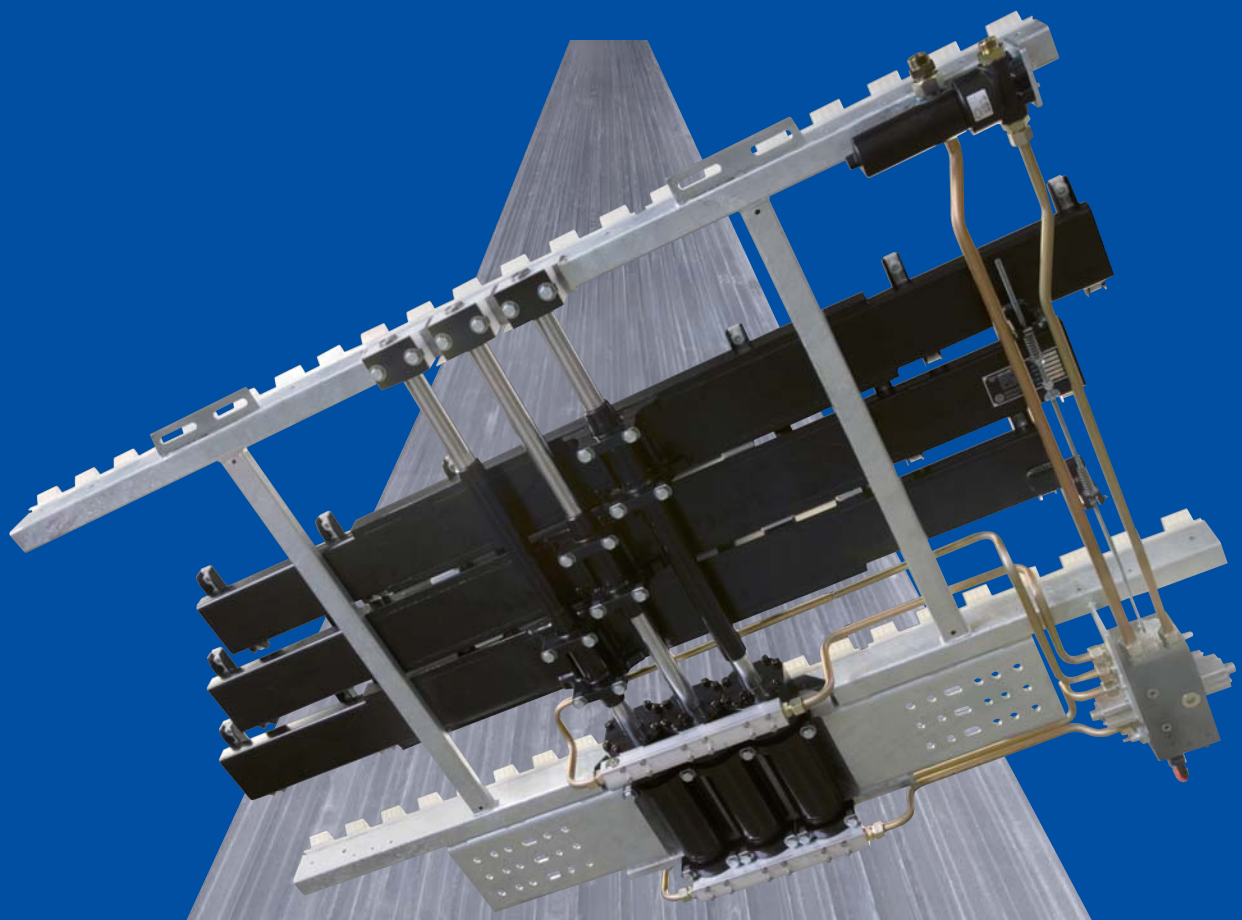
CARGO FLOOR®

HORIZONTAL LOADING-/UNLOADINGSYSTEM



GB

COMPANY PROFILE

Cargo Floor B.V. is the leading European supplier of horizontal loading and unloading systems which are exported all over the world.
With more than 25 years experience, excellent quality and an extremely high level of service, Cargo Floor B.V. is now recognised in the entire industry as **world-renowned market leader**!
Cargo Floor B.V. manufactures its products in Coevorden, The Netherlands, under the **ISO 9001-2008 quality label** (certified by Lloyds). Before delivery, each system is tested extensively for proper functioning, geometry and sealing.
This ensures that every Cargo Floor 'moving floor' System is easy to install and functions excellently anywhere in the world.

Cargo Floor B.V. has specialised in the following product groups:

- Cargo Floor mobile systems for the truck and trailer industry
- Cargo Floor stationary systems for self-unloading transport/dosing systems in factories (design, advice and implementation)
- CargoMatic "The Logistic Solution", a dock-to-trailer system for fully automatically loading and unloading packed materials within 90 seconds
- Service and installation
- Trailer rental

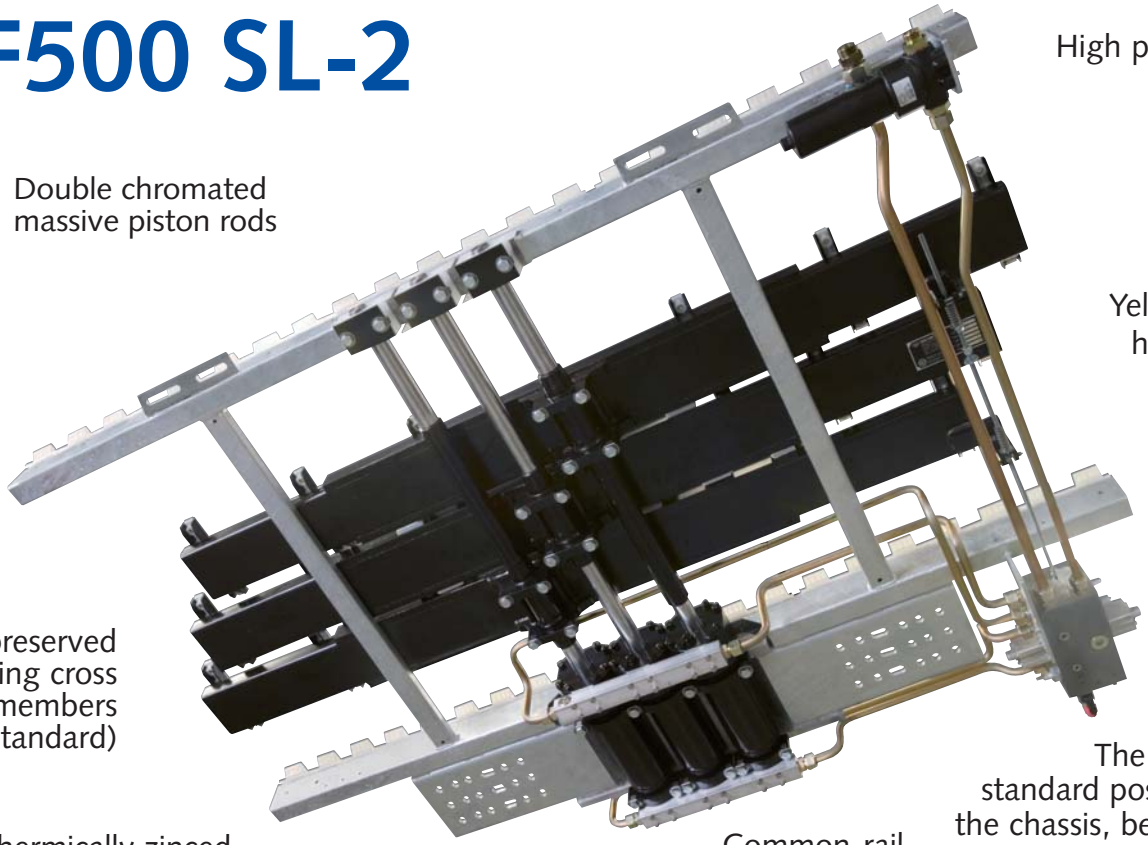
Cargo Floor has designed a revolutionary new moving system in close collaboration with fitters and end-users, and based on the experience acquired with the Cargo Floor 'moving floor' System. The new system makes use of the very latest engineering developments, inclusive of the newest materials. The CF500 SL-2* system is powered exclusively by hydraulics – as a result of which atmospheric conditions exert no influence whatsoever on the system's performance. As you will undoubtedly be aware, a number of factors are of fundamental importance to the ability to be able to achieve a return on your capital invested in transport material. These factors include the maximum cargo volume and the low tare weight of your vehicle required to provide for the transport of the greatest possible cargo weight, as little maintenance as possible, and the longest possible useful life. Moreover, a favourable quality to price ratio is an additional important factor. The latest Cargo Floor CF500 SL-2 meets all these requirements.

A few characteristic of the CF500 SL-2 system:

- An extremely low tare weight, absolutely the lightest system in its category available anywhere in the world
- The maximum possible cargo volume because of a very compact design, which incorporates 2 integral cross traverses, as a result of which the system can be installed in all types of trailers and trucks – inclusive of steered trailers with dual tires
- The system is supplied at the exact height of all cross traverses in common use; consequently they can be mounted directly to the chassis, without needing to fit spacers
- The hydraulic system is, next to mineral oil, as a standard suitable for the use of nearly every kind of biological and foodgrade hydraulic oil
- Because of the solid construction and the integrated support of the moving cross members, the system can be driven over by almost every type of fork lift truck
- The system requires no maintenance whatsoever
- Full hydraulic operation of the system

***Also available as very fast "Power Speed" system.**

CF500 SL-2



High pressure filter

Double chromated massive piston rods

Yellow passivated hydraulic piping

CDP preserved moving cross members (standard)

The control valve is standard positioned outside the chassis, because of that it is simply accessible

Thermically zinced subframe (optional) CDP is standard

Common-rail

3 Heavy Duty cylinders

Sustainable environmental conservation: Because Cargo Floor is the only company in the world that fully preserves its drive units with a CDP finish, the system does not need to be repainted or refinished during its lifetime.

OPERATION OF THE CARGO FLOOR SYSTEM

The Cargo Floor 'moving floor' System is a multi-functional, horizontal loading and unloading system for the fast and efficient transport of almost any product. The system is ideal for unloading a wide variety of bulk products, which typically are loaded from above and unloaded horizontally from the rear by the Cargo Floor 'moving floor' System. It can also be used to load and unload packed materials.

Floor structure

The Cargo Floor 'moving floor' System is composed of floor profiles installed lengthwise, parallel to each other. The Cargo Floor drive system moves the floor profiles back and forth within the power stroke of the three hydraulic cylinders. The cylinders are driven by mechanical or hydraulic systems (no electronics). The floor profiles are made primarily from aluminium, but they can also be supplied in steel or another material.

The density between the floor profiles is ensured by a high-quality plastic sealing profile; Semi Leak Proof floors and even 100% Leak Proof solutions are available.

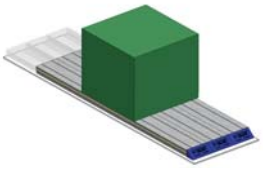
Clean unloading of bulk products

By using a moving partition, the floor/container can be unloaded in a virtually clean manner. The moving partition hangs from running rollers that are mounted on an integrated rail at the top of the side wall (Cargo Floor has developed special heavy-duty six-wheel rollers for this purpose, which also clean the rail in two directions; Art. no. 5165002). A cloth, onto which the cargo is unloaded, is secured underneath the moving partition for moving the partition across the floor. But a cloth over the floor, instead of a moving partition, will do just as well. Do not forget to roll it back manually (for the sake of reliability, weight, costs) and hang it on the bulkhead for the next cargo.

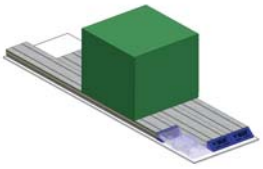
Returning packed cargo

Besides bulk cargo, you can also load and unload a variety of packed cargo, such as: pallets, paper rolls, big bags, compressed bales, etc.

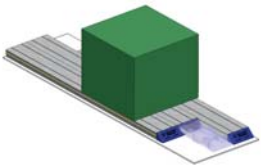
The Cargo Floor moving floor principle:



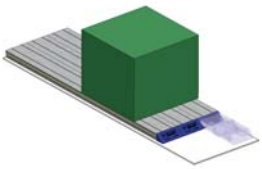
Step 1: three hydraulic cylinders move the entire floor as a whole in the selected direction, thereby transporting the cargo



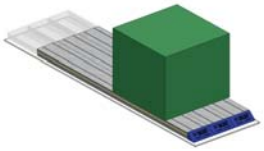
Step 2: one hydraulic cylinder pushes one group of floor profiles (= 1/3 floor section) back underneath the cargo, while 2/3 of the floor section remains still, the cargo will hardly move as a result



Step 3: one hydraulic cylinder pushes one group of floor profiles (= 1/3 floor section) underneath the cargo, while 2/3 of the floor section remains still, the cargo will hardly move as a result



Step 4: one hydraulic cylinder pushes the third and last group of floor profiles (= 1/3 floor section) underneath the cargo, while 2/3 of the floor section remains still, the cargo will hardly move as a result



Step 1 is repeated again. The frequency and thus the speed at which these steps are repeated depend on the output of the hydraulic pump. The available power at which the cargo can be moved depends on the available pressure of the hydraulic pump. The Cargo Floor 'moving floor' System is designed for a maximum payload of 40 tonnes.

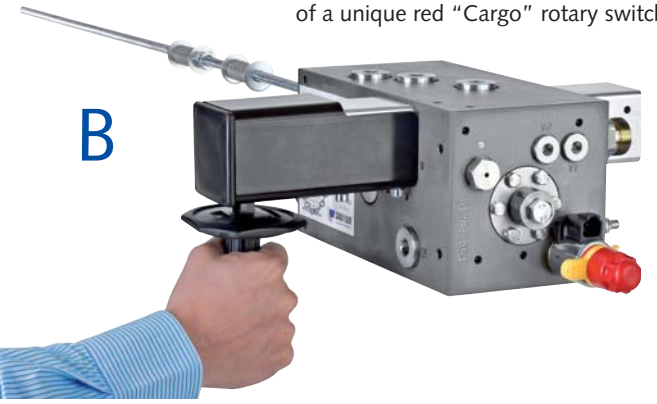
The principle works in two directions, in other words the Cargo Floor 'moving floor' System can be used to LOAD and UNLOAD.

OPERATING POSSIBILITIES

E

Manual **emergency control** by means of a unique red "Cargo" rotary switch.

B



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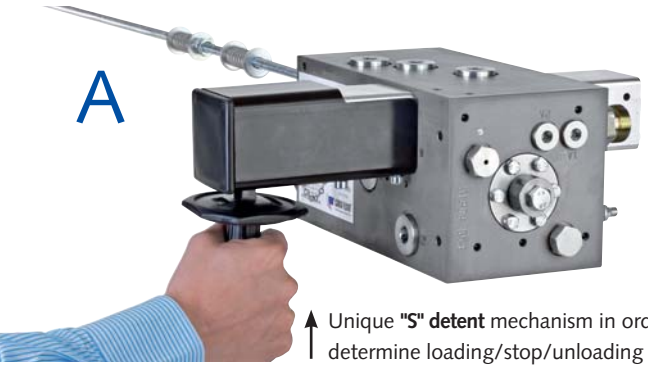


Unique **"S" detent** mechanism in order to determine loading/stop/unloading position.

STANDARD	OPTION
	
	

Thanks to its modular construction, the following operative versions of the Cargo Floor 'moving floor' System are possible (also retrofittable):

E-operation with loading / stop / unloading over a switch
As a standard provided with a manual emergency control by means of a unique red "Cargo" rotary switch
(Optional: radio remote control)

B-operation with loading / stop / unloading over a manual handle, with unique **"S" detent** mechanism in order to determine loading / stop / unloading position. on / off switching over a switch
As a standard provided with a manual emergency control by means of a unique red "Cargo" rotary switch
(Optional: radio remote control)

A-operation with loading / stop / unloading over a manual handle, with unique **"S" detent** mechanism in order to determine loading / stop / unloading position. (non-electrical)

APPLICATIONS

The standard Cargo Floor 'moving floor' System is ideally suited to the transport of almost all common products. In addition to the standard system, Cargo Floor also has a range of different drive units and floor sections available for special applications. The range of sections encompasses narrow or broad and ribbed or smooth sections in a variety of thicknesses. Sections are also available in a variety of materials (aluminium/steel/composite/plastic, or a combination of these materials).

Cargo Floor has proven its quality in the transport

- bulk materials
- wood chippings
- sawdust
- bark
- logs of wood
- potting soil
- peat
- clay
- bleaching earth
- straw
- straw bales
- maize
- grain
- potatoes
- carrots
- tapioca
- milk powder
- coffee beans
- soya beans
- alfalfa
- sugar beet and pulp
- chicken feed
- manure
- fertilizer
- salt
- chalk
- coal
- used paper
- rolls of paper
- aluminium scrap
- domestic waste
- cargo (bales / bags)
- big bags
- pallets
- Slaughter waste
- Sewage sludge
- Compressed bales
- etc.

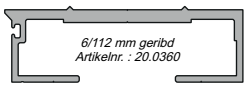
When used in combination with the special automatic roll-up protection sheet (see pictures) the Cargo Floor can also be used for the trouble-free transport of the following products:

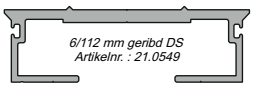
- glass
- gravel
- ore
- sharp sand
- vegetables and fruit
- all other abrasive materials

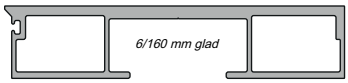
Fork-lift truck
In principle all Cargo Floor floors can be driven on by a fork-lift truck; contact your body builder for information about the permitted weights!

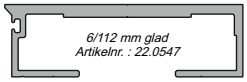
Efficiency/output
Efficiency of loading and unloading (packed) cargo is determined mainly by the flatness and the even weight distribution of the cargo over the floor area of the Cargo Floor. Uneven weight distribution will reduce efficiency and may even cause the cargo to only move back and forth within the power stroke of the system. Uneven cargo weight distribution can be compensated by using supports to spread the weight evenly across the floor profiles.
The system's operating speed can also affect loading and unloading efficiency.

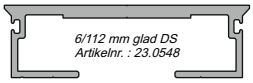
PROFILES

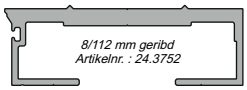


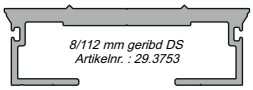


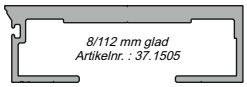


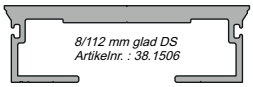


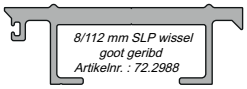


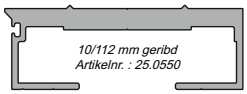


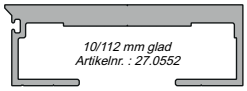


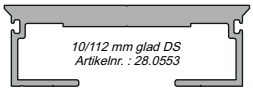








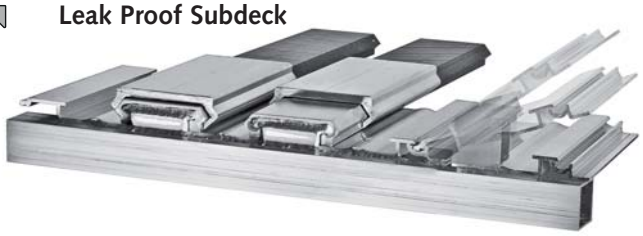


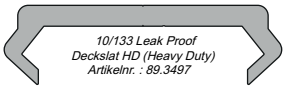


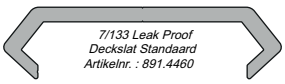
Alu U-profiel 25x25
"Snap-on"
Artikelnr.:692.4214

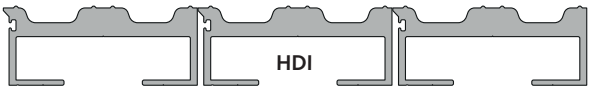
The standard system is supplied with plastic caps to seal the ends of the aluminium floor profiles; the caps are bevelled at an angel of 45 degrees and the result that your vehicle is securely sealed on the rear side. Aluminium caps are available as an option.

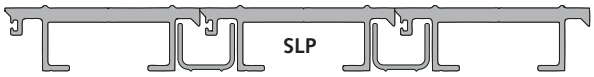
Leak Proof Subdeck











Steel "C-shape"

The **sealing section** is comprised of a unique plastic composite (Nobraforte) that will usually outlast the aluminium. The sealing section has been designed to ensure that the load cannot leak through the floor, whilst water and mud from the road splashing against the underside cannot penetrate into the trailer.

Profile quantity: **The Cargo Floor systems are standard supplied with 21 (option 24) sliding floor profiles, including a possible double seal end profile.** This end profile is provided with double seal. Because of this it is unnecessary to saw through a so called edge profile. One man can readily fit the aluminium floor profiles from above. Different profile numbers like …. 15, 18, 24 and 27….. are on request possible.

• **Steel profiles** can be supplied in various versions, with which you always should keep in mind that this causes a minimal increase in weight of 300 kg on our vehicle.

Cargo Floor's unique design ensures cargo security in a number of ways.

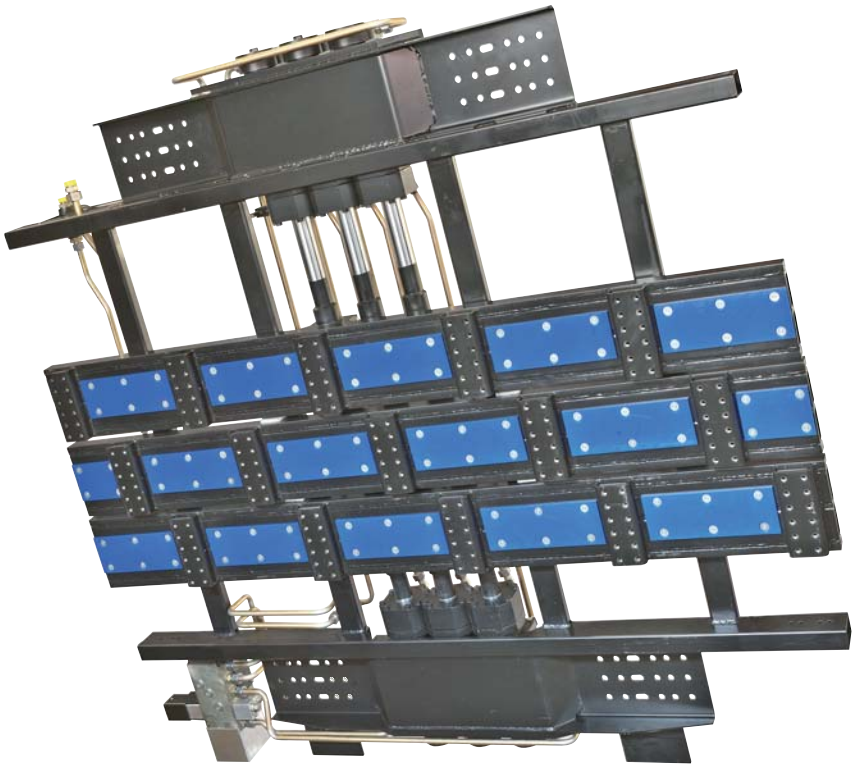
CF800 HD 80T 'HEAVY DUTY'

This extremely strong Cargo Floor 'moving floor' System is designed for the toughest applications in the market, using six cylinders that are interconnected by a massive piston rod. The Heavy Duty Cargo Floor 'moving floor' System has a net payload capacity of 80 T.

Yet, thanks to its unique design, the drive unit has remained lightweight, making the system readily mobile, especially for the mining industry as well as for mobile and stationary applications on industrial sites.

For intensive transport of highly abrasive materials, we recommend the use of our steel floor profiles, although aluminium floor profiles can also be used for such applications.

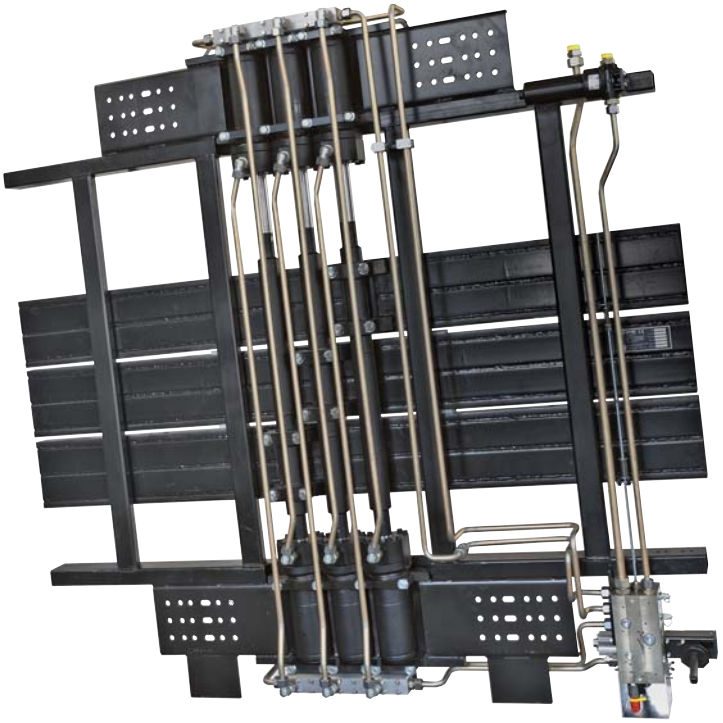
The Cargo Floor CF800 HD premiered worldwide in a trailer built by a Russian builder who supplied the trailer to Mongolia where it is used in the mining industry.



TECHNICAL SPECIFICATIONS

CF800 HD 80T

Operating possibilities	E/B/A
Cylinder bore (mm)	100
Piston rod diameter (mm)	50
Stroke (mm)	200
Oil volume per cycle (ltr)	16,5
Working pressure (bar)	170
Max. pressure (bar)	225
Max. oil flow	130
Pressure filter (µm)	10
Speed at advised oil flow (m/min)	1,3
Speed at max oil flow (m/min)	1,6
Theoretical unloading time trailer 13.6m (min)	10
Max. loading capacity (ton)	80
Advised pump capacity (2-line system)	
Flow (ltr./min)	110
Pressure (bar)	250
Pressure piping diameter (mm)	20/2
Return piping diameter (mm)	25/2,5
Oil tank filling min. (ltr)	100
Max. oil temperature (°C)	70
Oil type mineral or biological (HEES)	ISO VG 32



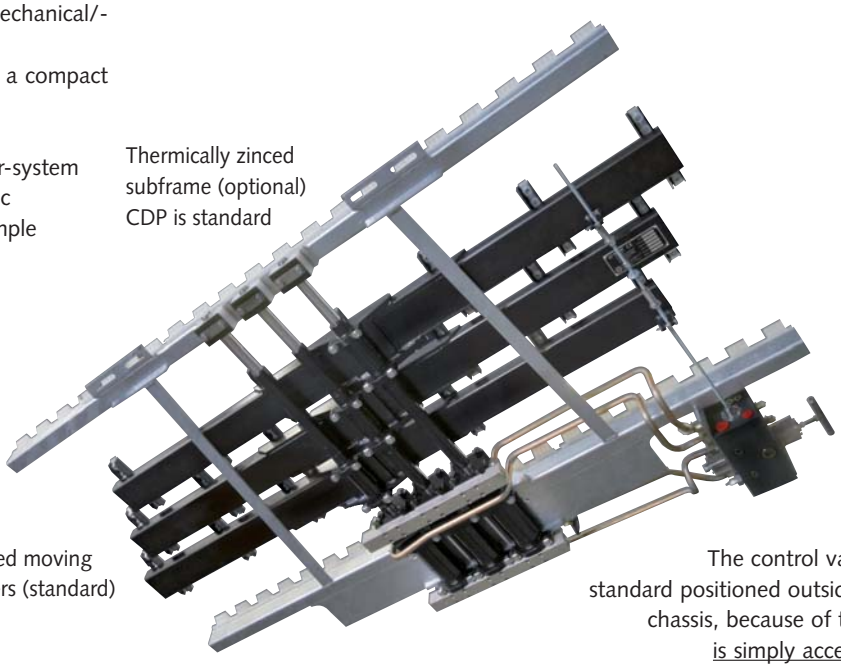
CF100 SL-2 'Ultra Light'

This unique light-weight Cargo Floor-system has been developed especially for simple installation in trucks, drawbar trailers, containers and inter-changeable containers (demountables).

A few characteristic of the CF100 SL-2 system:

- Lowest installation height possible in combination with 80 mm. cross member
- Extremely low intrinsic weight of the power unit
- Floor speeds between 0 – 2.5 metres / min.
- The entire hydraulic drive is controlled solely by mechanical/-hydraulic means
- The pre-assembly of the cylinders, pipes and valves in a compact frame provides
  for very simple and rapid installation
- Floor construction identical to the standard Cargo Floor-system
- Sub-frame may be dropped, in which case the hydraulic drive can be integrated in your own structure (for example aluminium/composite)
- Enables the maximum cargo volume to be utilized
- Suited for use as an autonomous metering silo
- Maximum load 20 tonnes
- Maximum floorlength 9,000 mm
- Yellow passivated hydraulic piping

Thermically zinced subframe (optional) CDP is standard



CDP preserved moving cross members (standard)

The control valve is standard positioned outside the chassis, because of that it is simply accessible

Cargo 'Snap-on' bearing block

The Cargo is a one-piece 'Snap-on' bearing block with anti-splash lip.

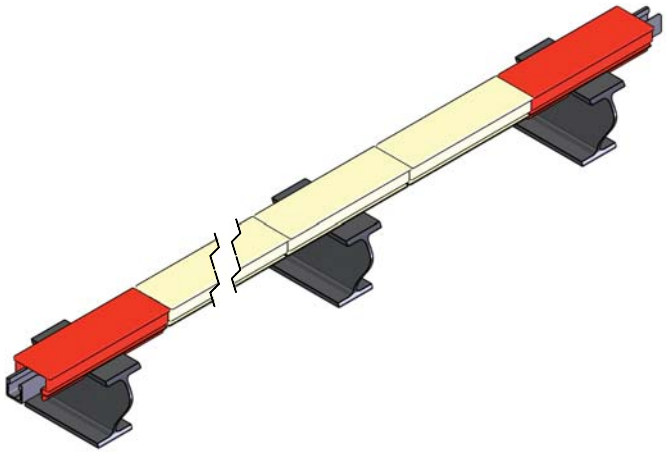
This newly developed Cargo 'Snap-on' plastic bearing block is a unique design with which a solid one-piece bearing block can be created, if so required.

Injection moulding rather than extrusion was chosen for this process, as it achieves the high density and precise dimensional stability required. Despite the large surface of the one-piece Cargo 'Snap-on' bearing block, it exhibits extremely low friction and the very high wear resistance one has come to expect of the Cargo Floor bearing block.

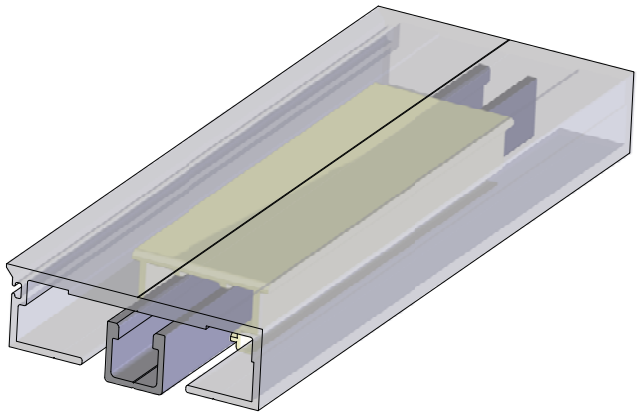
The assembly can be carried out in two simple and ergonomically sound ways:

A) Slide the Cargo 'Snap-on' bearing blocks in the aluminium support rail (press a vertical stopper at each end of the rail to lock the bearing blocks in place)

B) Press the Cargo 'Snap-on' bearing blocks vertically from above into the aluminium support rail.

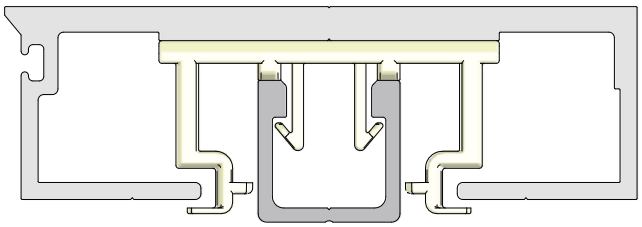


Anti-Lifting/Hold-Down Block:
The unique hooks clamped into the support rail prevent the bearing block from vertically protruding from the rail, thereby holding the floor profiles in place at all times.

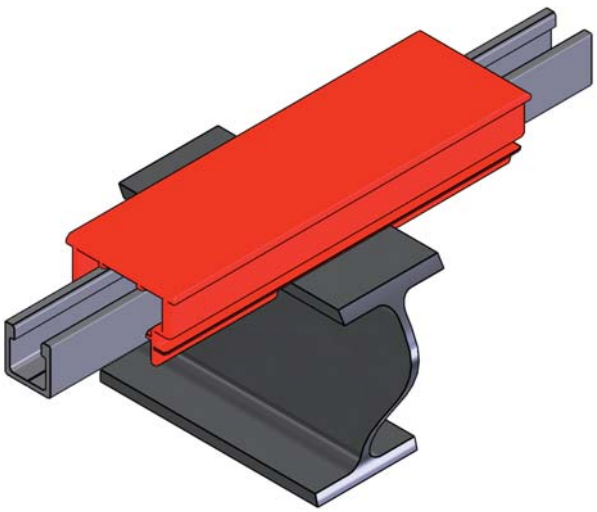


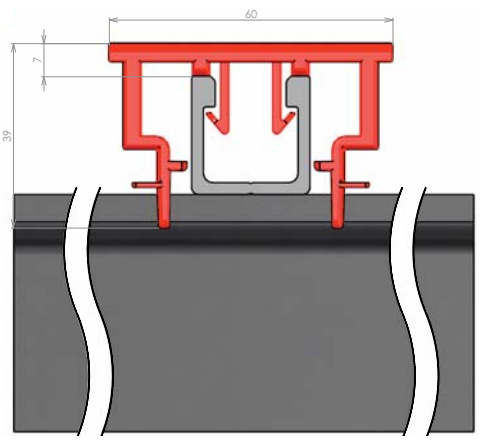
Anti-Splash:
The Anti-Splash Lip prevents road splash and debris from entering the support rail and contaminating the inside of the floor profiles, keeping wear to the bottom to a minimum.

The Cargo 'Snap-on' bearing block can also be placed near the cross beams.

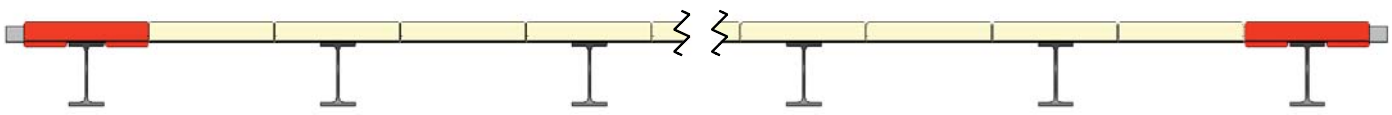


Aluminium support rail:
The special 25x25 aluminium U-shaped square section not only provides stability between the cross beams, it also serves as support and anti-lifting device for the plastic Cargo 'Snap-on' bearing block. This profile can also be used for other bearing blocks, such as the Cargo Twister. This is a huge advantage for the after-sales market, as it ensures that you do not have to deal with orders for special bearing blocks.
This 25x25 aluminium U-shaped profile can also be mounted on a steel structure.



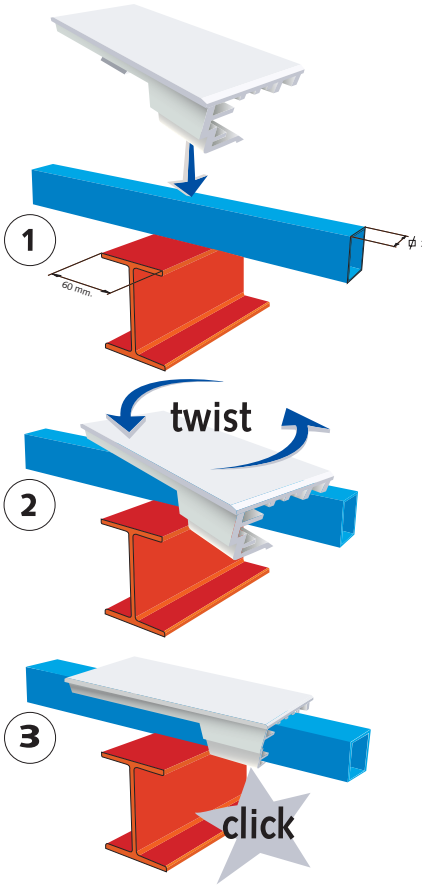


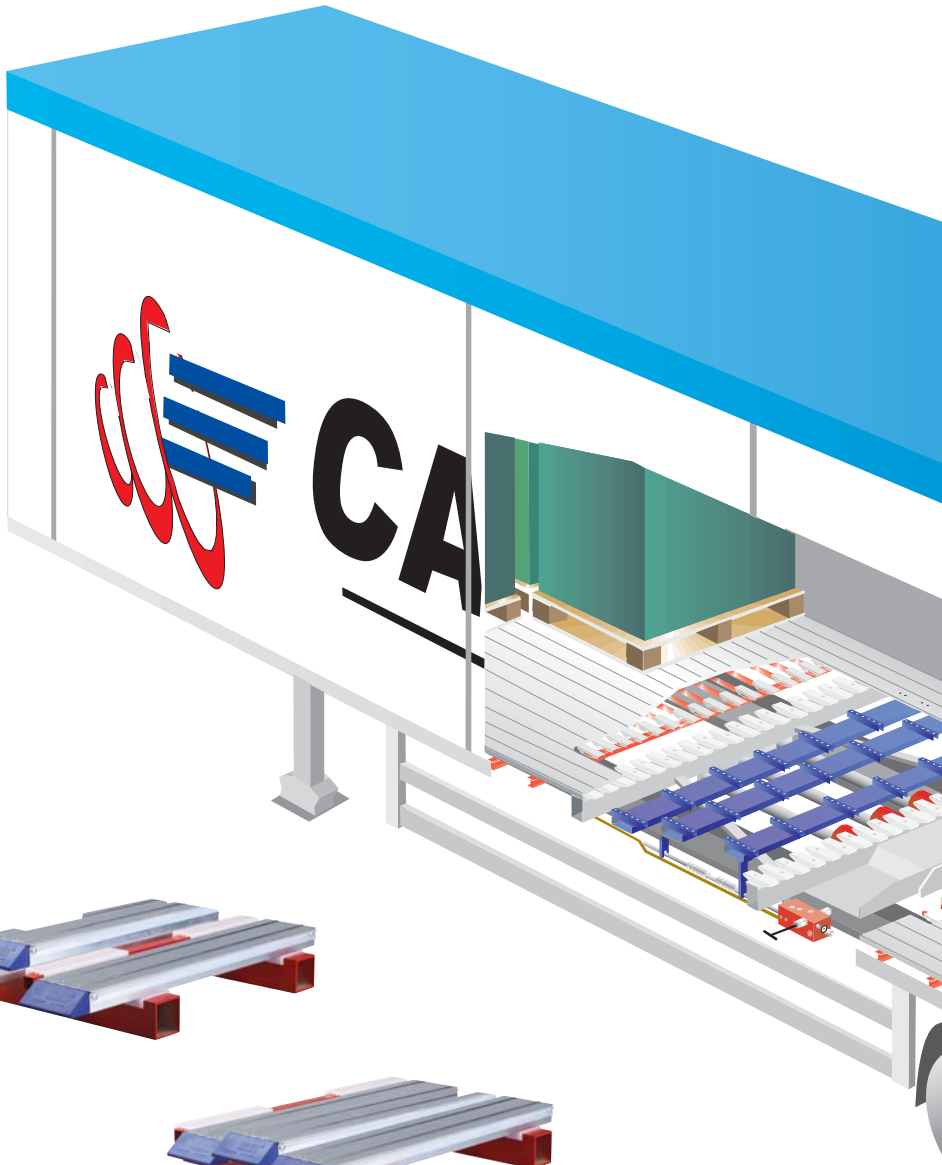
Patent Pending

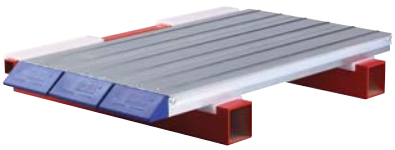


COMBINED TECHNOLOGY

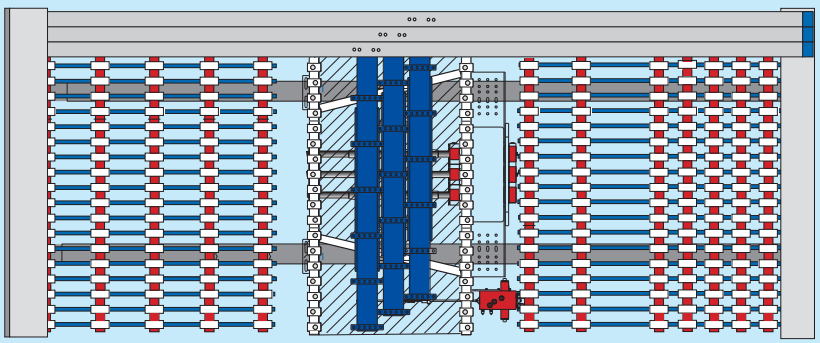
The patented **TWISTER** can be fitted easily and rapidly to the 25x25 under-floor beam (supplied by the trailer builder); no tools are required.
By virtue of its **ingenious construction** the full weight on the aluminium floor section is support by the thickest internal region of the section. Fouling does not exert an influence on the useful life of the aluminium – and, moreover, the design provides for the maximum stability when subjected to heavy loads (sliding surface 8700 mm2/unit).

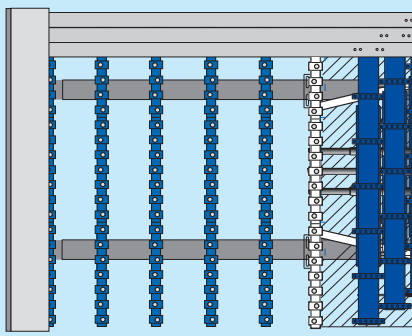


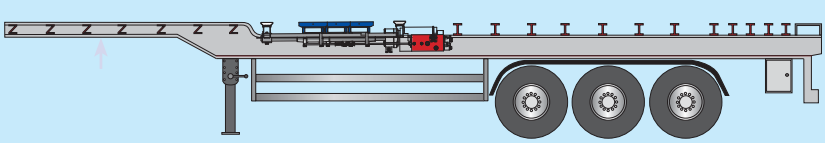


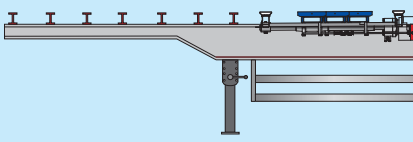


With the **Kick Twister,** floor profiles can be installed from above (without sliding). This is extremely useful in practice, in case of limited installation areas.

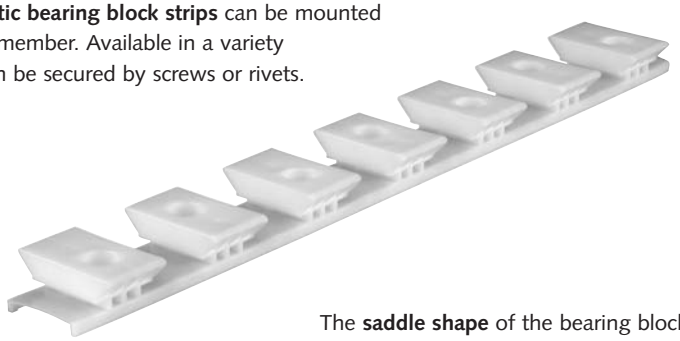


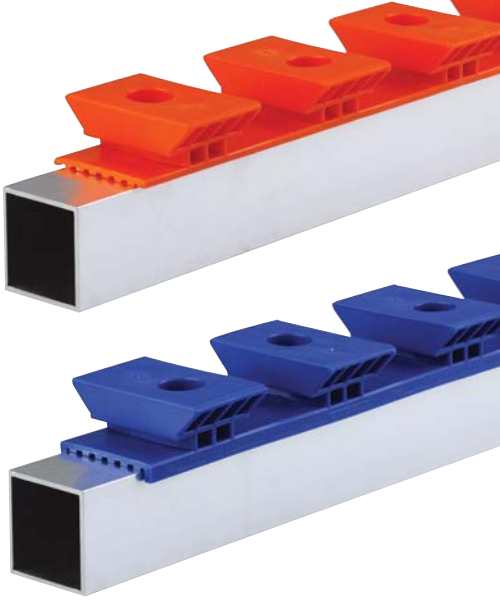




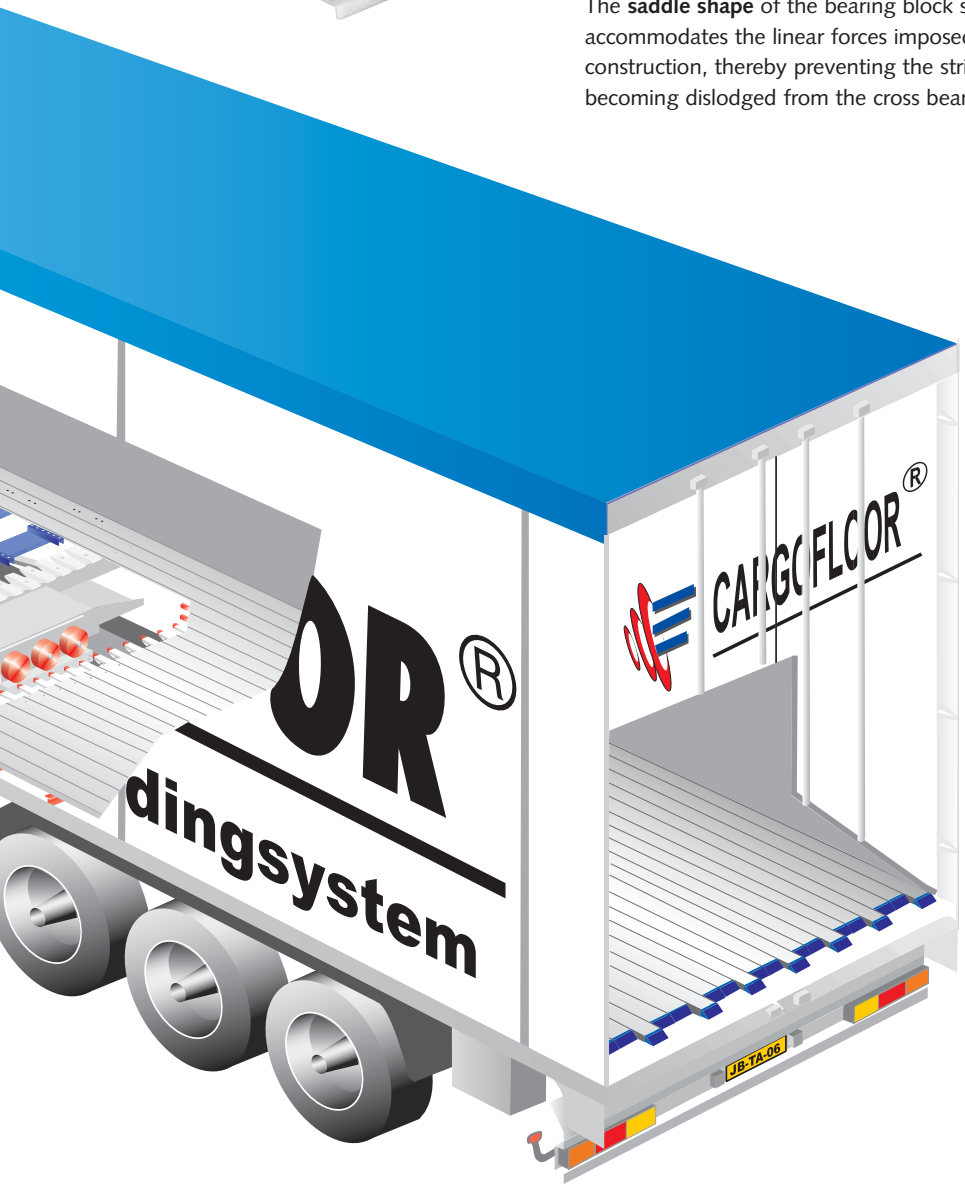


The patented **Plastic bearing block strips** can be mounted directly to a cross member. Available in a variety of models, and can be secured by screws or rivets.



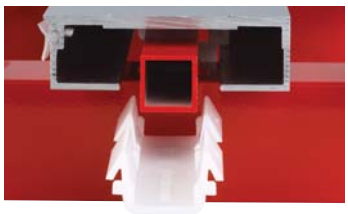


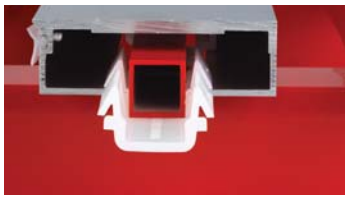
The **saddle shape** of the bearing block strip accommodates the linear forces imposed on the construction, thereby preventing the strip from becoming dislodged from the cross beam.

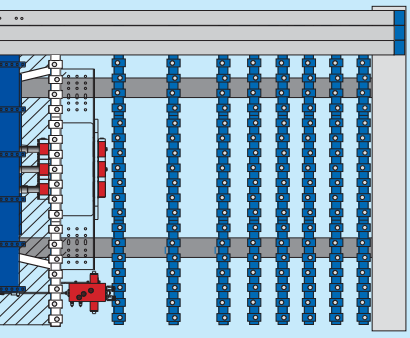


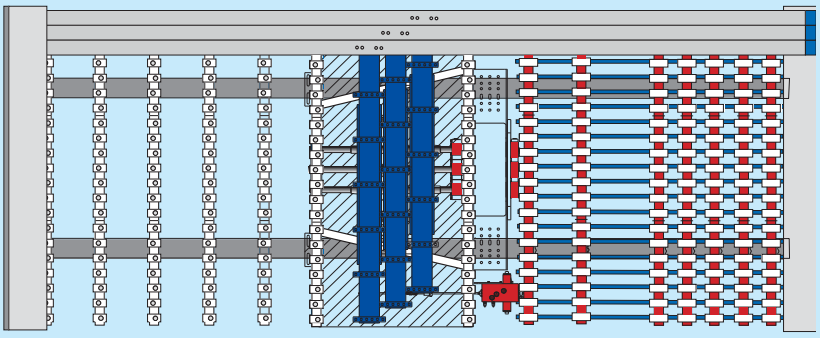
ANTI LIFTING BLOCK

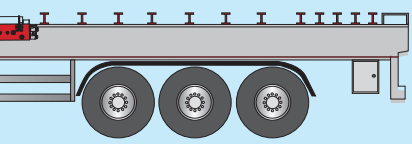
Extra protection against rising floor profiles. Can also be placed after the floor is mounted.

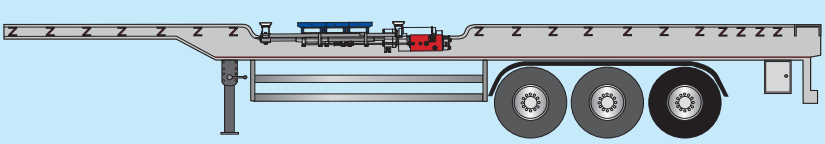












CF3LP-2 'Leak Proof'

Standard thermically zinced moving cross members

A compact watertight system

This 100% watertight Cargo Floor-system has been developed for transporting environment-polluting products, both in the form of loose bulk material as well as compressed bales.
The system is excellently suited for transporting and storing DOMESTIC WASTE and vegetation waste.

Thanks to this unique and compact design and the use of space in the so-called head radius, which minimises the loss of loading room. The inclined sealed partition also protects the drive system.

The aluminium sub-floor is easy to fit on both steel and aluminium chassis-frames, and is readily secured either by screws or rivets to the sub-floor members outside of the watertight section.

Virtually no welding is required, since the sub-floor sections are simply clicked into each other and rendered watertight with a special seal.

The aluminium floor sections are guided along their entire length, and are supported by solid plastic bearing blocks. Either standard aluminium section or HDI (Heavy Duty Impact) sections are available. The latter system is ideally suited to situations in which high impact forces are imposed on the floor.

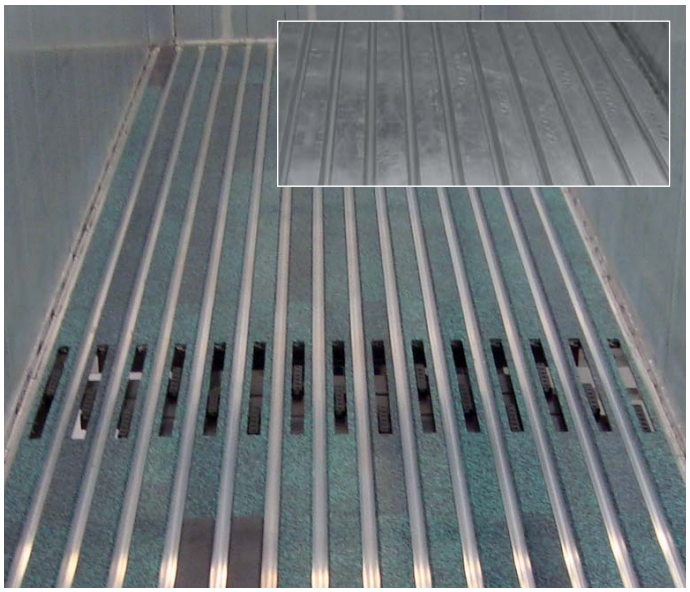
CF500 SL-2 Leak Proof* "Centre Drive"

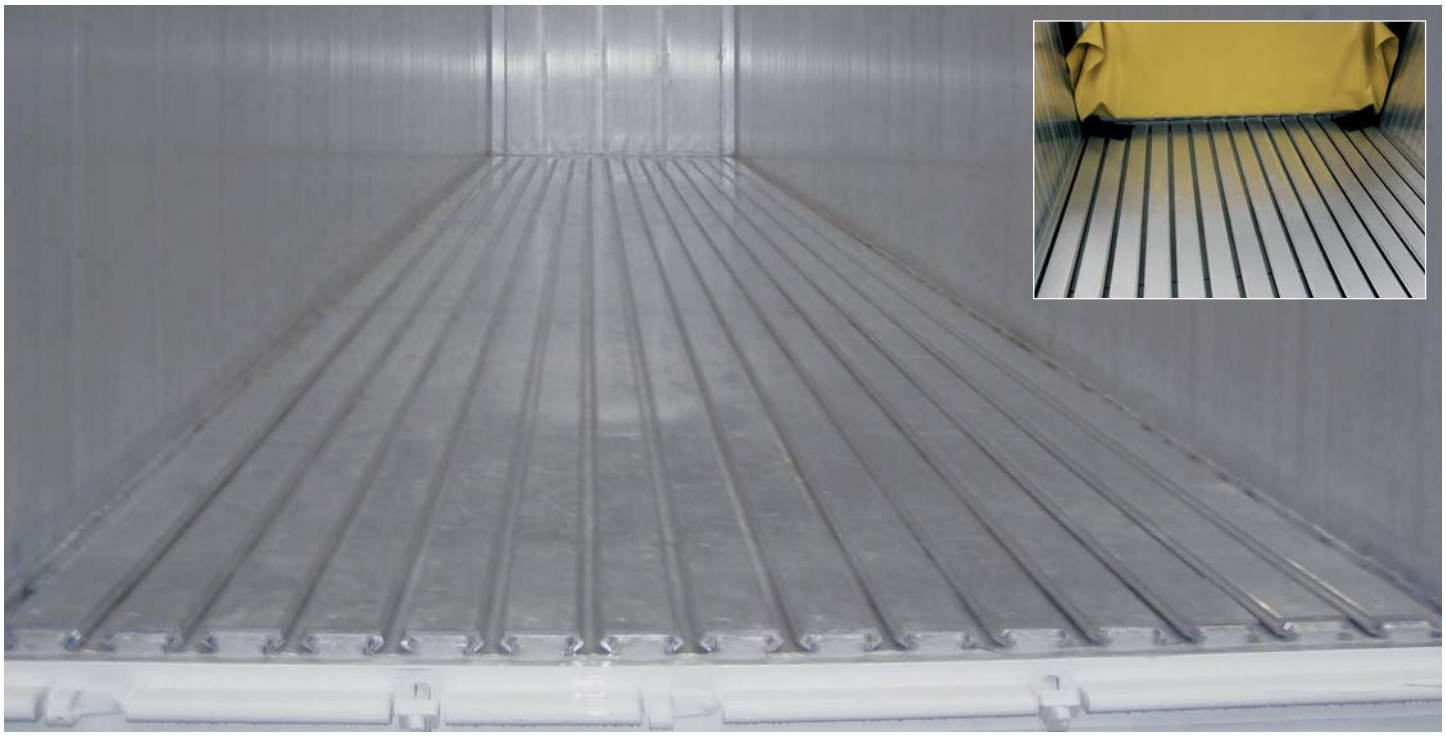
Because Cargo Floor is committed to leaving as small an environmental footprint as possible (leakage of products on the road is quickly considered an environmental crime), liquid-containing "waste" products must be transported in a safe and environmentally sound manner.
Cargo Floor has over 15 years of experience with its unique 100% watertight system solutions where a Cargo Floor drive system is mounted in the front of the trailer.
To make the Leak Proof concept easier and more accessible to a larger target group, Cargo Floor has developed a unique and special subdeck principle whereby the standard Cargo Floor drive unit can as usual be mounted UNDER the floor. Tested for years, this special watertight subdeck concept has proven to be the ultimate solution in preventing leakage of liquid-containing products on the road.
Unlike the 100% Leak Proof system, the bodybuilder does not need to make any modifications to the vehicle for the Cargo Leak Proof Centre Drive system. Besides a weight advantage, it also delivers a high volume advantage, as the inclined sealing wall is not required in this application.

With the supply of the unique Cargo Leak Proof Subdeck, the regular sub-floor will not be required anymore. The simple click-in system of the subdeck profiles makes installation fast and easy in both new and retrofit applications.
A solid bearing block is installed across the entire length of the floor under the moving floor profiles. What makes this unique is the fact that ABSOLUTELY NO end sealing section is used with this Leak Proof flooring solution. Also, the product will not come into contact with the solid under-floor bearing block during transport. There are currently two deckslat versions (moving floor profiles), the standard 7mm aluminium and the 10 mm heavy-duty aluminium model. Alternatively, you can also opt for the STEEL profiles.
The space between the moving floor profiles is largely self-cleaning, but thanks to its open shape, it can be easily and efficiently cleaned with a broom or pressure washer.

THE CARGO FLOOR LEAK PROOF CENTRE DRIVE SYSTEM IS THE ULTIMATE SOLUTION FOR PROTECTING THE ENVIRONMENT FROM LIQUID-CONTAINING "WASTE" PRODUCTS DURING TRANSPORT.

*With the "Centre Drive" construction, any leakage that may occur will only be possible at the connection area between the drive system and the floor profiles.





Steel Profile Solutions

Thanks to the reliable, efficient and safe operation of the Cargo Floor 'moving floor' System, there is an ever increasing demand from the market for solutions that allow for the safe horizontal unloading of an even greater variety of products.

To that end, Cargo Floor's on-going innovation efforts have successfully led to the development of a multi-functional STEEL floor with which virtually any abrasive product can be unloaded without concessions. A big advantage is the fact that there are STEEL floors that can be inter-changed with the standard aluminium floors without having to modify the vehicle or the structure. This makes it even possible to retrofit these floors in vehicles that are already in use.

Due to the special design, the floor has essentially remained flat, allowing such abrasive products as steel scrap, sand, gravel, glass, as well as standard bulk products and even pallets, big bags, and the like, to be transported without any problems. The entire floor is easy to clean without leaving any residue build-up behind.

Besides the C-shaped steel profiles, there are also other versions available in steel.

"Transport of abrasive materials without concessions"

Highlights:

- Pressure seal by steel overlap (no plastic seal)
- Smooth surface (also pallets, bales, etc.)
- Easy cleaning (no rest material)
- Interchangeable with standard Cargo Floor slats
- High wear resistance
- Also in Hardox or equivalent
- High Impact resistance
- Can be driven on by a fork-lift truck
- High temperature resistance
- Easy mounting
- Low weight +/+ 300 kgs*
  * Compared to 10 mm alu floor

Suitable for:


Sand


Aggregates


Pebbles


Recycled asphalt


Stones


Glass

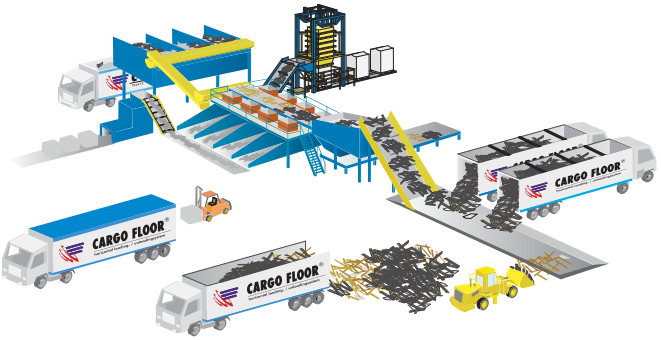

Steel scrap


Aluminium scrap

STATIONARY

The ultimate Cargo Floor moving transport-/dosing system

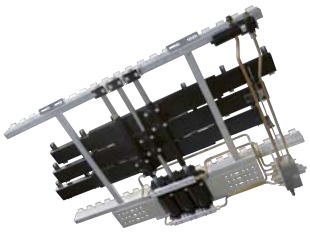
Apart from installation in trucks and trailers, the Cargo Floor 'moving floor' System is excellently suited as a transport system for the transportation of large quantities of automatically dosed bulk materials in industrial processes. The system is used largely as a reception bunker for bulk materials, which are then automatically transported to the factory for further processing. In addition, the manufactured materials are often stored in storage bunkers from where they are automatically transported onward for further processing or for filling trailers.
Many applications have been implemented in, among others, the paper, wood-fibre, recycling, composting, chicken manure, plastic and potting compost industry, in addition as a feed bunker in the chicken feather, pigs bristles and blood meal processing industry, domestic waste transhipment and as a feeder for shredders, presses and incineration furnaces.

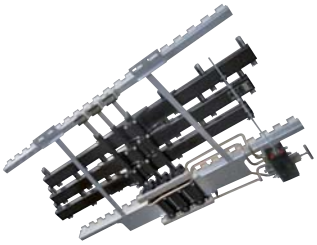


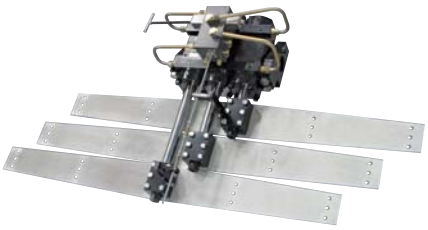
Customisation

- Customised work for every application (also fluid-tight)
- Very easy, fast installation
- Fully supportive base floor structure, capable of handling lorry and power shovel traffic
- Almost unlimited floor loading possible
- Solid plastic bearing block from the floor profiles over the entire length
- Selection from various types of systems, to be modified according to the product to be transported
- Floor plank material, selection from: steel, aluminium and other materials
- Transport speed can be precisely controlled from 0-2.5 mtr./min.
- Precise product dosing
- Easy connection to external command initiators such as for example sensors, timers, etc.
- Easy coupling to other reception systems such as for example plate conveyors, transport conveyors, worm conveyors, etc.
- High operating reliability due to excellent, maintenance-free design

TECHNICAL SPECIFICATIONS







	CF500 SL-2 *(Powerspeed)	CF100 SL-2	CF3LP-2
Weight from (kg)	450	295	310
Operating possibilities	E/B/A (B/A)*	E/B/A	E/B/A
Cylinder bore (mm)	100	80	125
Piston rod diameter (mm)	45 (HD)*	35	60
Stroke (mm)	200	150	150
Oil volume per cycle (ltr)	8,45	4,09	9,77
Working pressure (bar)	170	130	125
Max. pressure (bar)	225	175	150
Max. oil flow	130 (200)*	80	170
Pressure filter (µm)	10 (2x10)*	10	10
Speed at advised oil flow (m/min)	2,6 (4,0)*	2,6	2,0
Speed at max oil flow (m/min)	3,1 (4,7)*	2,9	2,6
Theoretical unloading time trailer 13.6m (min)	6 (3)*	nvt	7
Max. loading capacity (ton)	40	20	35
Advised pump capacity (2-line system)			
Flow (ltr./min)	110 (180)*	70	110
Pressure (bar)	250	200	175
Pressure piping diameter (mm)	20/2 (25/2)*	20/2	20/2
Return piping diameter (mm)	25/2 (30/2)*	25/2	25/2
Oil tank filling min. (ltr)	100 (150)*	50	100
Max. oil temperature (°C)	70	70	70
Oil type mineral or biological (HEES)	ISO VG 32	ISO VG 32	ISO VG 32

Cargo Floor "Intermodal"

All body and trailer builders and all carriers have their own specific wishes – and Cargo Floor has the facilities required for the design and construction of systems that meet the customer's every need!

CARGO FLOOR®

HORIZONTAL LOADING-/UNLOADINGSYSTEM

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ISO 9001 - 2008
Certified company

WORLDWIDE SERVICE NETWORK