General extended identification plate

Next to the system number the Cargo Floor order number will be mentioned and a field with 9 digits has been added in which we can, if required, put your identification or order number.

Numbers are automatically provided with a barcode; this makes it possible for you to scan the required data.

Short small identification plate

An extra identification plate has been mounted near the rear bridge, above the threaded rod of the control valve, so the system number can be read simply and swiftly at the outside of the trailer.

Paint and dirt protection

The identification plates are specially fitted with a double layer of transparent protective foil. The first protective foil has a lip with remains visible when the Cargo Floor system has gotten painted or exceptional dirty. This protective foil can simply be removed so the data is readable again and the second protective foil remains intact so the data remains protected.

 CARGO FLOOR® <small>HORIZONTAL LOADING-/UNLOADINGSYSTEM</small>		Cargo Floor B.V. Byte 14, NL-7741 MK Coevorden www.cargofloor.com	
Type	CF100 SLL	Max.WP.	175bar [2,538 psi]
Product	MOVING FLOOR®	Max.CAP.	20t [44,000lbs]
System no.			
CF SO.			
Client PO.			
Manufacturers of the CARGO FLOOR® selfloader and self-unloader World wide PATENTS pending!			



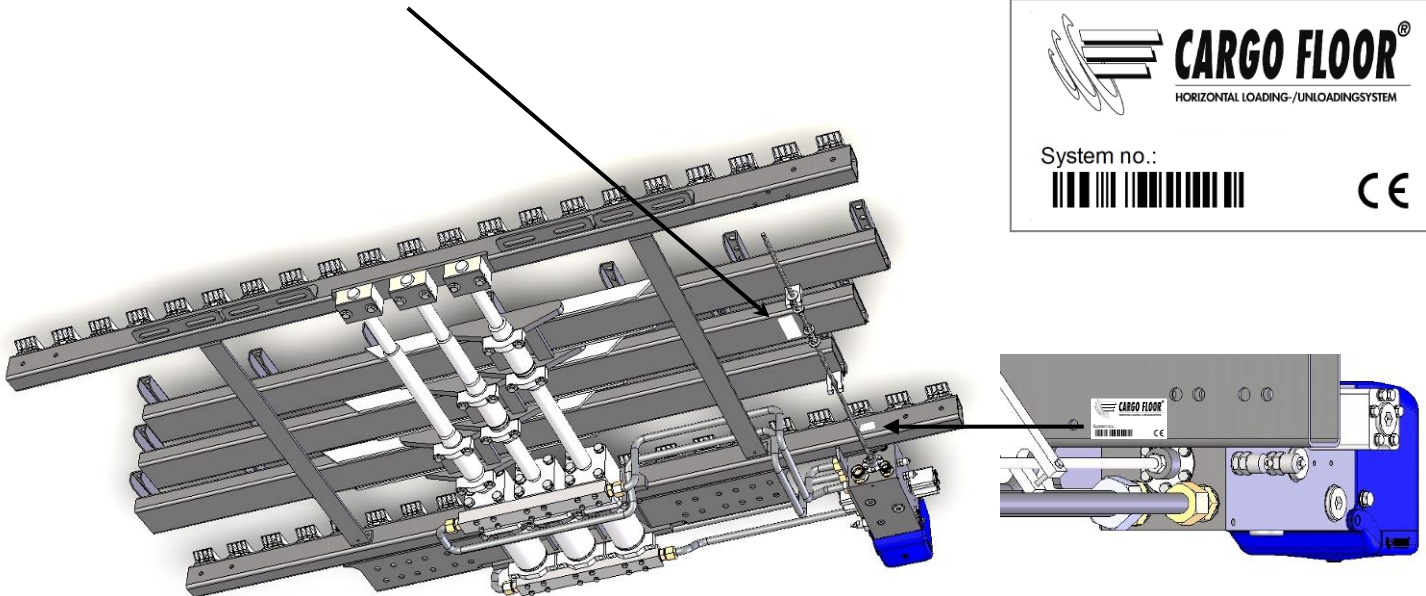



CARGO FLOOR®
HORIZONTAL LOADING-/UNLOADINGSYSTEM

System no.:







STICKERS

This WARNING STICKER/DECAL has been supplied with the drive unit in two fold. It should be attached near the control box and on the rear door in such a way that it is easy to read.


STICKERS/DECALS ON THE TRAILER:
A

Eng Important tips before the Cargo Floor system can be put into operation:

- 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.

D Wichtige Anweisung vor der Inbetriebnahme des Cargo Floor Systems:

- 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 des Cargo Floor System in die nicht aktivierte, neutrale Null-Stellung (0) zurücksetzen.
- Bei Wartungsarbeiten, alles ausschalten und die Hydraulik abkoppeln.

NL Belangrijke aanwijzing voordat het Cargo Floor-systeem in gebruik mag worden genomen:

- 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.

CAUTION CAUTION



KEEP CLEAR AT ALL TIMES !!






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www.cargofloor.com



Fr Indications importantes avant de pouvoir utiliser le système Cargo Floor:

- 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.

Esp Instrucciones importantes a seguir antes de poner en funcionamiento el sistema Cargo Floor:

- Siempre consulte primero el manual de instrucciones.
- Siempre determine y controle primero el sentido de transporte deseado.
- Cuidé 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.

It Istruzioni importanti a seguir prima di mettere in funzione il sistema Cargo Floor:

- Sempre consulte prima il manuale di istruzioni.
- Sempre determine e controlli prima il senso di trasporto desiderato.
- Cuidé 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.

CAUTION CAUTION



KEEP CLEAR AT ALL TIMES !!






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B

White/transparent



Black/ transparent



or

C

STICKERS/DECALS ON THE CONTROL BOX, ONLY WITH B- AND E-CONTROL:

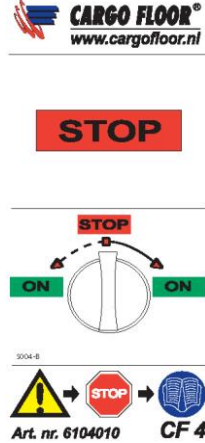


STICKERS/DECALS ON THE SWITCHES

Switch B-control



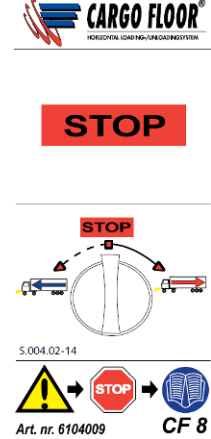
Switch B-control



Switch B-control

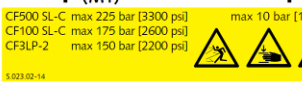
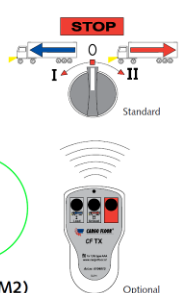
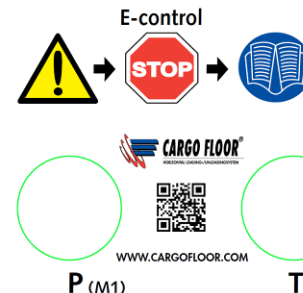
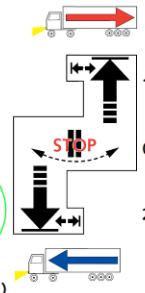
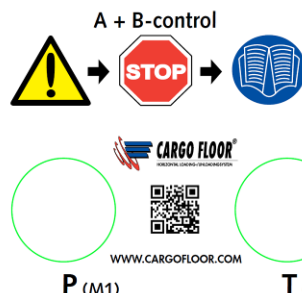
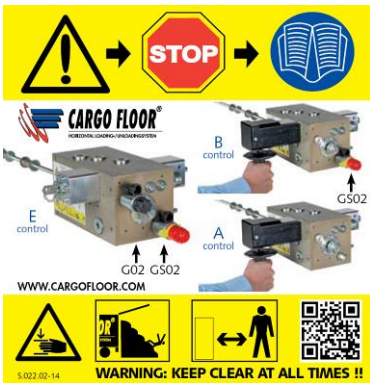


Switch B-control



D

STICKERS/DECALS ON THE SIDE OF THE TRAILER, NEAR THE DRIVE UNIT



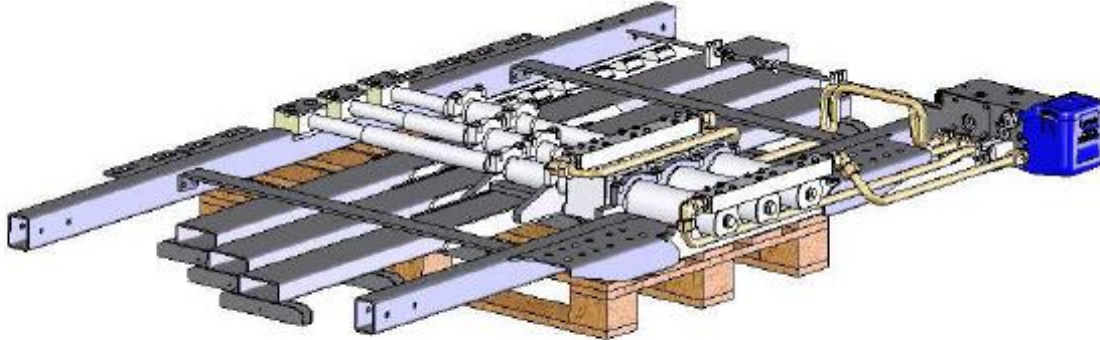
Only A + B-control



HOISTING INSTRUCTIONS

The Cargo floor system is supplied to you on durable pallets, see figure 1A, or in the specially designed transport racks.

FIG. 1



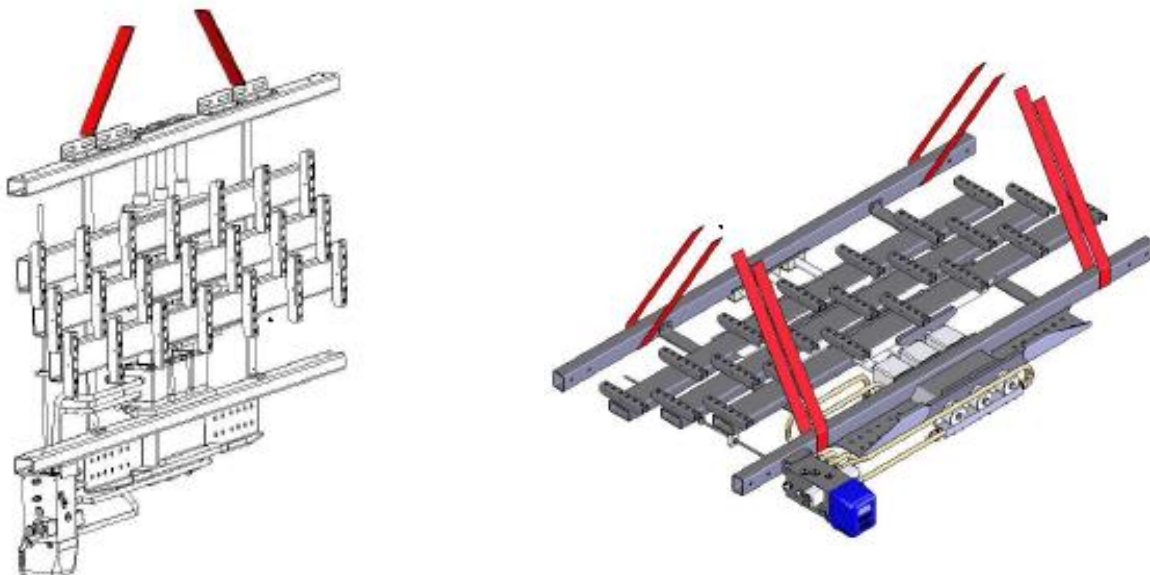
IMPORTANT

It is not permitted to lift the Cargo Floor system by the cylinders, moving crossmembers, valves or pipes. You must use the hoisting points when lifting the Cargo Floor system (as shown in figure 2). You need to pay particular attention that you use the right set of hoisting tools during lifting so that the cam guide and conduits do not get damaged.

The Cargo Floor system can be mounted directly on the chassis or frame. Great care must be taken while placing the Cargo Floor system to ensure that the system cannot slide away and cause danger and that there is absolutely no damage caused to the system.

⚠ Warning: Do not lift by the cylinders!

FIG. 2

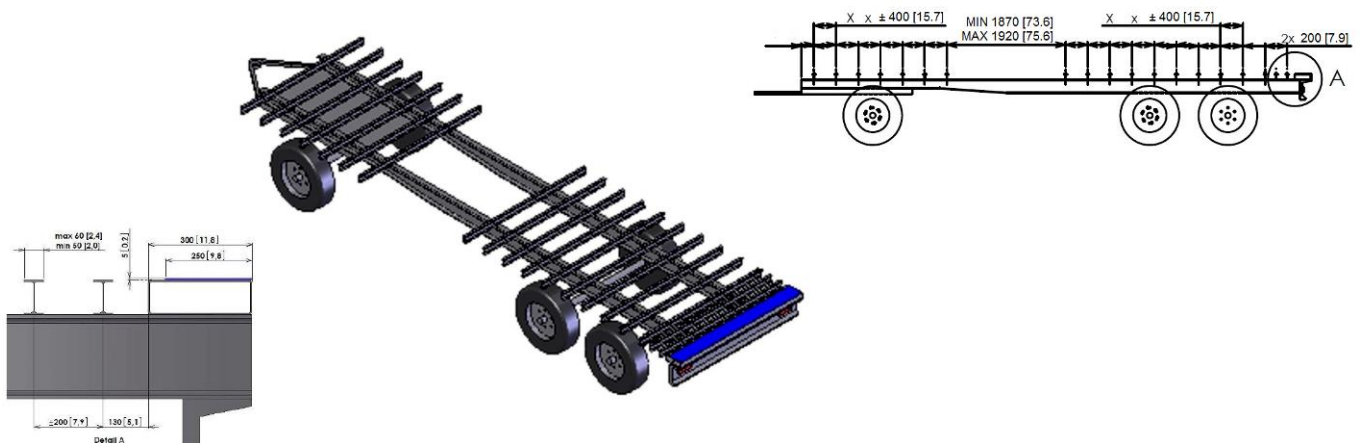


THE CHASSIS

This unique light-weight Cargo Floor-system has been developed especially for simple installation in trucks, drawbar trailers, containers and interchangeable containers (demountables) with a max. assembly length of 9000 mm [29.5 ft].

It's very important to ensure that, during the installation of the Cargo Floor system, the crossbeams are flat on the chassis. There must be no difference in height between the crossbeams, as this would hinder the installation of the system and adversely affect the operation and the lifetime of the Cargo Floor system.

FIG. 3



When using the plastic bearing on the 25x25x2 [1"x1"x0.08"] square tube

In this case the top flange of the crossbeam can be a maximum of 60 mm. [2.35"] wide and must protrude at least 7 mm. [0.3"] above the chassis beam, use the Cargo Twister.

When using the plastic bearing on the aluminium U-profile 25x25 [1"x1"]

In this case the top flange of the crossbeam may be a maximum of 60 mm. [2.35"] wide and must protrude at least 8 mm. [0.31"] above the chassis beam then the Cargo 'Snap-on' can be used, these consist of the Cargo 'Snap-on' bearing block (art. No. 4107023) and the Cargo 'Snap-on' bearing block stopper (art. No. 4107024).

When using the plastic bearing block:

Part no's of the bearing block are: orange 4103009 and white 4103010.

It is recommended in this case to use a crossbeam with a top flange width of maximum 60 mm. [2.35"], this may not be less than 50 mm. [2"]. Wider top flange widths may be used when specially designed plastic cam guides are used.

N.B. We strongly advise you to apply a stable crossbeam when using this plastic bearing blocks.

We refer you to figure 11 for the positions of the crossbeams for the various types of Cargo Floor systems. Make sure that there is space free in the middle of the chassis for the Cargo Floor system.

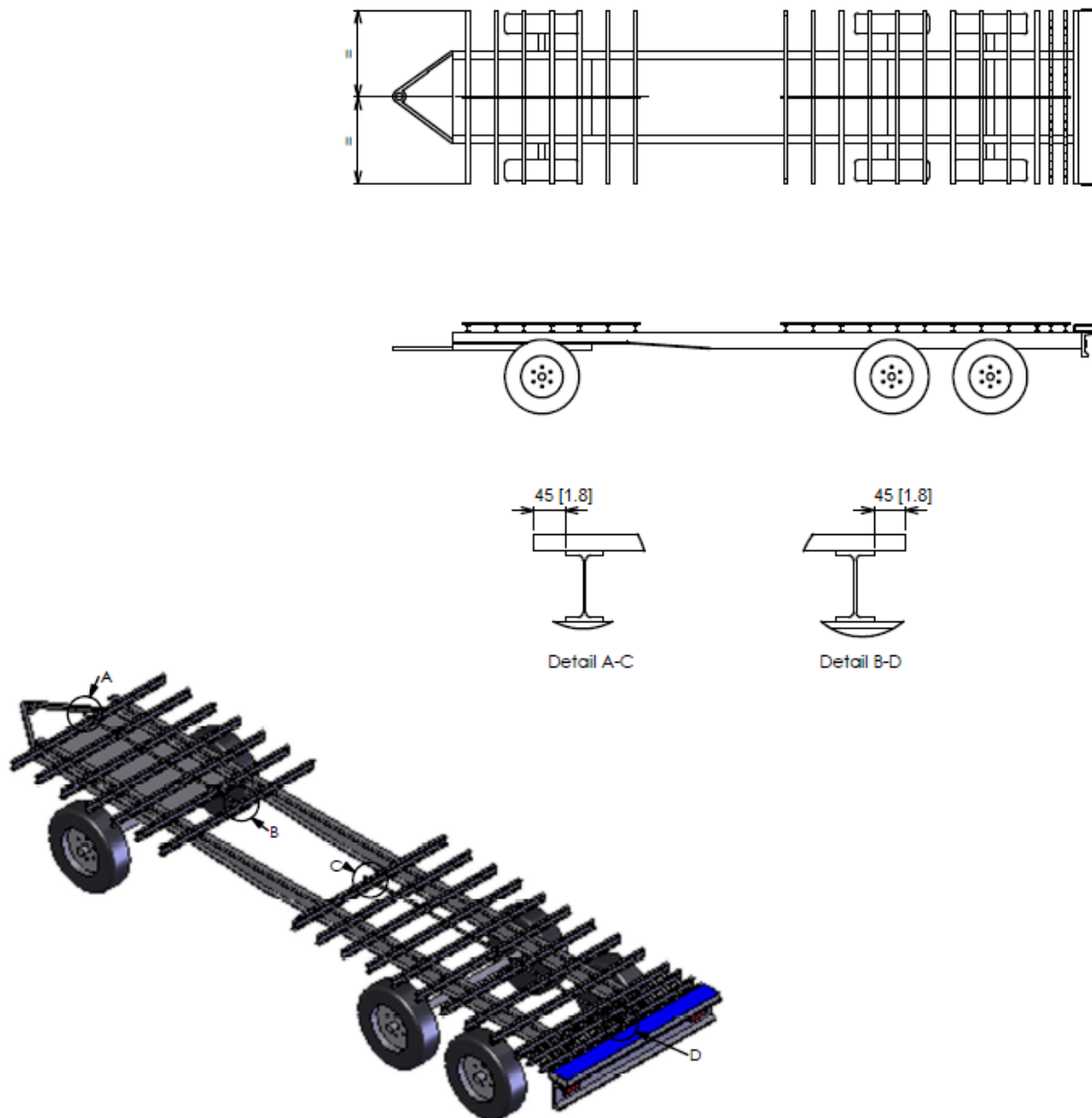
Attention: system height H80 applies for the CF100 SLL system

A 300 mm [12"] wide plate must be made and mounted on the back of the chassis at the same height as the crossbeam. A plastic wear plate of 2500x250x5mm [98"x10"x 0.2"] (part no. [4101007](#)) must be mounted on this plate.

MOUNTING THE 25X25X2 [1"X1"X0.08"] SQUARE TUBES

A square tube needs to be installed, over the full length and along the exact centre line of each of the crossbeams. These square tubes are used as guides and as references for the three (supplied) welding jigs, see figure 4A. The square tubes need to be securely welded on both sides to each crossbeam with a weld of at least 10 mm [0.5"] length (as shown in figure 4B) Take care while doing this to ensure that the start and end positions of the tube are correct, with the necessary projection for the correct mounting of the plastic bearing (TWISTERS, part no. [4107002](#)).

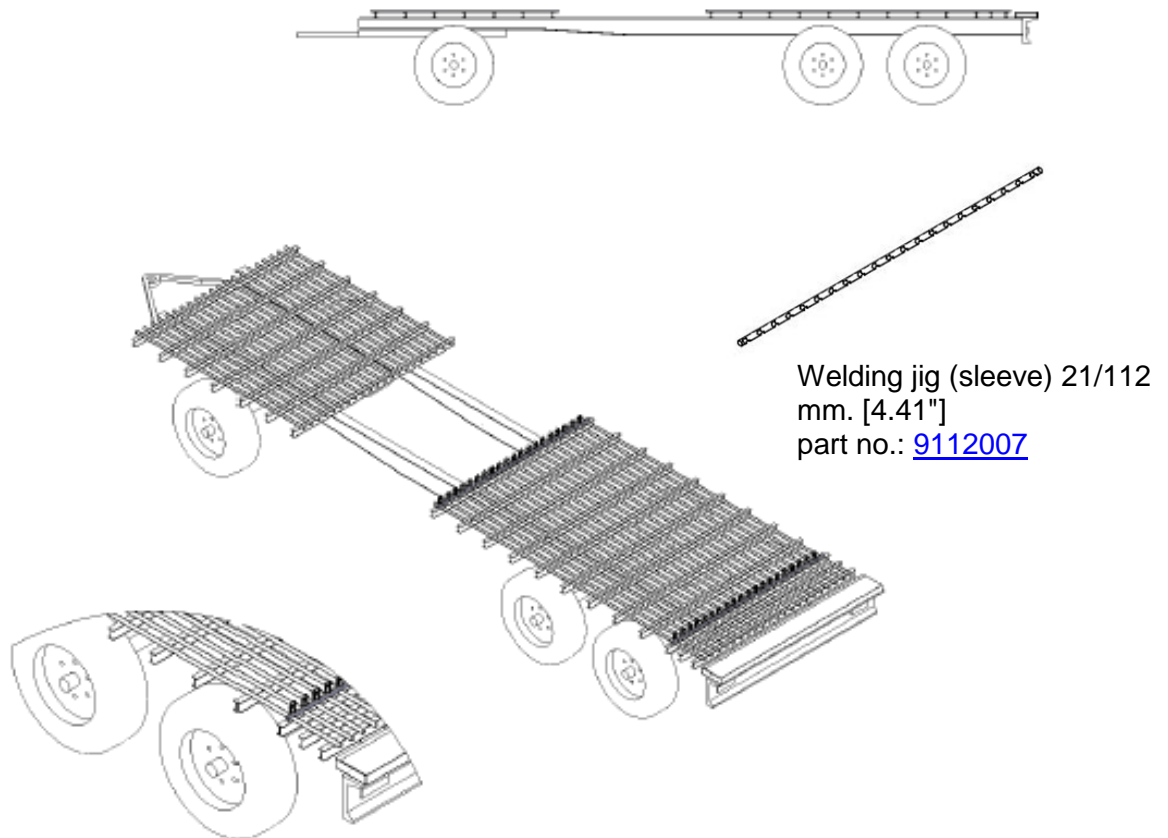
FIG. 4 A



Use of the supplied welding jigs (3 pieces, part no. [9112007](#))

All square tubes need to be pressed into the welding jig on one side and in the same direction. The welding jig needs to be clamped securely onto the crossbeam, so that the square tubes are all at exactly the same height. See figure 4 B for the positioning and use of the welding jigs.

FIG. 4 B



MOUNTING THE U-PROFILES 25X25X2 [1"X1"X0.08"]

If you use the Cargo Floor Snap-on bearing block (fig. 4 C) instead of the known Cargo Twister, you need to make use of the aluminium U-profile 25x25 [1"x1"] (part no.: [692.4214](#), Alu U-profile 25x25mm [1"x1"] for Snap-on L.= 5980mm [19.6']).

If you make use of aluminium cross members you can weld the U-profile to the cross member. For this you use the same method as mentioned in paragraph "[mounting the square tubes](#)" above (mounting the square tubes 25x25x2 [1"x1"x0.08"]). The U-profiles need to be welded to every cross member adequately on two sides with a weld of at least 20 mm [0.79"] and a welding thickness of max. 3 mm [0.1"].

If you would like to mount the aluminium U-profile onto a chassis with steel cross members then you need to choose a different method of fastening.

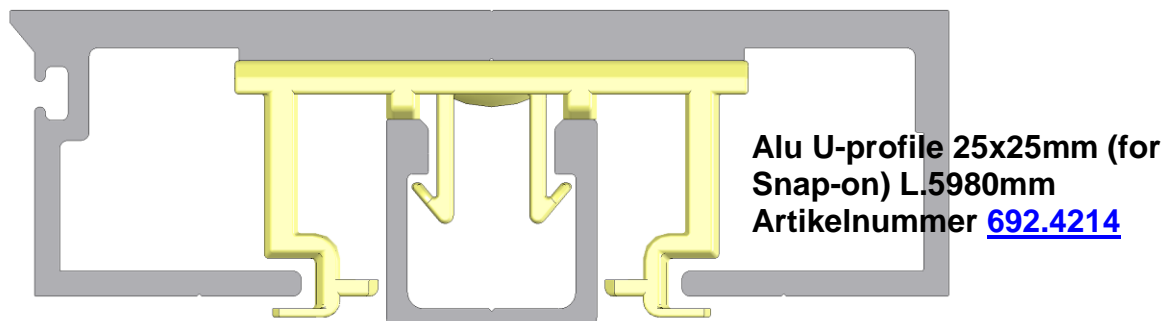
Alternative mounting methods for the fastening are:

- Fastening by means of screws – also possible when using aluminium cross members;
- Fastening by means of blind rivets (with enough strength) - also possible when using aluminium cross members;
- Fastening by means of shoot nails (example the ones of Hilti).

You need to decide for yourself if this manner of mounting provides enough strength to the structure of the trailer.

For the alignment you can use the same "welding" jig and method as for the square tubes (part no. [9112007](#)).

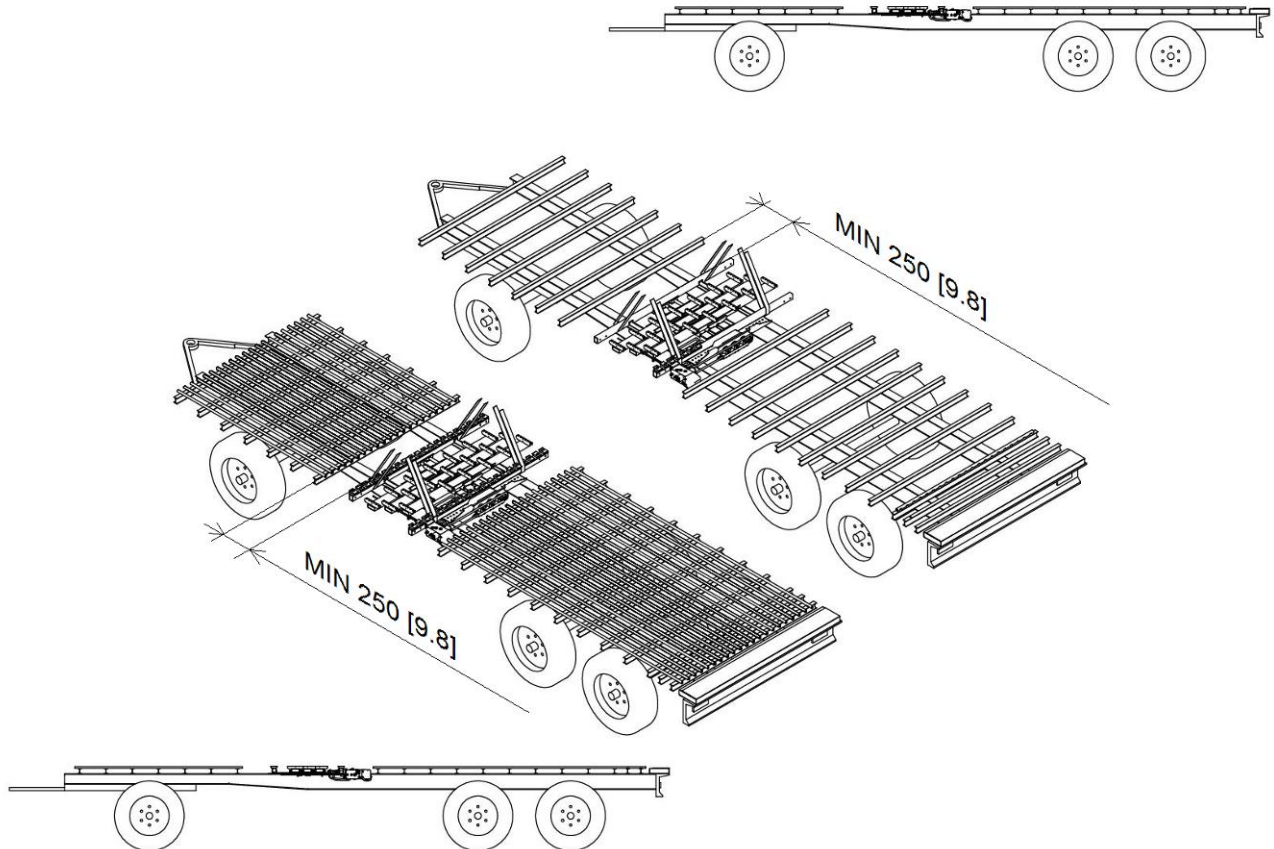
FIG. 4C



POSITIONING THE SYSTEM

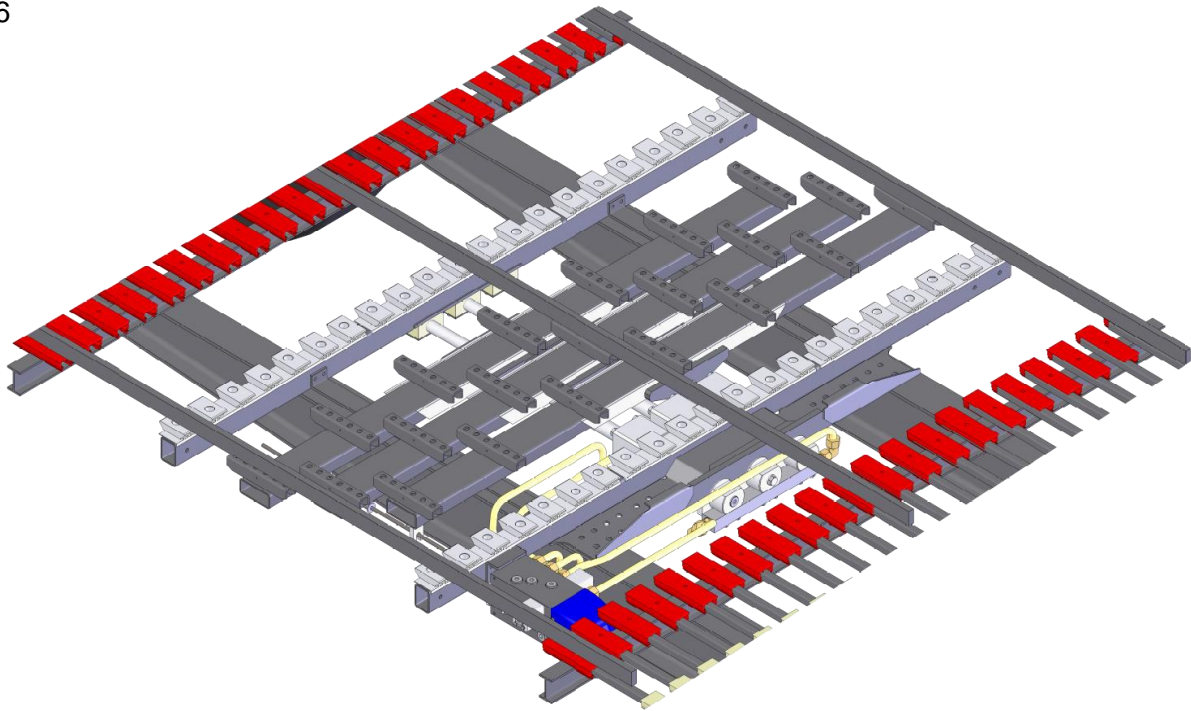
The [hoisting procedures](#) need to be studied before placing the Cargo Floor system. The Cargo Floor system can now be laid in the appropriate opening on the chassis / frame (see figure 5), **noting that the piston rods must always point in the head board direction.**

FIG. 5



HEIGHT ADJUSTMENT AND ALIGNMENT OF THE CARGO FLOOR SYSTEM

FIG. 6



Height adjustment

The Cargo Floor system needs to be at the same height as the plastic bearing that are mounted on the crossbeams. The top of the U- profile of the moving crossmember (U-fasteners for the floor profiles, see figure 6) is the reference. Any extra spaces that have been created between the chassis / frame and the underside of the Cargo Floor system should be filled.

Alignment

It is extremely important that the system is exactly lined up with the plastic bearing. The piston rod of the middle cylinder is used as reference for this. The centre line of the moving crossmember finger (U-fastener for the floor profiles) must be exactly in line with the centre line of the plastic bearing mounted on the crossbeams.

When using the square tubes 25x25x2 [1"x1"x0.08]

Mount at the designated locations (see figure 6) the Cargo Twister bearing. Then bring the Cargo Floor system at height and alignment using a steel rule.

When using the u-profiles for the Cargo Snap-on bearing block

When using the aluminium U-profile (part no.: [692.4214](#), Alu U-profile 25x25mm [1"x1"] for Snap-on L.= 5980mm [19.6']) for the Cargo Floor Snap On bearing block you can proceed in the same manner as using the square tubes 25x25x2 [1"x1"x0.08"].

When using the plastic bearings

Padding is not necessary when the correct combination of Cargo Floor height and crossbeam height is realized (except when blue or orange plastic bearing blocks are utilized). You really need to check that the height of the moving crossmember finger (U-fastener for the floor profiles) lines up with the plastic bearing mounted on the crossbeams.

It is advisable to clamp the Cargo Floor system securely once it is correctly positioned.

SECURING THE SYSTEM

After the Cargo Floor system has been correctly positioned it can be secured to the chassis / frame by welding or by bolting.

Bolting (see fig. 7 and 8)

The Cargo Floor system can, if desired, be bolted to the chassis / frame. The holes in the chassis / frame need to be concentrically aligned with the holes in the Cargo Floor system. 4 Bolts per side need to be used on the rear bridge (see figure 7) and 1 bolt per side in the so-called front bridge. This results in a total of 10 bolt connections. Each bolt needs to be secured with 1 spacer and a double nut (1 nut and 1 self-locking nut, see figure 7).

All bolts must conform to the following specification:

10 pieces M16x80 ELVZ (DIN931-10.9) [5/8"x3.25"]. Quality 10.9. [grade 8].

10 pieces nut M16 [5/8"]

10 pieces lock/nut M16 [5/8"]

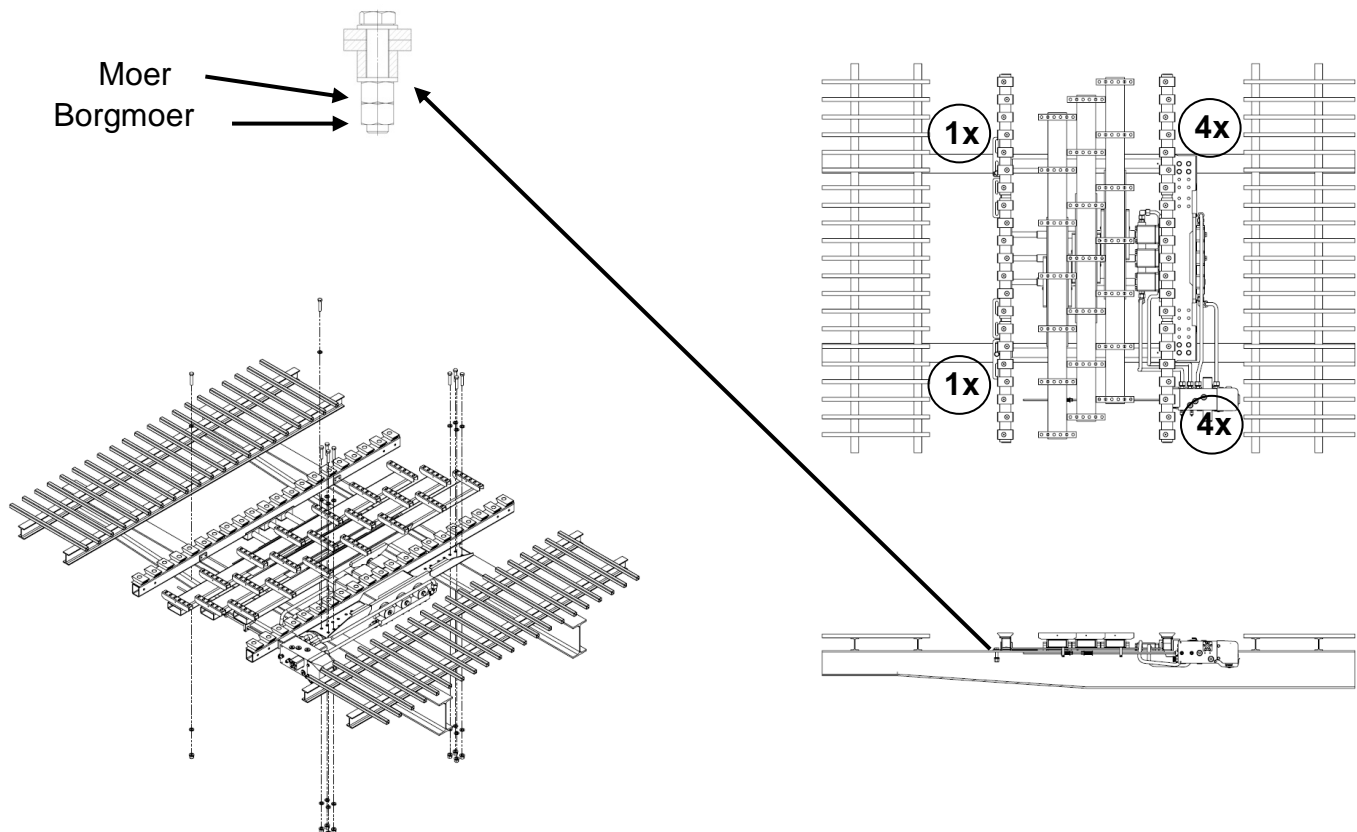
20 pieces washer Ø 30 / Ø 17, thick 3 mm (DIN125) [Ø 1.25" / Ø 0.75", thick 0.12"]

10 pieces spacer ST52-3 Ø 30 / Ø 17, length 20 mm [Ø 1.25" / Ø 0.75", length 0.79"]. Part no.: 5451005

Torque of the M16 nuts is 300 Nm [215 lbf.ft]

For an aluminium chassis we can advise, as an alternative for the steel spacers, to use a strip (thickness 20 mm. [0.79"]) with corresponding hole pattern.

FIG. 7



Welds (see fig. 8)

Good quality welds, of the appropriate lengths, need to be made at the points indicated in the drawing (figure 8).

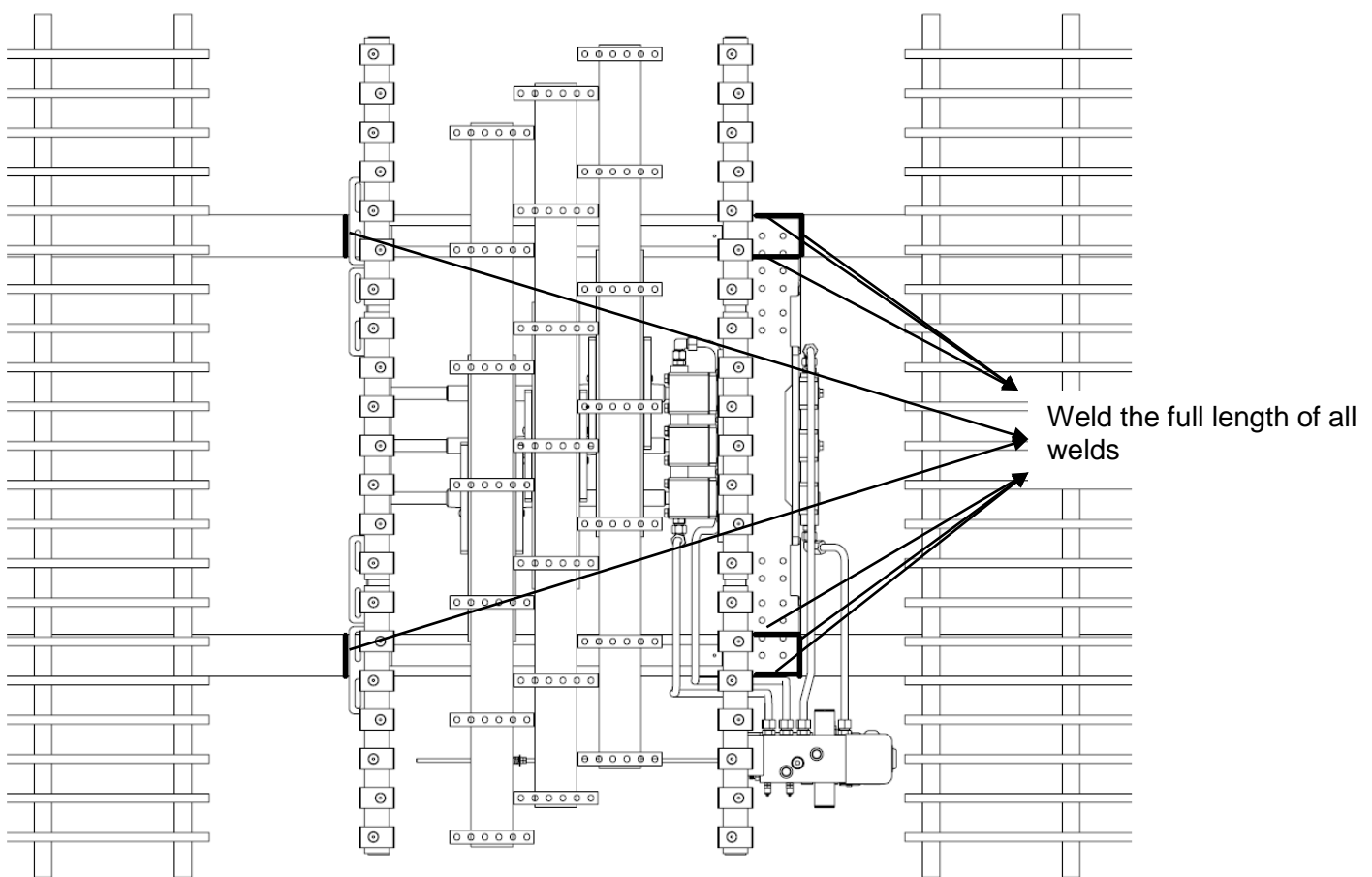
The tilting plates at the rear side of the rear bridge need to be removed before welding the rear bridge to the chassis (figure 7).

Use a weld width of min. $a = 10$ [$a = 0.5$ "].

Bracing of the Cargo Floor system is not necessary.

Pay attention to that if the sub frame is zinced (as option available with a SLL system) the spots that need to be welded are cleaned of the zinc coating.

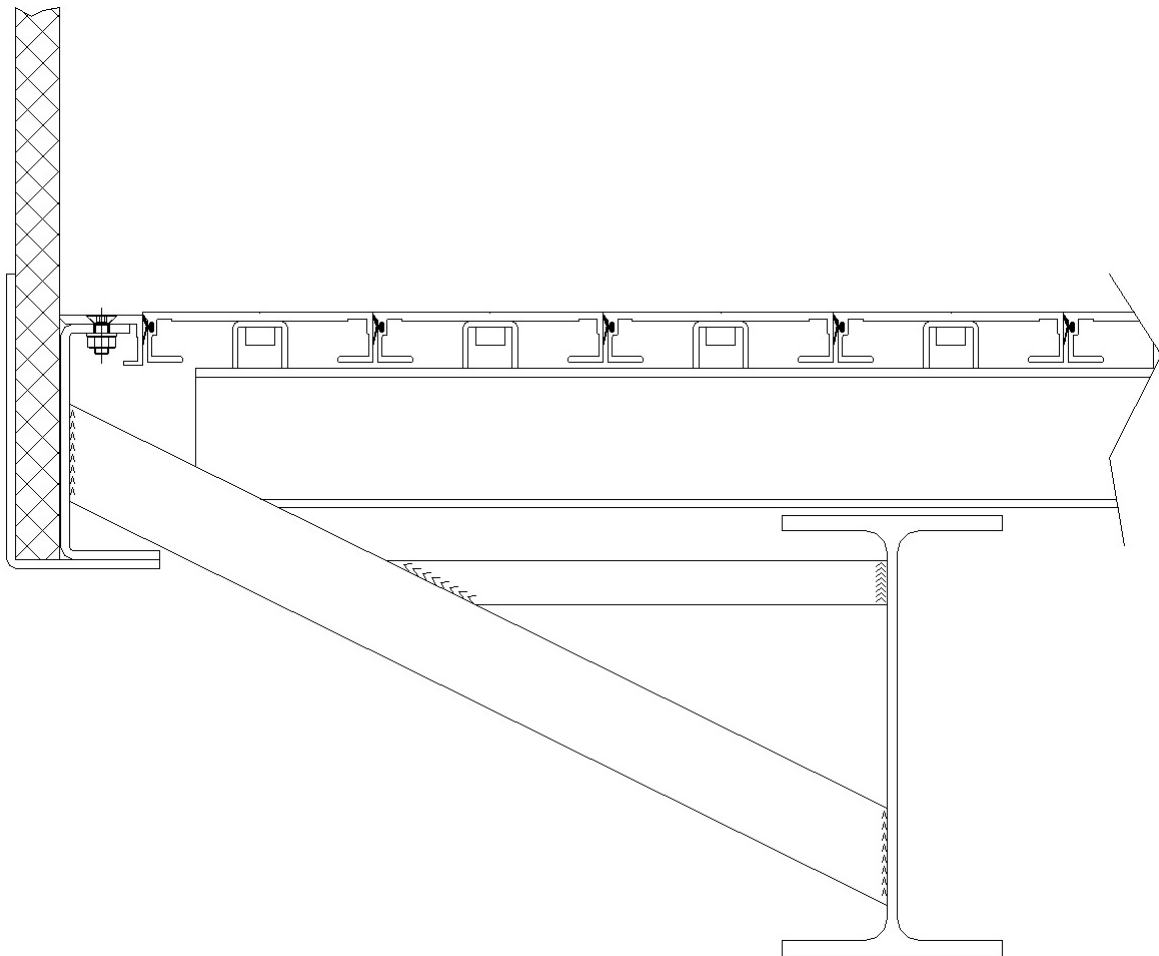
FIG . 8



BRACING THE SIDE WALLS

The sidewalls of the Cargo Floor system are not supported since no crossbeams are used. This can lead to buckling of the sidewalls when the system is heavily loaded. This can be avoided by fastening the sidewalls to the chassis. Figure 9 shows how this can be done.

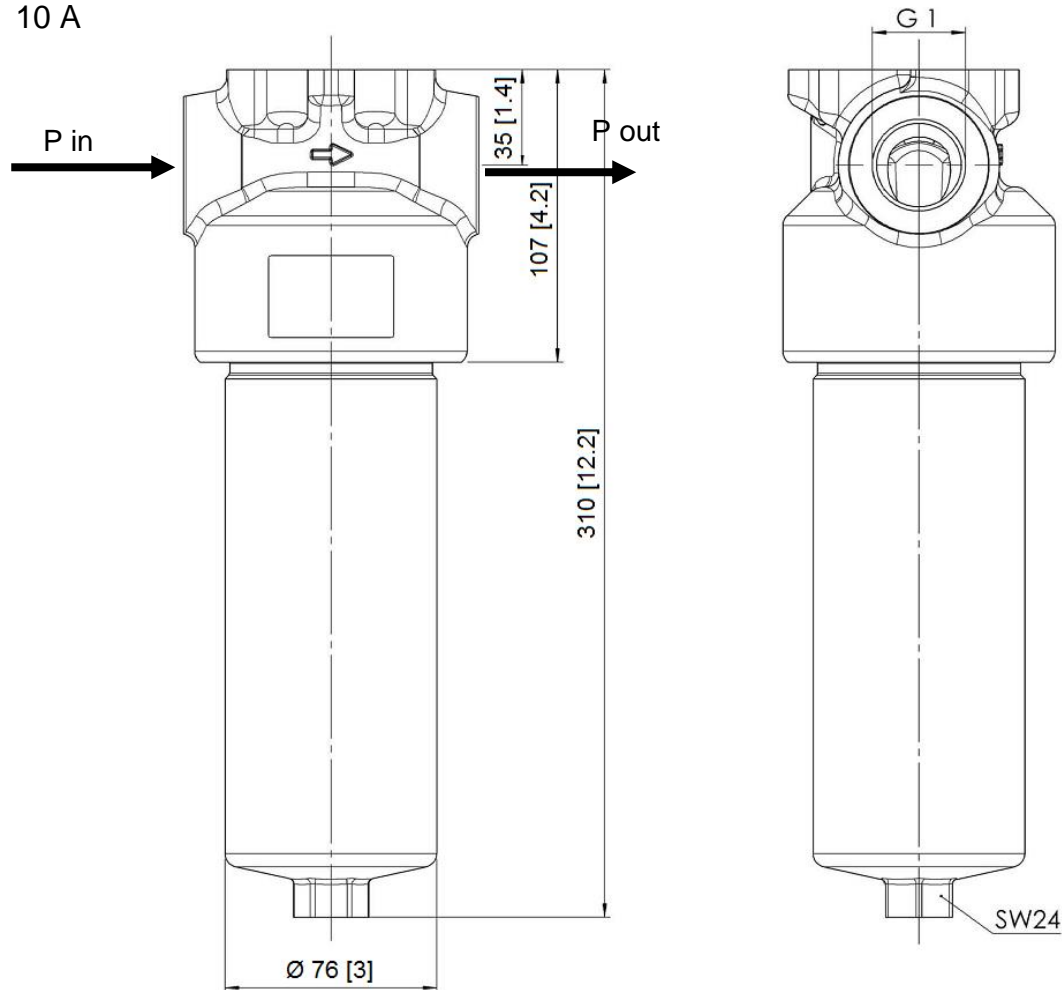
FIG. 9



CONNECTING THE HYDRAULICS

The supplied pressure filter needs to be mounted between the fast couplings of the pressure pipe (supply) and the control valve. The pressure filter is executed with a mounting bracket and two straight screw-in couplings 1" x 20 mm. Attention: when mounting the pressure filter mind the correct flow direction, this is indicated with an arrow on the filter housing.

FIG. 10 A



A hydraulic pressure pipe (20x2) needs to be mounted, which runs from the fast coupling pressure pipe to the pressure filter and to the control valve.

Also a hydraulic return pipe (25x2,5 mm) needs to be mounted, which runs from the control valve to the fast coupling return pipe. If you mount a hydraulic hoses instead of a pipe, do keep the indicated internal measurements of the pressure and return pipes in mind.

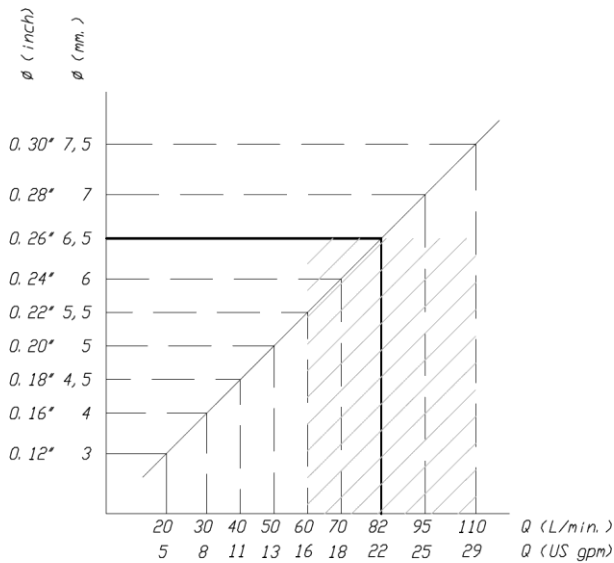
! Important: connecting pressure and return wrongly will cause a malfunction, and damage to the system.

All hydraulic components need to be carefully cleaned before being connected, making sure that no sealing caps / cleaning wads are left behind.

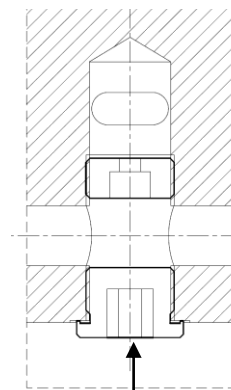
Try to use as few (right-)angled connectors as possible (as these cause pressure loss, or build-up of return pressure).

After connecting the system it may not be operated. Operation may only be done at the moment that the trailer and floor have been fully built!!!!

If the E-controlled Cargo Floor system will be operated by different types of pumps or a pump with a low oil flow, it could be that you have to pay attention to mount another type of choke.

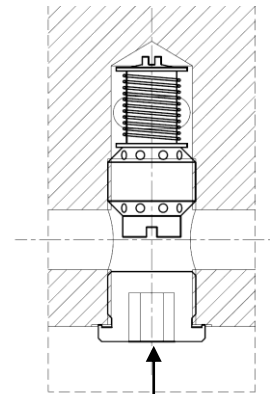


Standard choke
DIN 906-5.8-3/4"



PB

Variabele choke
part no. [7370106](#)



PB

The shading points out the reach of the standard choke.

Choke

There is a standard 6,5 mm [0.26"] choke mounted as standard in the PB channel of the E control valve. This allows the E control valve to function correctly. This standard choke is suitable for an oil flow level of 60 to 120 litres per minute [16 to 31 gpm]. 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 will not get into loading position or remains in the loading position;
- 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 (variable choke part no. [7370106](#)). The standard mounted choke can simply be changed with these. You remove the socket plug out of channel PB (Allen key 12 mm). After this you screw the choke out of the channel with allen key 12 mm. Screw the new variable choke in the channel and fasten these by hand (about 15 Nm [11 lbf.ft.]). Screw the socket plug back into channel PB (allen key 12 mm) and fasten these by hand (about 15 Nm [11 lbf.ft.]). Let the floor run (loading and unloading) in order to check if everything is functioning well and no leakage occur. The variable choke has a flow range of 20-120 ltr./min [5-31 gpm] ±10% using a VG32 and is suitable for a maximal work pressure of 225 bar [3300 psi].



Important: connecting pressure and return wrongly will cause a malfunction, and damage to the system.

B- control

Another 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

MOUNTING THE PLASTIC BEARING “CARGO TWISTER”

The plastic bearing may be mounted after the square tubes (25x25 mm [1”x1”]) have been sprayed (making sure that the paint layer is not too thick and that there are no paint drops). This can be easily done with one hand, without any tools, on the unique patented “CARGO TWISTER” (part no. [4107002](#)).

The “CARGO TWISTER” is placed diagonally over the square tube and the bearing is rotated (twisted) through a quarter turn so that the feet of the plastic bearing move under the square tube and a click is heard. (Figure 13A.)

Kick Twister (part no. [4107005](#))

As an option the Kick Twister (figure 13D) can be supplied. With the help of this bearing it is possible to mount the aluminium floor profiles from above over the bearing. When using these Kick Twisters it is necessary to also use the Anti Lifting Block. (Figure 13C.)

Mounting plastic bearing 25x25 [1”x1”](part no. [4107001](#))

For this two steel strips of 60 x 4 L=±300 [2.35”x0.16” L=±12”] are used, see figure 13B. These can be used to spread the plastic bearing and hence to slide it over the square tube (25x25 mm [1”x1”]). Check that the plastic bearing are properly secured. (Figure 13B)

Anti Lifting Block (part no. [4107006](#))

It is possible (but not necessary) to mount an Anti Lifting Block profile while mounting the square tubes. This anti lifting block keeps the aluminium profiles in place. This should be done on the loading / unloading side of the vehicle, before the aluminium floor profiles have been mounted.

Recommendation:

The remaining plastic bearing need to be mounted at the last two meters over the square tubes between the cross member.

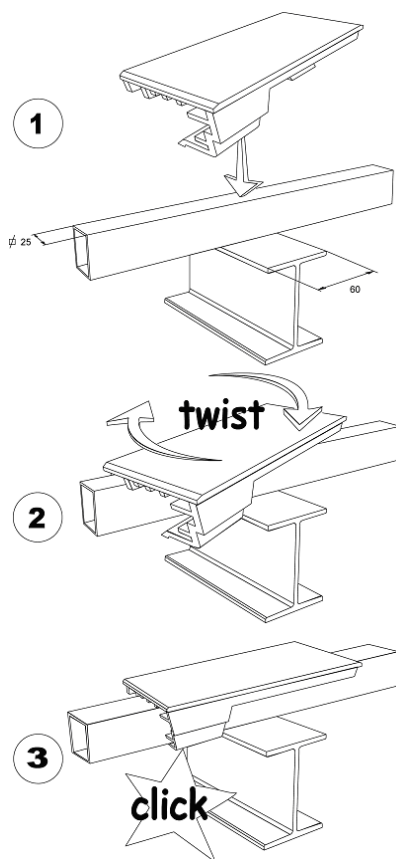


FIG. 13A

FIG. 13B

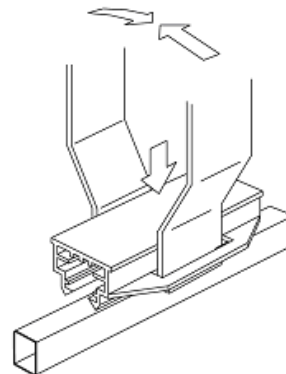


FIG. 13C

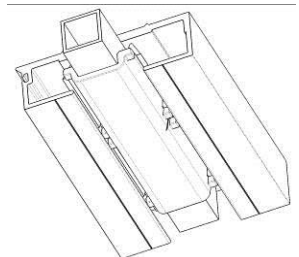
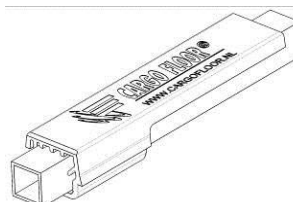


FIG. 13D



MOUNTING THE PLASTIC BEARING “CARGO SNAP-ON”

The advantage of this bearing structure is that the moving aluminium profiles are fully supported and the inside of the profiles is protected against dirt of the street.

After the U-profiles (if this applies) are spray painted (pay attention to that the U-profiles are not painted too thickly and surely do not have drops on them) the plastic bearings can be mounted. These can simply be pushed into the aluminium U-profile from one side.

The Snap-on bearing has two executions: the standard Snap-on (part no. [4107023](#)) and the “stopper” (part no. [4107024](#)). The “stopper” secures the standard Snap-on bearing so these cannot slide out of the U-profile.

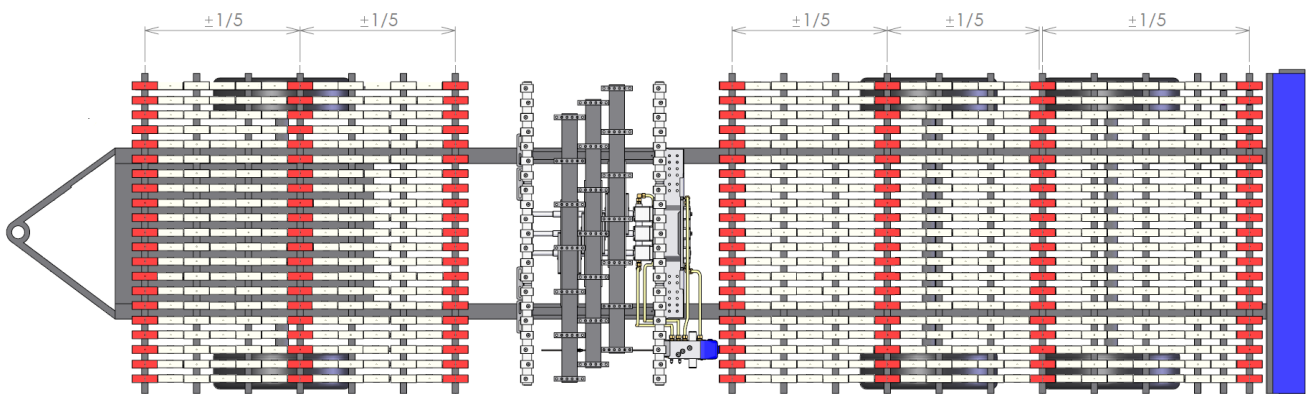
You start at the front of the trailer with the mounting of a “stopper” from the above at the first crossing of a cross member with an alu U-profile.

After this you mount a number standard Snap-on bearings and then a “stopper” again at about 1/8 off the floor at a crossing of a cross member. (The amount of standard Snap On bearings between the two stoppers can vary with regards to the distance between the cross members). Next you mount a number of standard Snap-on bearings again until 2/8 off the floor after which you mount a “stopper” again at a crossing of a cross member.

At the end you close as how you started so all standard Snap On bearings are enclosed between “stoppers. In fig. 13 E you can see how you should place the bearings.

You of course can choose not to fill the complete alu U-profile with bearings, but only use “stoppers” at the height of every cross member.

FIG. 13 E



MOUNTING THE SPECIAL PLASTIC BEARING BLOCK

A check needs to be made, that the top of the plastic bearing block and fingers of the drive system are in alignment before mounting the plastic bearing block (see fig 6).

The plastic bearing blocks are normally mounted per 3 on a crossbeam. In this case the centre of the middle block of the plastic bearing needs to be mounted along the centre line of the chassis. The centre lines are shown on the plastic bearing block.

When mounting the two outer plastic bearing blocks, one needs again to measure from the chassis centre line to the centre of the middle block in the plastic bearing block, see figure 14B.

There are situations where the “saddle principle” over the flange of the crossbeam of the plastic bearing block cannot be used, because the flange is wider than 60 mm [2.35”], in such cases the orange plastic bearing block should/could to be chosen. ATTENTION: this can only be done with 35 mm [1.37”] high plastic bearing block.

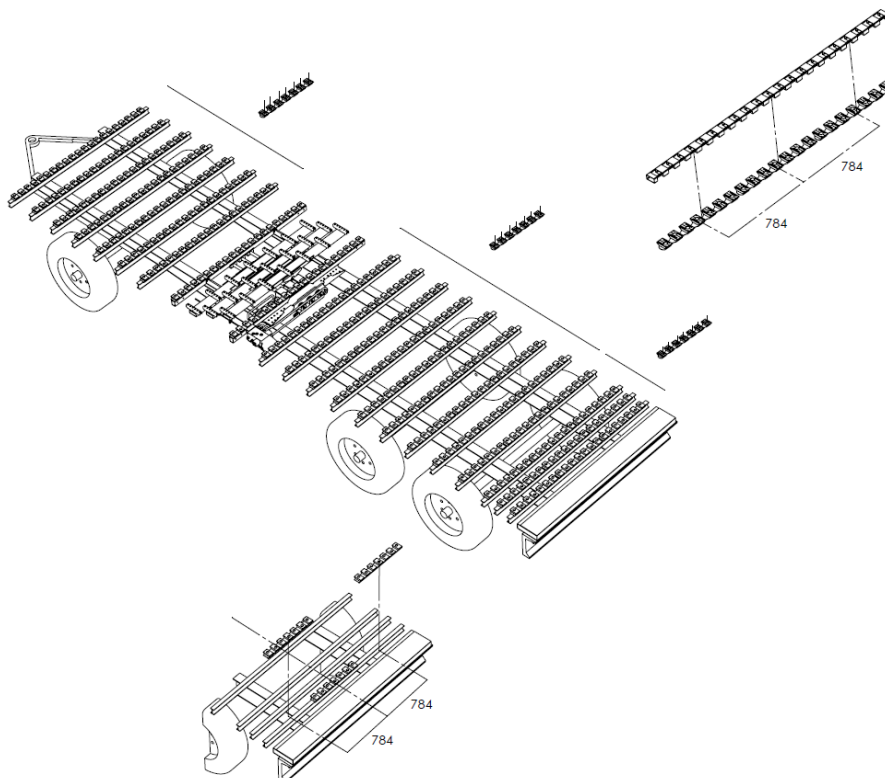
Thanks to the “saddle principle” of the plastic bearing block, it is not necessary to use every mounting hole in the plastic bearing block. (See figure 14A.)

Number of mounting points:

- The outer and centre hole(s) of each plastic bearing block from the front of the trailer to the drive system need to be used (3 per bearing, 9 per crossbeam).
- Every second hole, starting at the first hole, of each plastic bearing block from the drive system to about 2000 mm [6.6’] away from the loading / unloading side of the frame needs to be used (4 per bearing, 12 per crossbeam).
- All of the holes over the last two meters of the frame need to be used.
- When using plastic bearing blocks that do not use the “saddle principle” (orange bearing) one needs to use all mounting holes.

Use of a crossbeam with a top flange width of maximum 60 mm [2.35”] is recommended, it may not be smaller than 50 mm [2”]. Other widths can be used, but only if specially designed plastic bearing blocks are utilized.

N.B. We strongly advise you, that if you use these plastic bearing blocks, to ensure that a stable crossbeam is used and that the support frame is strong enough. We advise to use our positioning jig, part no. [9111201](#), for the positioning. See figure 14B.



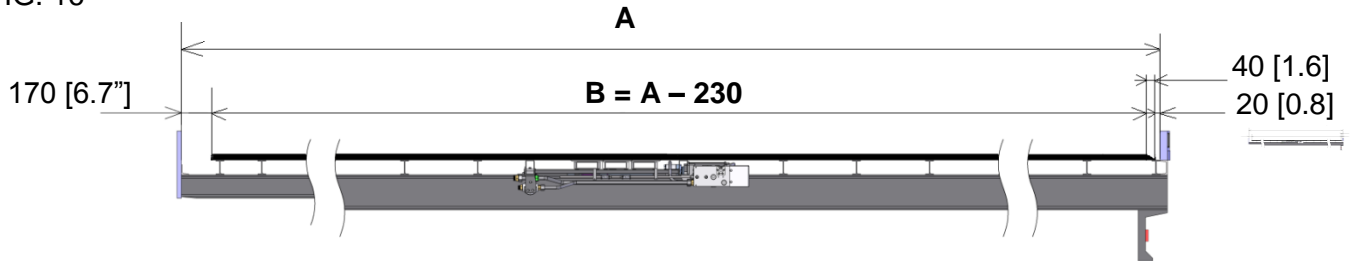
The aluminium floor profiles can be cut to size according to the table (see figure 16) after the plastic bearing have been mounted.

Pay attention to the fact that the floor profiles must be shorter than the inner measurement of the construction, and take into account whether the door is inside or outside the tailgate.

At the rear side a space of 40 mm [1.6"] needs to be adhered for the length of the endcap.

A space of 20 mm [1"] should be adhered to at the front and the rear of the construction.

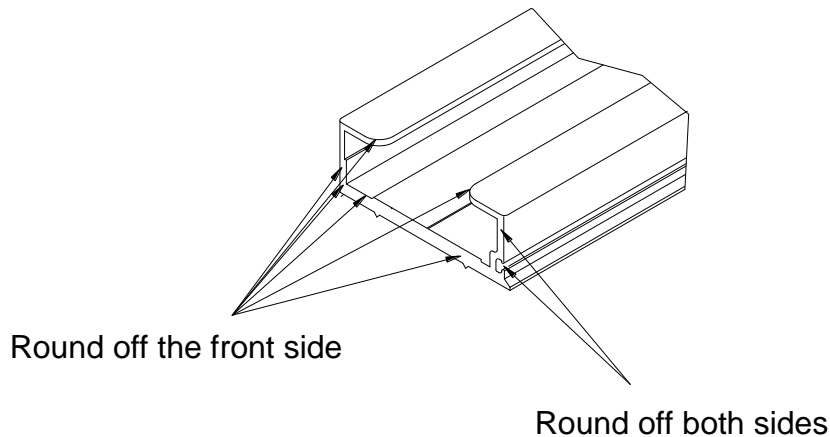
FIG. 16



After cutting the floor profiles to length they need to be rounded-off (beveled) at the front according to figure 17, so as to ensure a smooth guiding of the floor profile while sliding in, and to prevent damage to the plastic bearing.

To aid mounting, the rounded-off (beveled) side needs to lie in the mounting direction of the vehicle

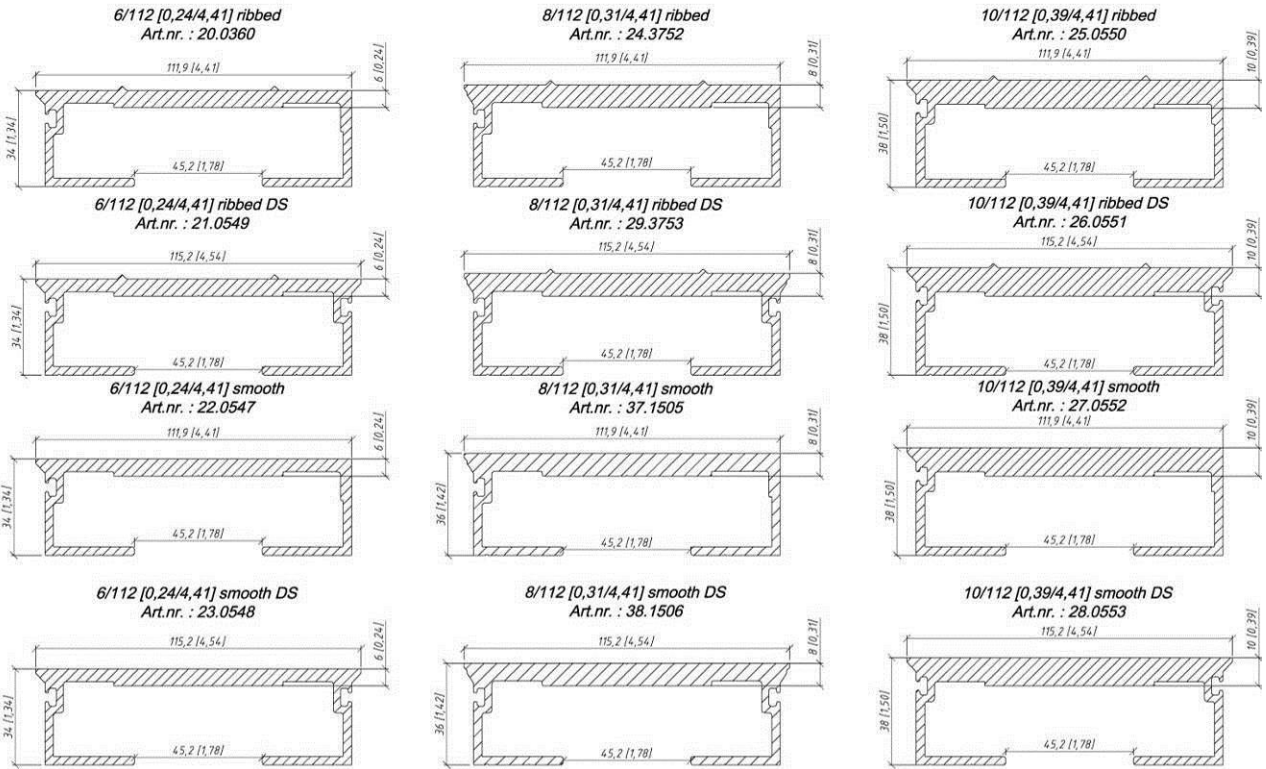
FIG. 17



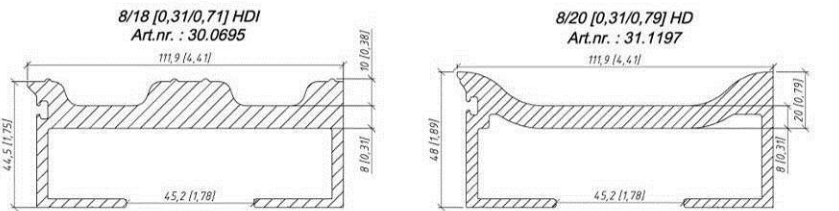
PROFILES

FIG. 18

PITCH 112 [4,41] - STANDARD

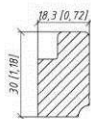


PITCH 112 [4,41] - SPECIAL

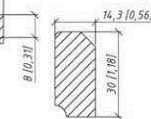
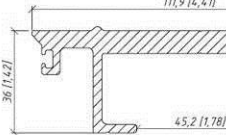


Alu 8/112 [0,31/4,41] SLP ribbed
(possible with SLP-channel, art.nr.: 755.4525)
Art.nr. : 72.2988

Drainage channel for SLP profile
Art.nr. : 755.4525



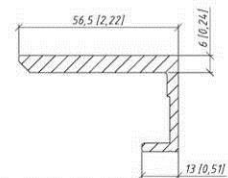
Alu side closing profile
SLP seal side
Art.nr. : 5448004
L=220 [8,66]



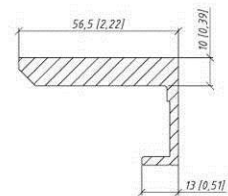
Alu side closing profile
SLP NOT seal side
Art.nr. : 5448005
L=220 [8,66]

SIDE PROFILES

Alu 6/56,5 [0,24/2,22] side profile L/R
Art.nr. : 23.4910



Alu 10/56,5 [0,39/2,22] side profile L/R
Art.nr. : 28.4911



DETERMINE THE POSITION OF THE HOLES IN THE PROFILES

First you need to determine the position of the holes in the profiles, see fig. 19.

Check if the cylinders are fully retracted. You check this as follows: the ends of the piston rods may not protrude out of the guide block for cylinderbar more than 5-10 mm. [0.20-0.39"].

Take into account that with a bundle floor profiles there could also be a double seal profile supplied. This profile should be mounted fully to the left (1st group) or fully to the right (3rd group). Devide the remaining 20 profiles into 3 groups (1 group of 6 profiles and the double seal profile, 2 groups of 7 profiles).

The position of the first hole is determined by taking the measurement from the inside of the door side to the first hole in the U-profile moving crossmember of the third group. From this measurement you deduct 60 mm [2.4"] and with this you have determined measurement A.

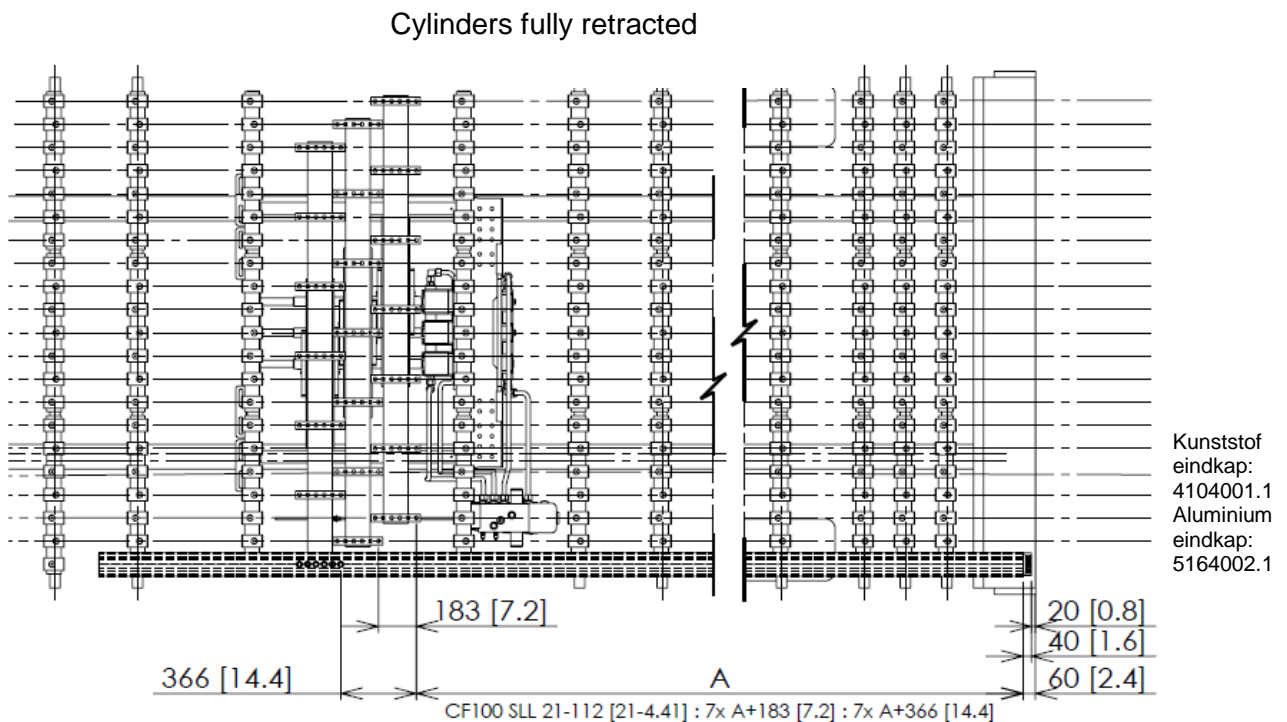
Put a mark on the bottom side of the 7 profiles of the 3rd group at the spot of this first hole.

The 7 profiles of group 3 will have the hole pattern on measurement A.

The 7 profiles of group 2 will have the hole pattern on measurement A + 183 mm [7.2"].

The 7 profiles of group 1 will have the hole pattern on measurement A + 366 mm [14.4"].

FIG 19



DRILING THE HOLES IN THE FLOOR PROFILES

The holes in the profiles need to be drilled before these are placed.

- Place all of the floor profiles with the sealing grooves in the same direction before you start drilling. **Pay special attention to, when present, that the double seal profiles (figure 18) is at the extreme left or right. This agrees with the pattern of holes for the first or last moving frame foot.**
- Then drill according to figure 19 the necessary number of floor profiles per moving frame foot using the Cargo Floor drill jig, part no. [9111009](#).
- Pre-drill 4 holes of $\varnothing 4.5$ mm [$\varnothing 0.18$ "] with the aid of the drill jig on the inside of the floor profile ensuring the centre of the holes line up with the extruded reference line. Then drill out the holes, from the same direction, to $\varnothing 12.5$ mm [$\varnothing 0.5$ "]. (fig. 21 A)
- Next the holes need to be countersunk from the top side using a good countersink bit according to the specification G136 HSS DIN 335 C, code 13628.0 (figure 21 B) Make sure that the hole is countersunk to the right depth; the screw head must not stick out above or under the floor profile. See figure 21 C.

FIG. 20

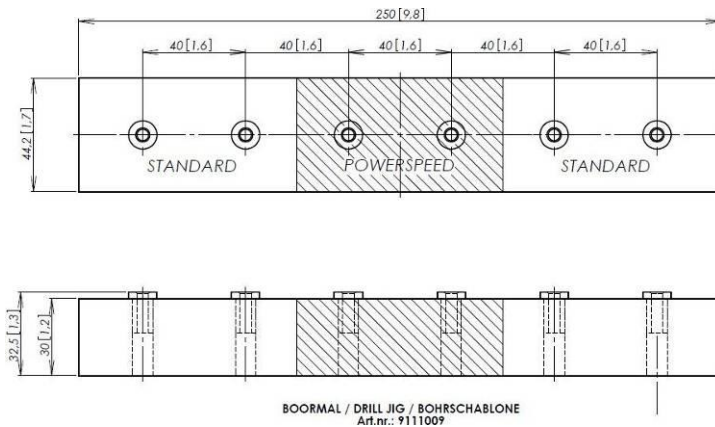


FIG. 21 A

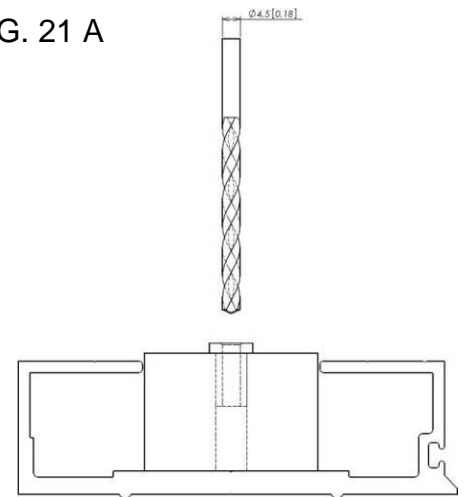


FIG. 21 B

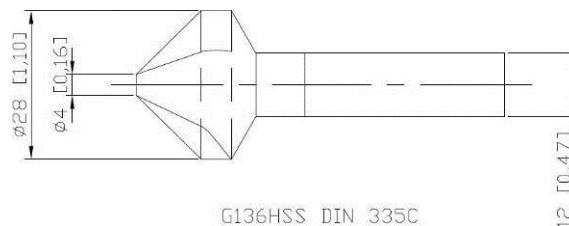


FIG. 21 C

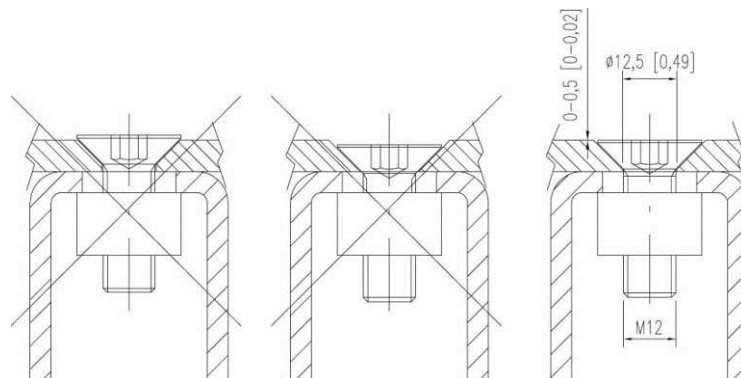
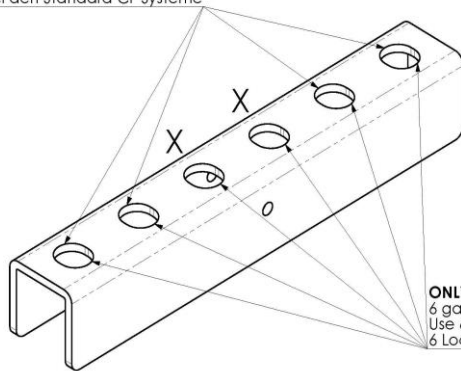


FIG. 21D

STANDARD CARGO FLOOR-SYSTEMS

4 gaten gebruiken bij standaard CF systemen
Use 4 holes by standard CF systems
4 Locher benutzen bei den Standard CF Systeme



ONLY POWER SPEED

6 gaten gebruiken bij CF Power Speed
Use 6 holes by CF Power Speed systems
6 Locher benutzen beim CF Power Speed

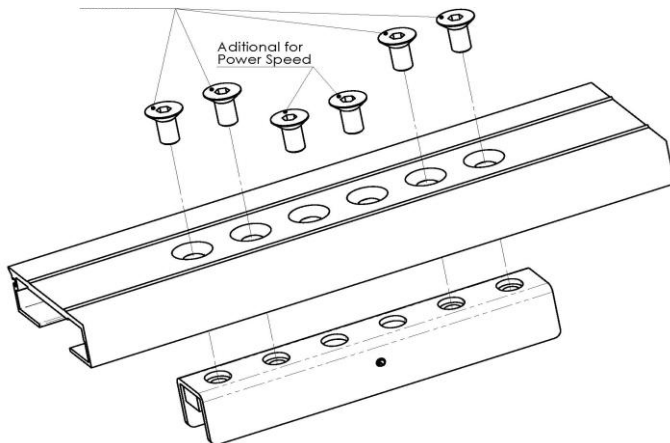
cross members

([4.41], etc.)

the profile should be fastened with 6 screws

FIG. 21 E

Only use the dedicated supplied screws:
M12 x 30- 10.9 DIN 7991

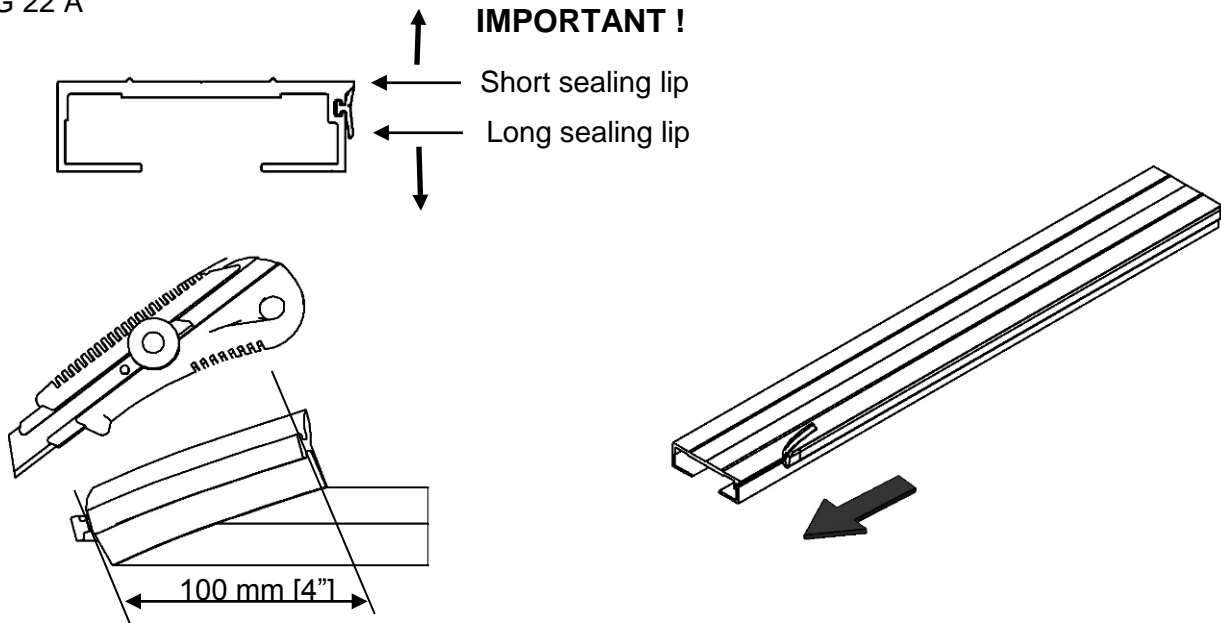


MOUNTING THE SEAL AND ENDCAP

Lay all of the floor profiles on their sides against one another, with the groove facing upwards. The groove in the floor profile needs to be clean (if necessary blown through with compressed air) before the seal can be mounted.

The seal is supplied on a roll. In order to install it simply, one needs to determine from which side of the groove the seal needs to be pulled. The short lip of the seal always needs to point upwards and the long lip needs to point downwards See figure 22 A.

FIG 22 A

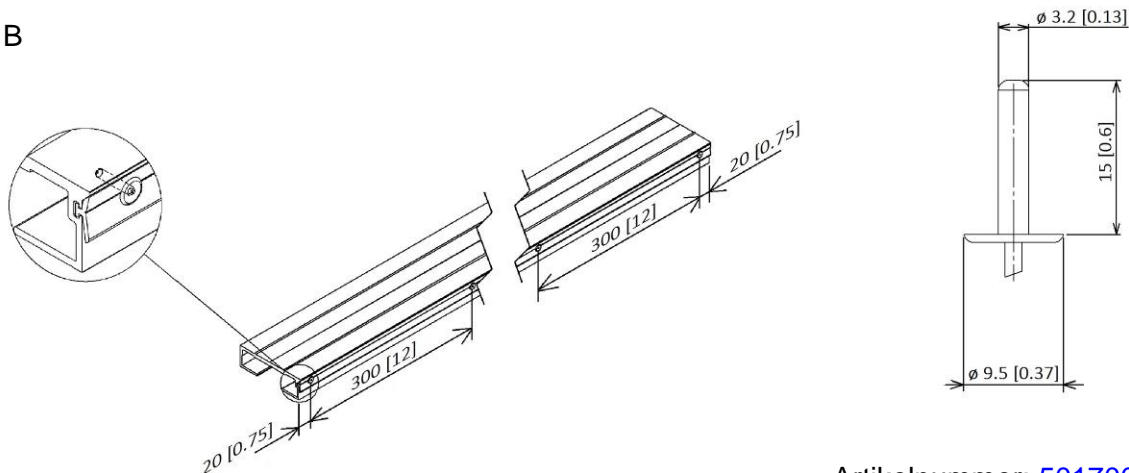


To aid the mounting of the seal, snip / cut about a little into the T-form at about 100 mm. [4"] from the start (this will form a handgrip, see figure 22 A).

Next, place the T section of the seal in the groove and, using the handgrip, pull the seal into the groove in the floor profile until the end of the floor profile. The cut will now be at the end of the floor profile. Now the seal can be fastened at this side with the special rivet (part no. [5017001.1](#), see fig. 22 B).

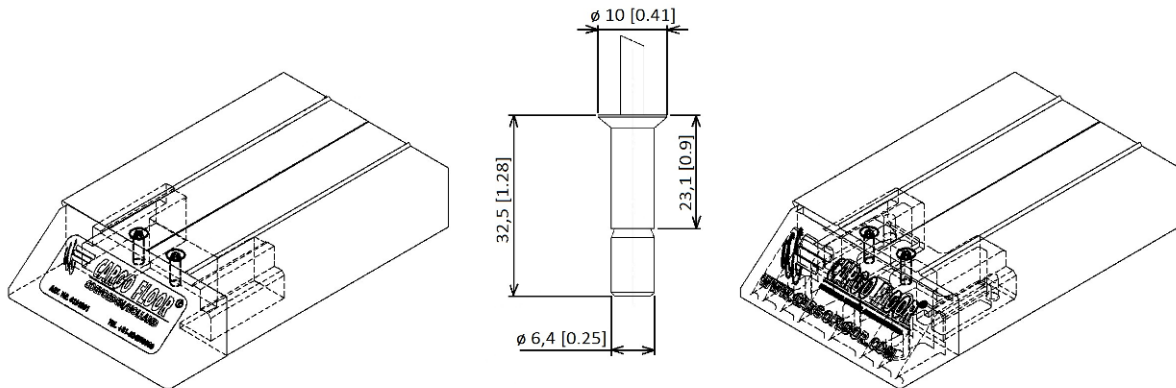
Then tension the seal by stretching it by at least 600 to 1000 mm [24" to 40"] (until you start to feel higher resistance and the length of the vehicle), this means about 6 to 10 kg [13 to 22 lbs] pulling force. After tensioning the seal place the remaining pop-rivets according to figure 22 B.

FIG 22 B



Artikelnummer: [5017001.1](#)

The endcaps can now be mounted. The endcap can be hammered into the profile with a plastic hammer. In order to fasten the endcaps you can use monobolts (fig. 23 A). With the aluminium endcap you have the choice between using monobolts or welding in order to fasten the endcap (fig. 23 B).

FIG. 23 A EINDKAP


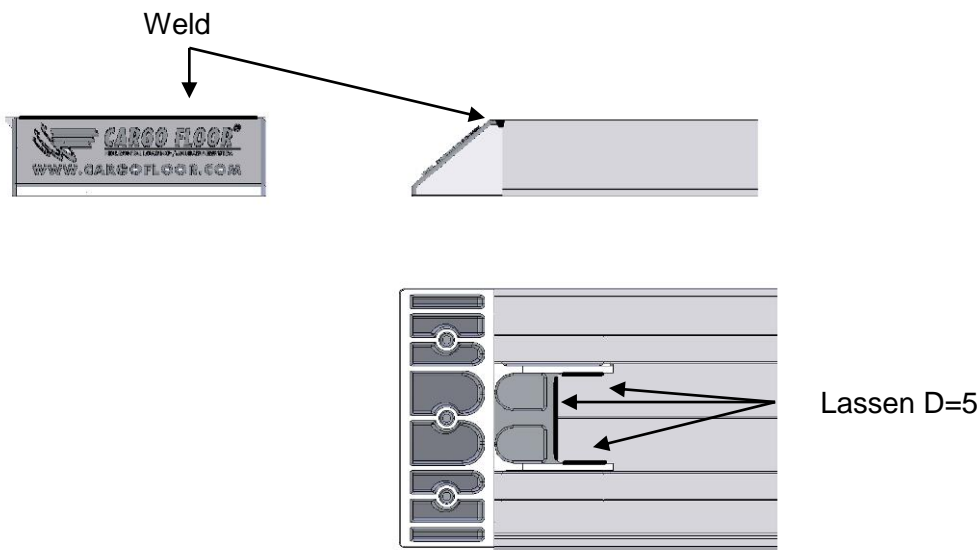
Plastic endcap
 Part no. [4104001.1](#)

Monobolt 6.4x23.1
 Part no.: [5017002](#)

Aluminium endcap
 Part no. [5164002.1](#)



Attention: If you want to secure the sealblocks by welding, then this needs to be done before mounting the seal see Fig. 22A. The welding needs to be done on the outside at the top side and on the inside at the topside.

FIG. 23 B


SECURING THE FLOOR PROFILES TO THE DRIVE UNIT

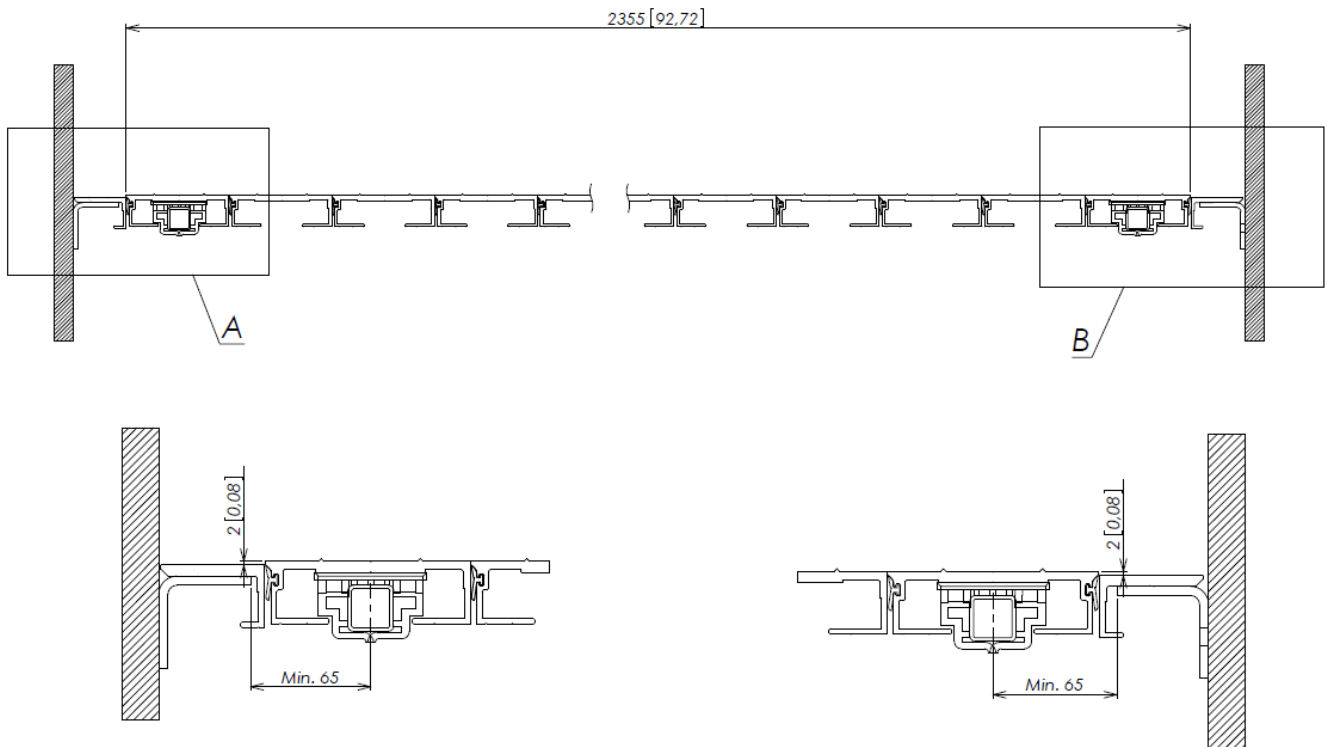
After the floor profiles have been cut to size, rounded-off, drilled, and had the seals and sealblocks mounted, they can be slid over the plastic bearing at the required position (matching up the hole pattern with respect to the moving crossmember). You need to carefully guide the floor profiles during the mounting procedure. Next, mount the provided galvanized M12 bolts with countersunk head using Allen No. 8. A torque of 100 – 140 Nm [72 – 105 lbf.ft]. should be used to tighten the bolts. One person can do this from above, and the bolts need to be well tightened. (fig. 21A.). Every bolt should be fitted with Loctite (Loc-tite 243 cat.o. 23286 screw thread locker).

SECURING THE STATIONARY EDGE PROFILES

The stationary profiles always need to be mounted 2 mm lower than the moving floor profiles (see figure 24A). The stationary edge profiles need to be pushed firmly against the moving floor profiles before the stationary profiles are secured. Next the stationary edge profiles need to be secured every 1500 to 2000 mm [5'to 6,6'] with mono-bolts, with countersunk heads, which are not permitted to stick out above the edge profile (see figure 24 A). The opening between the sidewall and the stationary profile needs to be filled with a flexible sealant.

Alternatively you can mount it with a bolt connection or make small welds.

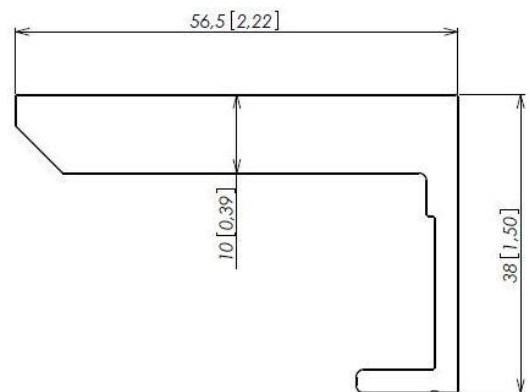
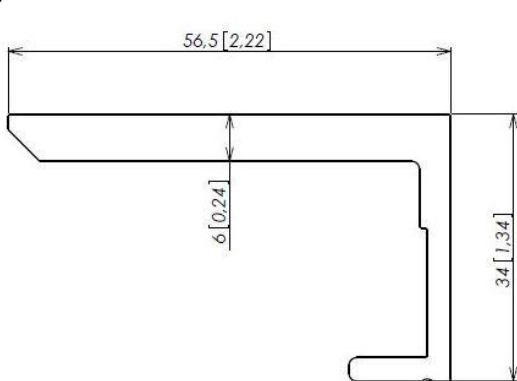
FIG. 24 A



It is better not to weld the stationary edge profiles completely to the sidewalls, since at a later stage the floor may need to be retensioned, and to do this the side planks need to be loosened.

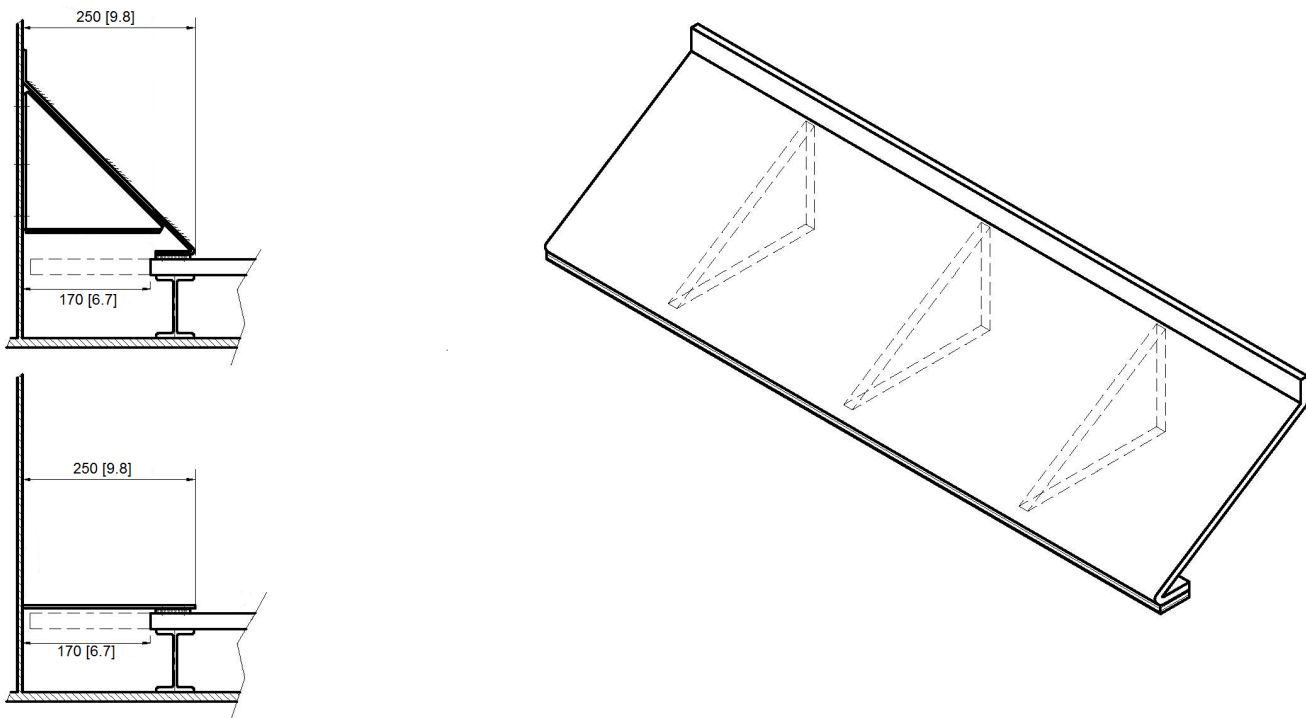
Cargo Floor has standard side profiles (fig. 24 B) available in 6 [0.23"] and 10[0.39"] thickness, which can simply be mounted.

Fig. 24 B



6 mm. [0.23"] = Part no.: [23.4910](#)

10 mm. [0.39"] = Part no.: [28.4911](#)

SEALING THE FRONT AND REAR SIDES OF THE FLOOR
FIG. 25

Front

A reinforced flat plate (width minimum 250 mm [9.8"], length dependent upon the inside of the trailer) mounted on the front wall of the trailer can be used to cover the opening created by the operational stroke of the system. The provided plastic strip (2500x75x5 mm [98"x3"x0.2"]) needs to be mounted on the bottom of the front of this cover plate to avoid wear and to provide a good seal. In order to achieve an optimal seal when using ribbed floor profiles, the ribs need to be cut away over a length of about 250 mm [10"] leaving a smooth surface.

Ensure here that the fasteners countersunk in the plastic strip are mounted so that they do not come in contact with the floor.

A heavily reinforced cover plate needs to be mounted at an angle of 45° for trucks that are used for loading / compressing, see figure 25.

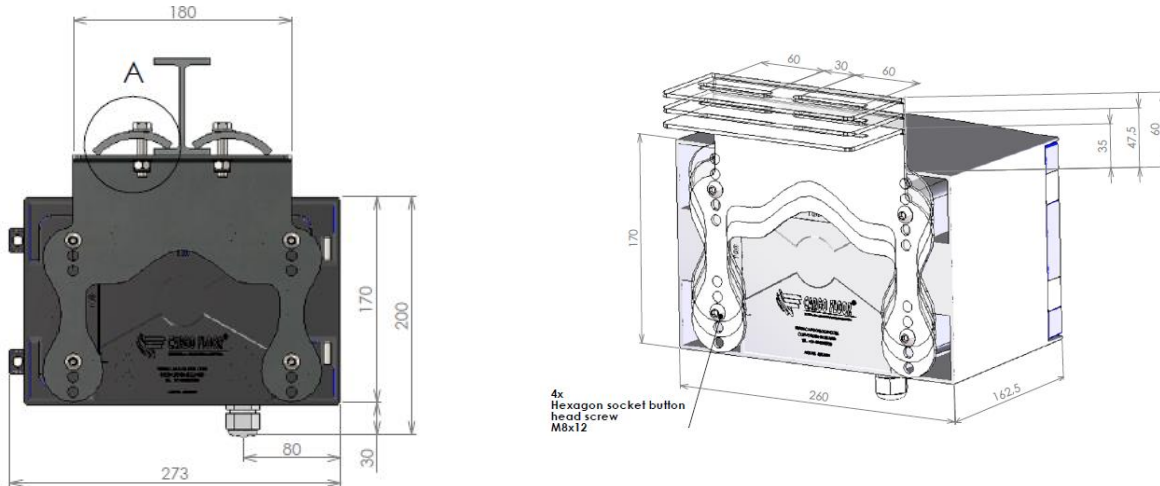
The construction needs to be very sturdy, so that it won't buckle or rise up.

Rear

A plastic plate needs to be mounted between the bottom of the floor profiles and the rear beam at the unloading side of the floor, in order to achieve an optimal seal and to avoid wear. The length of the plate is at least 250 mm. [10"]; the width and thickness are dependent upon your construction. In order to ensure that this plate can be changed easily, it must be fastened with countersunk screws within the free section of the operational stroke of the system, so that the screws cannot make contact with the moving floor profiles.

MOUNTING THE CONTROL BOX AND THE ELECTRICS

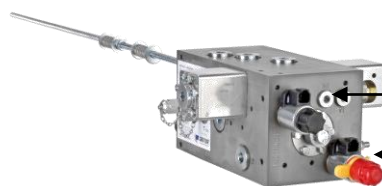
The control box can simply be mounted, without drilling holes, to your own mounting construction or on the mounting bracket that can be supplied as an option. This mounting bracket can, depending on the shape of the crossmembers, be mounted without drilling holes with the supplied clamping plates. The mounting bracket has three heights for mounting the control box. Also the, optional, wireless remote control RX/TX can simply be mounted into the control box, with the E-control as well as the E-control.



E-CONTROL

With the E-control the controlbox CF7 is provided with 3 electrical cables:

- 1x 2 core connection cable for the power supply. The brown cable needs to be connected to the 24V+ and the bleu cable to the 24V-.
- 1x 2 core cable with premounted black plug Deutsch for solenoid GS02 on/off;
- 1x 2 core cable with premounted grey plug Deutsch for solenoid G02 unloading/loading;



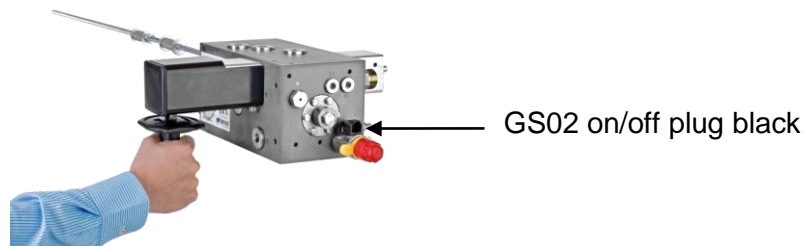
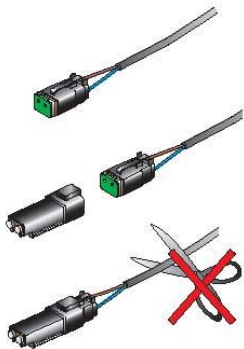
G02 unloading/loading plug grey

GS02 on/off plug black

B-CONTROL

With the B-control the control box CF3 is provided with 3 electrical cables:

- 1x 2 core connection cable for the power supply. The brown cable needs to be connected to the 24V+ and the bleu cable to the 24V-.
- 1x 2 core cable with premounted black plug Deutsch for solenoid GS02 on/off;
- 1x 2 core cable with premounted grey plug Deutsch G02 equipped with a watertight end cap and sticker "do not cut".



Mount to cable G02

It is important that the watertight plugged cable with plug is mounted, but not can nor needs to be connected. This cable and plug need to be fastened somewhere near the control valve. The mounted watertight plug may not be removed.

THE MOVING HEADBOARD

The moving headboard can be made from sidewall profiles reinforced by an edge profile. It is also possible to use a frame with a tarpaulin as a moving headboard. It is the best to hang the headboard on two Cargo Rollers, Heavy Duty, 6 wheels with bi-directional cleaning device in the rails (part no. [5165003](#)), see figure 31A, mounted on the top edge of the trailer. Many aluminium top edges have this rail already integrated.

Mount the rails at the same width as the width of the trailer. The moving headboard needs to be fastened to the Cargo Roller with a length of chains (at least 200 mm. [8"]), so that the headboard can move freely and the Cargo Rollers won't jam. Brushes or rubber flaps can be mounted between the headboard and the sidewalls to avoid leakage and to keep the sidewalls clean.

Let the moving headboard run free on both sides of the side walls, about 25-30 mm [1"-1.25"]. Take obstacles (like welds eg) of the sidewalls

FIG. 31 A

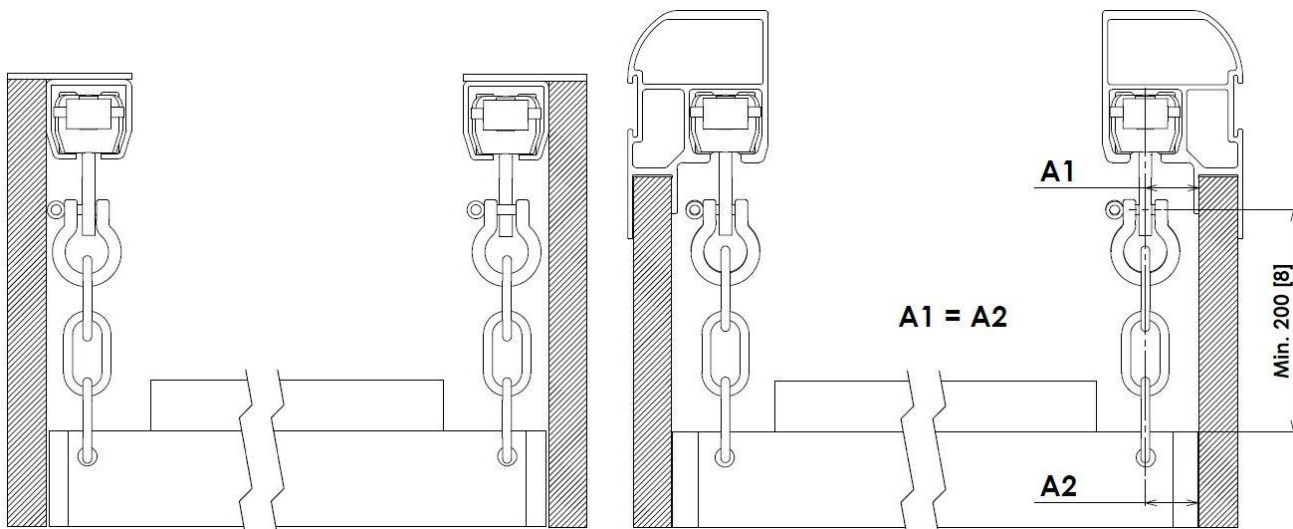
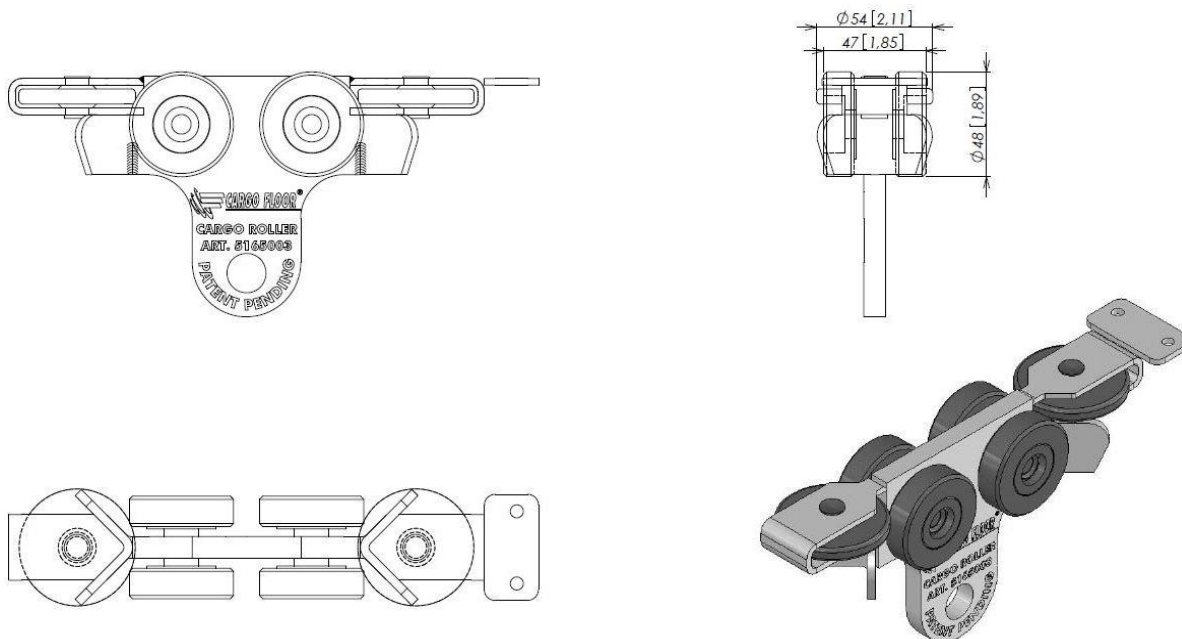


FIG. 31 B

Cargo Roller, Heavy Duty, 6 wheels with bi-directional cleaning device (part no. [5165003](#))

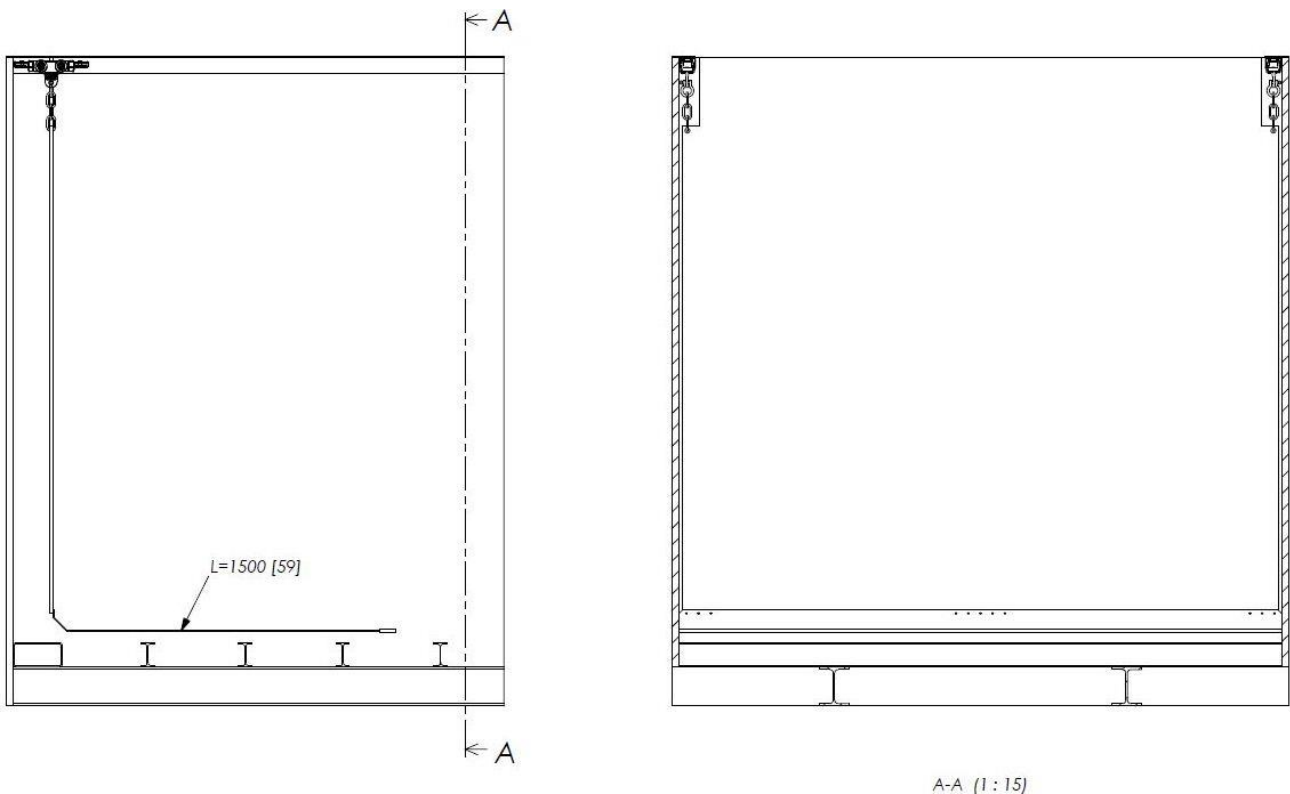


THE MOVING HEADBOARD TARPULIN

In order to allow the headboard to move with the load, a tarpaulin is fastened to the underside of the moving headboard, see figure 32. A section of this tarpaulin (about 1250 mm [4']) needs to lie on the floor. This section of the tarpaulin needs to be fitted with one or more pine (wood) planks. The tarpaulin is clamped between these planks. The fastening bolts/screws need to be well countersunk so as to ensure that they do not come in contact with the moving floor.

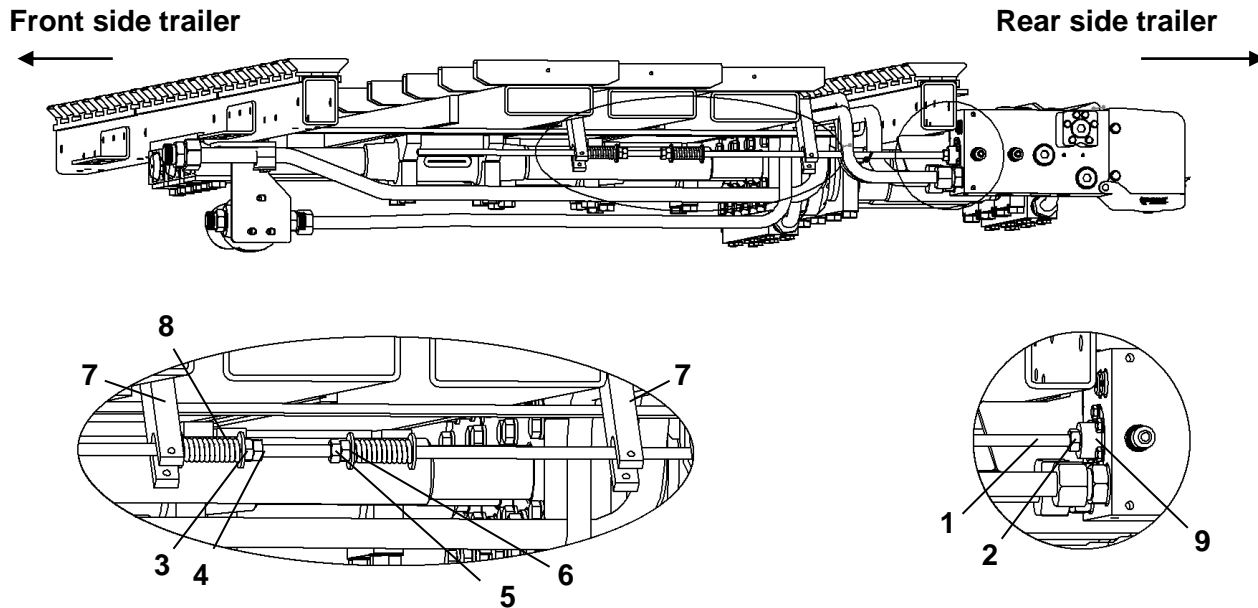
Attention: These planks are about 20 mm. [0.79"] shorter than the smallest internal width of the loading space of the container.

FIG. 32



ADJUSTMENT OF THE THREADED ROD OF THE CONTROL VALVE

FIG. 33



All Cargo Floor systems have the threaded rod set and are fully tested. You therefore do not need to adjust the threaded rod, but in certain circumstances (f.e. certain repairs) it may be necessary to check or adjust the setting of the threaded rod. If switching spontaneously doesn't go normally anymore, then please make a good assessment first why this has happened before changing the adjustment.

Attention: when adjusting the threaded rod take care only to touch the rod when the pump is turned off. It not the risk of entrapment arises!!!

Necessary tools:

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

Check that the threaded rod (1) is fastened securely to the operation plunger, with pressing and pulling the stroke is exactly 12 mm. [0.5"].

If not, then screw the threaded 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 [1.25"] in the direction of the rear of the trailer.

Now switch the pump on while you are at a safe distance. The system will start to move and stops automatically at the point where the command lip (7) no longer operates the operation plunger, because the spring (8) is no longer pushed. Switch off the pump immediately.

Now push the threaded rod (1) in the direction of the front side of the trailer until the spacer ring (9) touches the control valve.

Tighten nuts (3 and 4) so far in the direction of the front side of the trailer that the spring is fully pushed in, and secure them by tightening them against one another. Repeat this procedure for the other side (nuts 5 and 6) by doing everything in opposite directions.

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

TECHNICAL SPECIFICATIONS

- System operation** : completely hydraulic, with three double-action cylinders.
System control : completely hydraulic mechanical.
Operation control : fully automatic loading – stop – unloading, optional A/B-control.

	CF100 SLL	
Bore (mm)	80	[3.15"]
Piston rod diameter (mm)	35	[1.38"]
Stroke (mm)	150	[5.9"]
Cylinder volume (ltr)		
Oil volume per cycle (ltr)	4.09	[1.08 us gal]
Over pressure valve threshold, max. operational pressure (bar)	175	[2,538 psi]
Speed (mtr./min.) with advised pump capacity	2.6	[8.5 ft./min]
Advised pump capacity:		
Flow (ltr./min.)	70	[18.5 gpm]
Pressure (bar)	200	[2,900 psi]
Max. pump capacity:		
Flow (ltr./min.)	80	[21 gpm]
Pressure (bar)	200	[2,900 psi]
Speed at maximum pump capacity (mtr./min.)	2.9	[9.5 ft./min]

- Control valves** : 24V DC (12 V DC optional available)
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 21.
- Drive** : use of the PTO/pump on the truck; an electro-hydraulic aggregate or a hydraulic aggregate with an external combustion engine.
- Filter** : pressure filter type: high-pressure 10 micron (part no. [7372005](#)).
- Pressure piping** : Ø 20 x 2 feed through 16 mm
Return piping : Ø 25 x 2 feed through 20 mm
Oil ISO VG 32 : Shell Tellus T32 or BP HL2-32 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 [158 °F]
- Floor**
Aluminium floor profiles :
 - profile length negotiable
 - floor thickness 3, 6, 8, 10, HDI 8/18 mm. HD 8/20 mm; Semi Leak Proof. [floor thickness 0.12", 0.24", 0.31", 0.39", HDI 0.31"/0.71", HD 0.31"/0.79"; Semi Leak Proof].
 - profile width 92.7 / 97 / 112 / 156,8 / 160 [profile width 3.65" / 4.4" / 6.17" / 6.3"] Pitches and number of slats are variable. Please contact Cargo Floor for advice.
 - moving floor width standard 2.355 [92.7"] mm for an inner width of 2.500 mm [98.4"]
- Extrusion alloy** : high quality Aluminium-alloy, weldable, very wear-proof and tensile
Guiding : The aluminium floor profiles are borne by wear-free plastic bearing (TWISTER) or by plastic bearing block.
- Guide bearing surface** : the total bearing surface of each (TWISTER) is 87 cm² [9.3 sq.inch]. Total bearing surface of each plastic bearing block is 60 cm² [6.4 sq.inch]. 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 bearing can be provided with square tubes 25x25x2 [1"x1"x0.08"] or the plastic bearing block can be mounted directly on the under floor. Alternative is the alu u-profile with Snap On bearing block.

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.com/downloads

Check for the end user / owner after receipt of the new Cargo Floor trailer

Check a couple of days after receipt of the new trailer and / or after 10 loads / unloads and after one month the connection between the aluminium floor profiles and the Cargo Floor system. You do this by placing your finger half on the screw and half on the floor profile when the floor is operating.

Important: if you feel a difference in movement between the screw and the floor profile it means the floor profile is not fastened enough. The screw connection of the whole profile group this concerns needs to be renewed with new screws in accordance to the fastenings guidelines mentioned in the assembly instructions (see www.cargofloor.com/downloads). Also the countersunk hole needs to be cleaned properly. Do not check the screw connections with the help of an allen key and do not simply just tighten the screws, the Loctite connection will be broken.

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 [72 – 105 lbf.ft.]

Regular checks and preventive maintenance:

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:

- Replace the filter element every year, or more often if needed
- Change the oil every 2 years, or more frequently if required;
- The level of oil in the tank. See for oil levels and the oil specifications the wet kit information
- Floor profiles: are they still fixed, replace screws if necessary!
- Check the guide blocks for the 3 piston rods for wear
- Check the coupling nuts and couplings 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.com/downloads

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

Adjusting the threaded rod of the control valve;

It is important that the steering valve is correctly adjusted and that the switchover moment occurs according to the procedures

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 gulley regularly.

IMPORTANT INSTRUCTIONS

- Avoid letting dirt and water get into the hydraulic system when disconnecting the connectors or when topping up/cleaning the oil tank.
- Adjust the work speed when, for example, heavy massive products are being loaded or unloaded with which the system needs the maximum power ([see chapter technical specifications](#)), so as to avoid overloading.
- It is not permitted to exceed the maximum operational pressure ([see chapter technical specifications](#)).
- Avoid loading and unloading sharp objects such as glass without a protective roll-up cover mechanism. This causes unnecessary wear of the seal/floor profiles. If you would like to transport such materials safely, we advise you to use a protective roll-up cover mechanism.
- Never exceed the maximum number of strokes per minute when using the full stroke ([see chapter technical specifications](#)). A greater number of strokes causes enormous forces in the system and chassis, and causes a lot of heat to be generated in the hydraulic system.
- When loading and unloading packed goods it is important that a good equal weight distribution is realized on the floor. If this is not the case there is the possibility that the goods will not move. When using pallets, if necessary, place a wooden plank (of about 300x18x2350 mm [12"x 0.75"x92.5"]) multiplex underneath.

TROUBLESHOOTING E-CONTROL

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 system	Concerns part	Cause	Solution
1. Does not operate No oil flow control valve	PTO	Not switched on	Switch on PTO
	Quick coupling	Blockade	Check couplings / mount correctly
2. Does not operate There is oil flow control valve	Remote control	Manual override operated	De-activate manual override
	Solenoid valve GS02 on/off	Interruption wiring Interruption in coil	Activate manual override GS02 temporarily and/or repair power supply
	Pressure control valve	Polluted	Clean / replace pressure control valve, attention: do not open the pressure control valve in parts
	Operation plunger in the middle position	Flow <60 l/m [16 US gpm] See chapter: choke	Increase pump rpm Install another pump Adjust choke
		Hoses connected reversed	Check filter first, then connect pressure and return correctly.
	Plunger moves with difficulty due to molten seal	Replace seals operation plunger	
3. Starts immediately after switching on the PTO	Switch CF7	Switch movement blocked in the on position	Remove blockade
	GS02 on/of	Manual override activated	De-activate manual override, put yellow security clip back in place
	Hoses connected reversed	Pressure and return hoses are swapped	Check filter first, then connect pressure and return correctly.
4. Individual movement is difficult and/or incorrect with a full trailer	Pressure control valve	Tipper valve	Turn tipper valve in correct position
		Pressure control valve pulling vehicle max. pressure to low	Measure max. pressure/ adjust pulling vehicle
		Return oil has restrictions	Measure pressure M2, remove restrictions
	Capacity of the system is insufficient.	Too much load	Unload part of load with crane
		Pollution between the profiles	Clean
		Frost	Thaw
5. Individual movement is incorrect when unloading With a full and empty trailer	Valve in cylinder head 1 or 2	Pollution prevents a good closure	Remove pollution
		Broken valve spring	Replace spring
	Valve seat in cylinder head 1 or 2	Valve seat has loosened	*Replace / fasten valve seat
	Common rail cylinder rod side	Stop in the common rail has loosened	Fasten stop / replace common rail
		Common rail mounted the wrong way around	Mount common rail correctly

Malfunction system	Concerns part	Cause	Solution
6. Switching is difficult or goes not at all. 3 Cylinders are fully retracted or fully out.	a. Threaded rod	Adjustment incorrect	Adjust correctly, attention: determine cause. See: b. and c.
		Switching spring broken	Replace spring, attention: determine cause. See: b. and c.
	b. Switching plunjer	Stroke > 12 mm. [0.5 inch] -> threaded rod loose, spacer loose	Screw in Threaded rod / bolt fully.
	c. Moving cross member	Slanting caused by loose profiles	*Replace screws and provide them with a thread locking product and check the rod bearing.
	d. Switching choke	Polluted	* Clean choke
7. Floor unloads when choosing loading and unloading	Solenoid valve G02 loading / unloading	Interruption wiring Interruption in coil	Activate manual override G02 temporarily and/or repair power supply
8. Floor loads when choosing loading and unloading	Solenoid valve G02 loading / unloading	Manual override G02 is activated	De-activate emergency control
9. Other malfunctions	Please contact your trailer builder or Cargo Floor, keep the system number at hand.		

* Contact us for the right repair advice.

WARRANTY CONDITIONS

Warranty shall only be given with the prior consent of Cargo Floor B.V.! With warranty requests always fill in and send a warranty request form to Cargo Floor B.V. beforehand. You can fill in a request for warranty simply on our website: www.cargofloor.com, [After Sales, guarantee request](#).

The warranty 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 warranty 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 warranty period is for the first equipment owner only.
- 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 warranty:

- 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. [158 °F]
- Malfunction caused by overloading or injudicious use.
- Malfunction caused by improper repair work, or repair work which is carried out by third parties.
- Malfunction caused by corrosive materials
- Filter elements and components, which are subject to normal wear-and-tear and are not warranty items.
- Defects in electrical components due to incorrect connection and/or incorrect voltage levels.
- Consequential damages

The warranty is void if:

- The system is used for purposes, which have not been recommended by Cargo Floor
- The wet kit is not as recommend in the Cargo Floor manuals
- The Cargo Floor system is not installed properly
- Load in excess of legal limit are moved as defined in Cargo Floor manuals and operating instructions.
- 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.

Cargo Floor hereby warrants, only to the first owner of a new Cargo Floor unloader from the factory or selling distributor, that the Cargo Floor hydraulic parts and hydraulic components shall be warranted as free from defects in material and workmanship for a period of one year to the first registered owner from the date of the sale.

This warranty does not cover normal wear and tear, maintenance, or heat damage. It is not to be Construed as a service contract.

Note: prevention of excessive heat in the hydraulic system is the single most important factor for long system life. Bad pumps, improper wet kits and hydraulic restrictions cause excessive heat and will damage the hydraulic system. Heat damage will void the warranty

Definition of normal use and service:

Normal use and service means the loading and/or unloading of uniformly distributed, non-corrosive material, properly restrained and secured, on properly maintained public roads, with gross vehicle weights not in excess of factory rated capacity.

Sole and exclusive remedy:

If the product covered hereby fails to conform to the above stated warranty, **Cargo Floor** sole liability under this warranty and the owner's sole and exclusive remedy is limited to repair or replacement of the defective part(s) at a facility authorized by your dealer or **Cargo Floor**. This is the owner's sole and exclusive remedy for all contract claims, and all tort claims including those based on the strict liability in tort and negligence. Any defective part(s) must be shipped freight prepaid to your dealer who will contact **Cargo Floor**

Except as expressly set forth above, Cargo Floor makes no warranties:

Express, implied or statutory, specifically: No warranties of fitness for a particular purpose or warranties of merchantability are made. Further, **Cargo Floor** will not be liable for incidental damages or consequential damages such as, but not limited to, loss of use of the product, damage to the product, towing expenses, attorney's fees and the liability you may have in respect to any other reason.

Tort disclaimer:

Cargo Floor shall not have any liability in tort with respect to the products, including any liability based on strict liability in tort and negligence.

If this warranty violates law:

To the extent any provision of this warranty, contravenes the law of any jurisdiction, that provision shall be inapplicable in such jurisdiction and the remainder of the warranty shall not be affected thereby.

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Nederland

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Website: www.cargofloor.com

Order spare parts:

E-mail address: sales2@cargofloor.nl
DID number: +31 524 593 922

After Sales (technical questions and malfunctions)

E-mail address: as2@cargofloor.com
DID number: +31 524 593 991