

CARGOMATIC®

THE LOGISTIC SOLUTION
Only Quality generates Quality!™





DOCK-TO-TRAILER SOLUTION !

Optimizing the logistic process is more important than ever. The CargoMatic conveyor system is the solution! The system's adjustable speed is able to move cargo up to 9 meters per minute, making it one of the fastest conveyor systems in the world. However, the optimum appears to be 6 meters per minute; with this a standard trailer transporting 33 pallets will be unloaded in 2.5 minutes. The CargoMatic is especially suitable for the short-distance shuttle transport from A to B.

Development

Through more than 30 years of experience working with technical experts and operators in the field along with logistic managers and material handling experts, the CargoMatic conveyor system is the most reliable and strongest dock to trailer conveying system while still the lightest. Using the latest safety technology and state of the

art components makes CargoMatic the most innovative horizontal loading and unloading system.

The CargoMatic conveyor system has been designed for: maximum cargo volume, maximum legal payload, lowest cost of operation, long lifespan, durability, safety and minimal environmental impact. To help operation and business growth for its customers.

Mobile

The CargoMatic conveyor system takes care of loading and unloading the trailer. Once the load is in the trailer, the system will move it forward and backward automatically. Forklifts are no longer needed to drive inside the trailer and the system can be connected to a wide range of static conveying systems (roller bed conveyors, chain systems, etc.)


Static

When a static CargoMatic conveyor system is used in a factory or distribution centre, loading or unloading will be a completely automatic process, without the need for human or machine intervention.

In this set-up, the complete load can be conveyed quickly, without product damage, out or into the docked trailer.



CARGOMATIC BENEFITS

- 👍 Fast and smooth loading and unloading (< 2,5 min.)
- 👍 No damage to product and trailer
- 👍 Less manpower required
- 👍 Less trucks and trailers in operation
- 👍 Less or no forklift trucks needed
- 👍 No need to enter the trailer, loading / unloading from the rear
- 👍 Safe operation
- 👍 Quick ROI (Return On Investment)
- 👍 Silent operation 24/7 (<60 dB) 
- 👍 Suitable for all types of load carriers
- 👍 Less loading / unloading docks
- 👍 Fits in all types of trailers (box trailers, refrigerated trailers, curtain siders)



Type: SLAT CONVEYOR

The principle of the CargoMatic slat conveyor is based on a chain driven slat floor. The aluminium slats together form a completely flat loading floor. This robust floor allows maximum flexibility in the transportation of every and any load, among other: pallets, roller containers, crates, rolls of paper, sheets of cardboard etc.

The extremely stable construction of the aluminium sub-frame forms an integrated unit with the drive unit. The edge profile is fitted with an integrated protection profile, which ensures that the chain cannot be pushed off the plastic guidance. This guarantees the safety of the conveyor and has the additional advantage that it prevents materials from getting between the chains.

The double triplex chain provides transmission, via the headboard of the trailer, to the 8 transport chains. The transport chain runs with its rolls over a high quality, wear-resistant, plastic guidance. This results in a very low friction resistance and wear is being prevented.

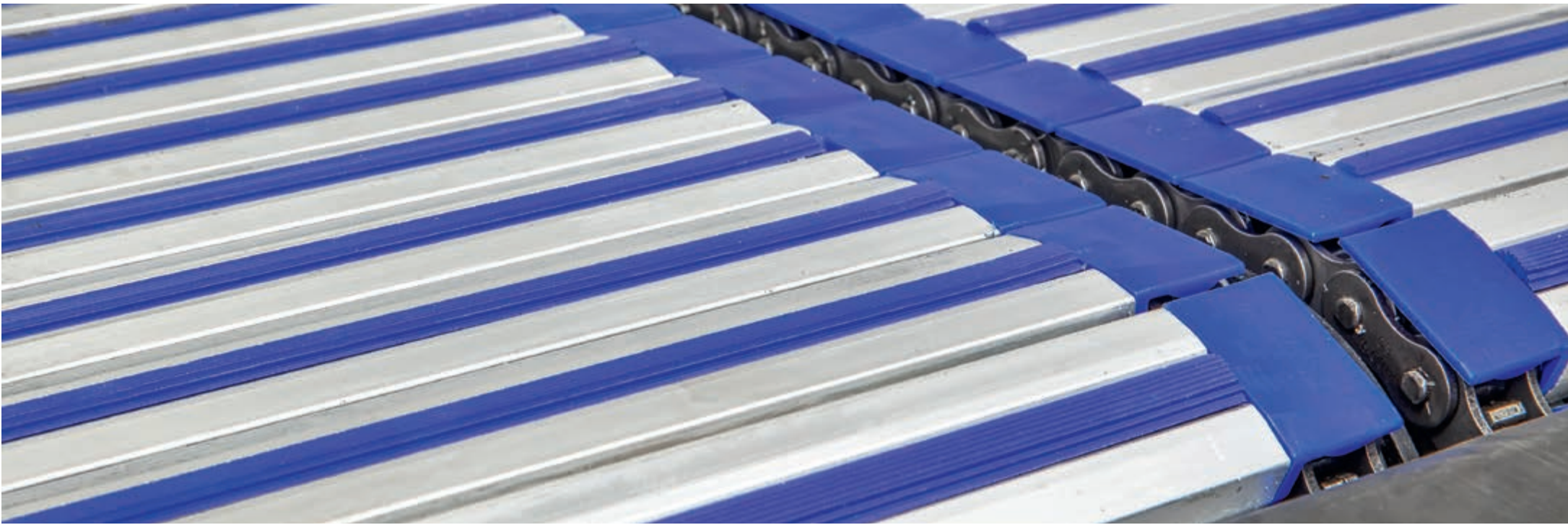
Heavy duty

The **heavy duty** chains run on a high quality, wear-resistant, plastic guidance and are protected against pollution by the patented chain protection caps. Because of these the load will not come into contact with the chain grease.

The aluminium slats are supported in the middle over the entire length of the trailer by a maintenance free plastic guide. Each system is also equipped with 12-fold extra support at the back of the trailer.

Simple assembly

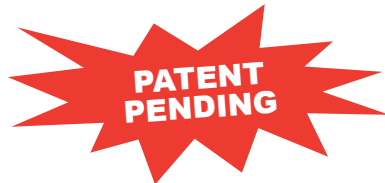
The CargoMatic conveyor system is available as a installation kit for retro-fitting and can be fitted on both new and existing trailers. This is mainly done in box-trailers and refrigerated trailers, but sliding tarpaulin trailers are also suitable. The compact drive is mounted on the outside of the bulkhead and falls within the headboard space, allowing the entire length of the trailer to be used for loads. Because of the low built-in height (140 mm), an optimal interior loading volume can be realised.

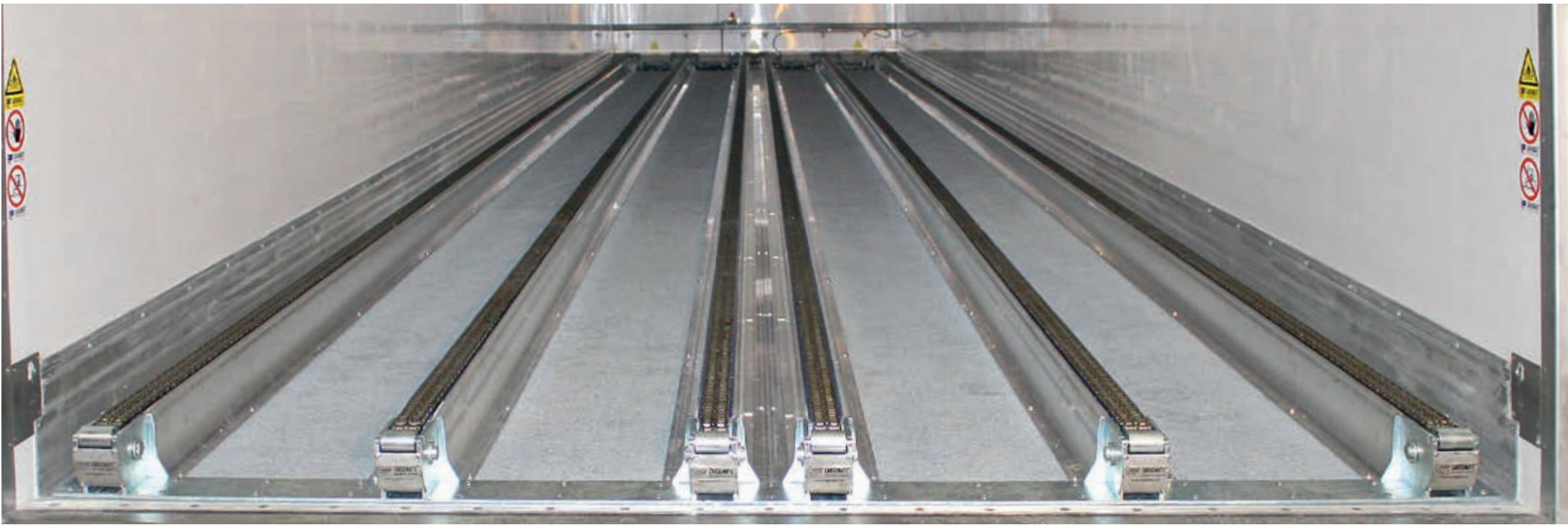


ANTI-SLIP

Each CargoMatic slat conveyor can be equipped with special anti-slip slats; these are executed with a special profiled anti-slip rubber cord for load security and safety. These anti-slip slats ensure increased friction between the CargoMatic slat conveyor and the load, preventing the load from moving / slipping.

In combination with a reinforced trailer bulkhead it gives the opportunity to obtain a certificate for securing loads in accordance with DIN EN 12642 (Code XL). Ask your trailer supplier about the possibilities. This is particularly important when transporting light, slick and fragile cargo; such as plastic pallets, IBCs, steel crates, boxes, etc.





Type: CHAIN CONVEYOR

This chain version of the CargoMatic conveyor distinguishes itself by her ultimate simplicity.

When always transporting the same size pallets or other load carriers, the CargoMatic chain conveyor could be a good alternative to the CargoMatic slat conveyor. The CargoMatic chain conveyor is equipped with 6 duplex (= 12 chains) that support all the feet of the pallet.

The stable shaped aluminium profile combines the following features: robust, extremely light and because of her round shapes simply to clean.

The aluminium profiles, which are provided with solid UHDPE plastic chain bearings, are mounted onto the existing floor of the trailer. This assembly method guarantees simple cleaning of the trailer floor, a very reliable conveyor and with which no thermal bridges can arise if mounted into a refrigerated trailer.

The assembly height of the CargoMatic chain conveyor is, just as the CargoMatic slat conveyor, 140 mm. This has as advantage that the conveyors are compatible when it comes to the measurements. The CargoMatic chain conveyor is, in contrast to the slat conveyor, a loading / unloading system that can fully revolve 360°.





The **ultra compact** CargoMatic drive unit always fits on the outside of the trailer bulk head, this allows full maximum loading space in the trailer. A hood protects this ultra compact drive unit against dirt and water.





ELECTRIC PERFORMANCE

The **silent operation** of the conveyor is realised by the use of an electric traction motor combined with plastic components and high quality bearings. The CargoMatic conveyor system complies with the strictest noise level specification of <60 dB and as a result can be legally used 24 hours a day (meets the Dutch Order in Council for retail and crafts businesses).

High-Tech

Every system is standard provided with a control box. Personal and / or product-specific adjustments are freely programmable in the menu-operated Full Colour display of the PLC.

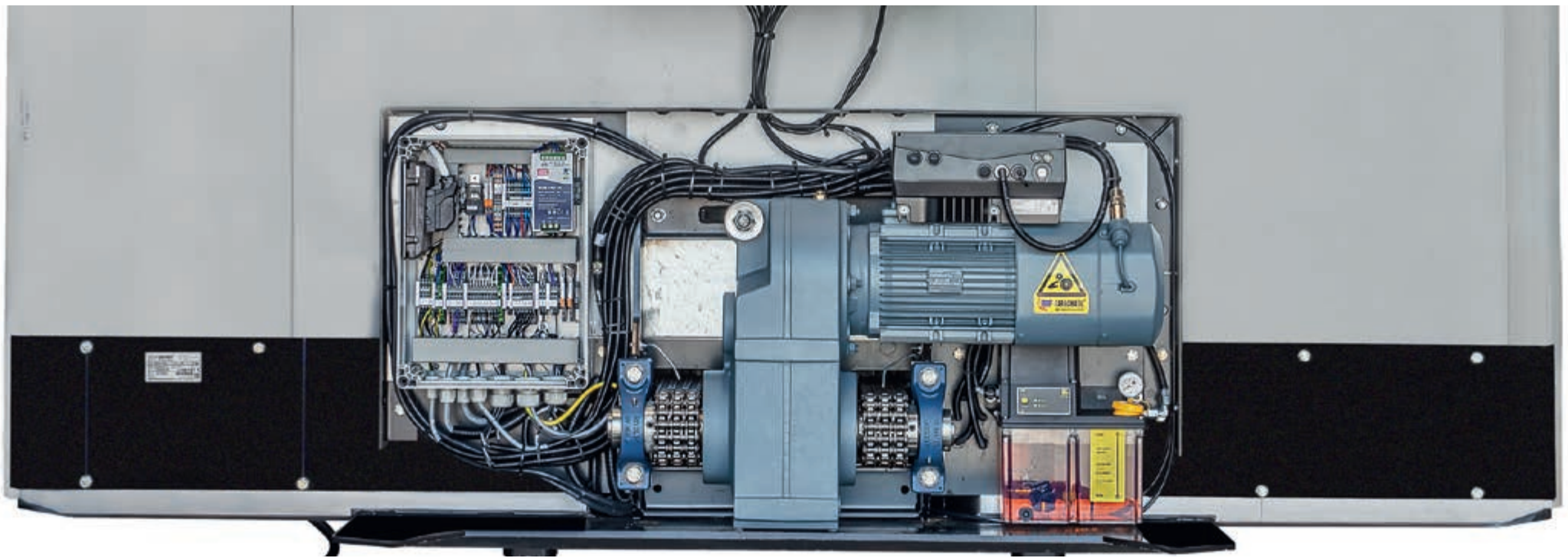
The CargoMatic conveyor systems can be fitted with a fully automatic lubrication system, which is controlled by a PLC and which lubricates the chain on more than 18 different points.

IQAN controlled

The mobile CargoMatic conveyor systems are fully automated by means of an IQAN control for loading and unloading. This unique "shock and vibration-proof" control is suitable for a temperature range of -30 ° C and + 60 ° C, IP65. This makes the CargoMatic conveyor system the only loading and unloading system that is really suitable for a mobile application.

Communication via the CAN bus is the most reliable (due to the minimal number of connections required) and also the communication platform that is easiest to expand. As is well known, this is the absolute standard in the automotive industry.





7 "Full colour touch screen

Operation is very user-friendly, as a 7-inch full-colour touchscreen display with a Graphical User Interface "GUI" is used. The GUI has a clear, ergonomic menu structure that ensures that the driver can operate the CargoMatic conveyor system intuitively. It also shows all essential information about the status of the conveyor, including: maintenance history, I/O information, error diagnosis, etc.

Drive

The electric drive is specially mounted on the outside of the bulkhead in the trailer bulkheadradius. As a result, the maximum possible effective loading length can be generated. The 4 kW 3-phase electric motor with energy efficiency (IE3), gearbox and 2 triplex chains drives the 4 tracks with slats in the trailer, which are suitable for moving a load of 35 tons.

High end frequency inverter

The integrated frequency inverter offers stepless speed, fully controlled starting and stopping. What is unique is that this frequency inverter is also suitable for mobile applications. The frequency inverter is mounted directly on the motor so that there are no EMC problems and less wiring. To ensure the security of the system, it is also equipped with a "STO" (Safe Torque Off). The motor has an encoder that accurately records the speed, displacement and position of the floor. These parameters are registered and displayed on the full color touch screen.





24 VDC BATTERY OPERATED

The CargoMatic slat conveyor can work completely independently with a battery pack and converters. With this battery pack and converter the CargoMatic becomes totally self-supporting and independently operating from the power grid (from warehouse or factory).

The CargoMatic conveyor system can be extended with two ultramodern and very light high capacity energy cells, a three-phase module converts from 24VDC (battery voltage) 3x400VAC/50 Hz. One of the great advantages is that where the power grid is available, it can be used to operate the conveyor and charge the batteries as well. If the truck is equipped with a heavy-duty alternator, the batteries can be charged while driving and the CargoMatic is ready to load or unload on its own.

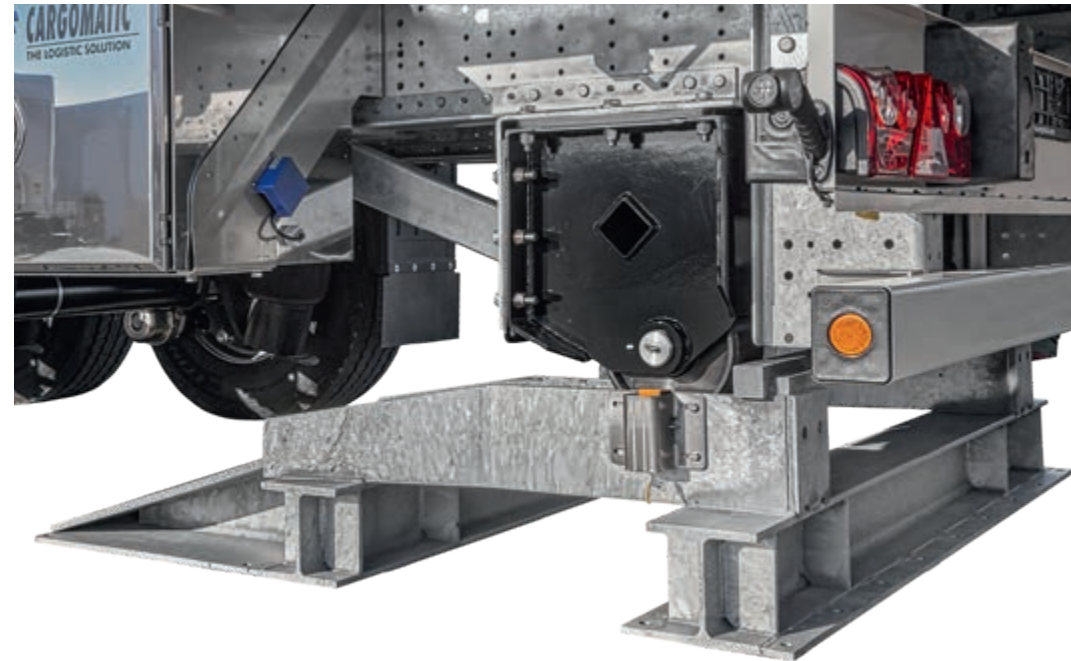




EASY POSITIONING

The positioning wheels (at the rear of the trailer) together with the positioning frame (fixed to the floor) ensures that the trailer can easily be placed in position in front of the static CargoMatic dock.

When the positioning frame with the standard positioning indicator is combined with the optional extra traffic light, the truck driver can look at this traffic light from his drivers seat if the trailer is correct positioned.





STATIC SOLUTIONS

The highest logistical efficiency will be achieved by combining the mobile CargoMatic conveyor systems with static CargoMatic loading / unloading docks.

When combining docks and trailer a single trailer can shuttle fast and efficiently between various locations. A complete load can be commissioned without a trailer waiting. With the static CargoMatic conveyor systems it is possible to load and unload semi-trailers, which are equipped with a CargoMatic conveyor systems or with existing loading / unloading system, fully automatically in approx. 2.5 minutes.

Because of the modular construction of the CargoMatic conveyor systems, many components are interchangeable between the mobile and static.

The static CargoMatic conveyor systems are compatible with automatic storage systems; reach the highest level of efficiency and eliminating forklift trucks and manpower!

Each static CargoMatic conveyor systems has a control box equipped with a safety PLC, the usual auxiliary relays / fuses and potential free contacts.

The integrated frequency inverter provides infinitely variable speed, fully controlled smooth start-up and stop. The frequency inverter is mounted directly on the motor, so there are no EMC issues and less wiring, which simplifies the system. The motor also has an encoder that accurately registers the speed, movement and position of the floor, parameters are registered and visualized on the full colour touchscreen. The loading / unloading speeds can be set

independently from each other, to push the pallets together or pull apart if desired to prevent damage.

HMI (Human-Machine Interface): a Siemens full colour touch panel, with extensive GUI (Graphic User Interface) integrated in a control cabinet (desk model). The GUI has a clear ergonomic menu structure that ensures that the operator can operate the CargoMatic conveyor system intuitively. In addition, all essential information about the status of the system is displayed including: maintenance history, I / O information, fault diagnosis, etc.

A-brand chain in the extra strong Heavy Duty version, the standard in the automotive industry which results in less maintenance and therefore lower operating costs.



Type: FLOOR MOUNTING

The CargoMatic conveyor systems mounted directly onto the concrete floor with a minimal height of 200 mm. This way the CargoMatic can simply be installed without any substantial structural modifications.

Options: pallet guiding and forklift truck protection.



CargoMatic chain conveyor in Heavy Duty execution with 6 triplex chains.



Type: FRAME MOUNTING

This static CargoMatic conveyor system is mounted on a frame with standard in height adjustable support legs. Beside this a optional extra guiding portal is mounted right before the load enters the trailer. This heavy duty guiding portal is executed with 6 vertical positioned steel rolls in order to guide and force protruding load to the inside dimensions of the trailer.



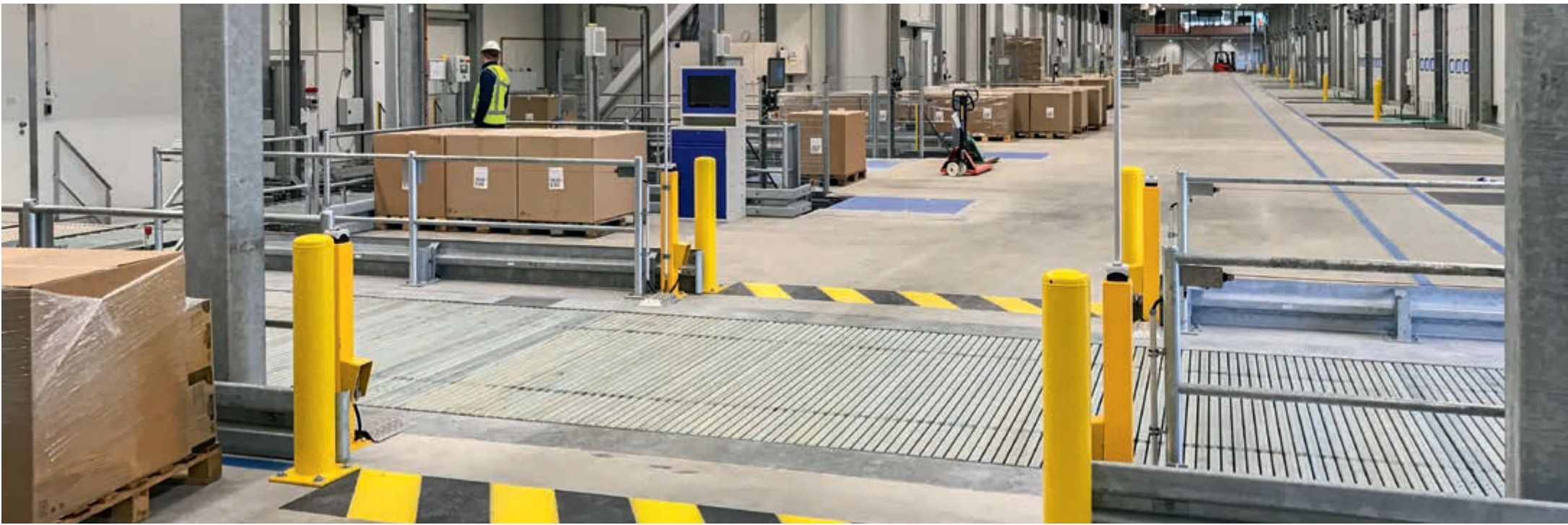


Fully integrated warehouse logistic!

All static CargoMatic conveyor systems can be fully integrated and communicate with all types of conveyors or AGV's; this to eliminate manpower and forklift trucks.



Video



Type: INTEGRATED IN FLOOR

When a fully flat surface of the floor is required, the CargoMatic can be integrated in the floor. This can be done with the standard CargoMatic with aluminum slats. However when fork lift trucks need to cross over the CargoMatic, a CargoMatic executed with steel slats is available.



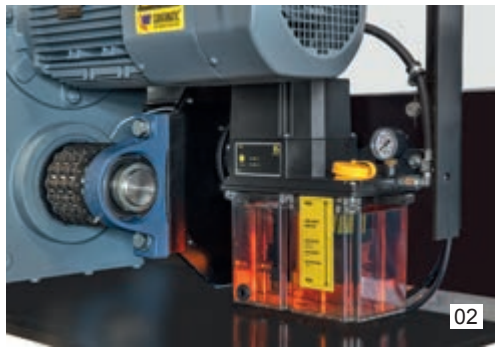
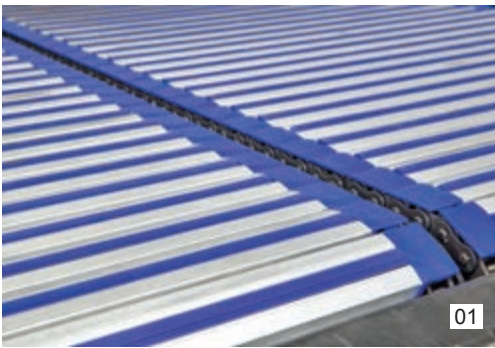


SAFETY

The static CargoMatic conveyor systems are standard equipped with a safety PLC and the associated safety sensors. This makes the CargoMatic conveyor the safest automatic loading and unloading system available on the market.

- 👍 Frequency inverter with "STO" (Safe Torque Off).
- 👍 Safety photocells at critical positions.
- 👍 Safety sensor on the positioning frame to detect if the trailer is in the correct position.
- 👍 Emergency switch (rope) over the full length of the static CargoMatic conveyor system.





OPTIONAL EXTRAS

- 01 Anti slip slats with special profiled anti-slip rubber cord for load security and safety
- 02 Fully automatic lubrication system
- 03 Coupling for self (automated) connecting of electric power and data transfer
- 04 Duplex drive for independent track movement
- 05 Load security devices inside trailer
- 06 Battery operated CargoMatic drive for autonomic operation and solar charging
- 07 Double stock CargoMatic in trailer incl. load security
- 08 Additional support underneath tracks
- 09 Remote Service Module over Bluetooth or WiFi and Remote Control
- 10 Forklift: fork impact protection bar





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- 11 Trailer positioning indicator by traffic light
- 12 Connection (interface) to internal conveying system
- 13 Guiding portal with height check
- 14 Stand-alone static CargoMatic for adding space
- 15 Automated side shift of complete static CargoMatic frame structure including product
- 16 For forklift truck loading/unloading; static frame protection pillars and pallet positioning guidance
- 17 Drawbridge between static and mobile CargoMatic



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Video



COMPANY PROFILE

Cargo Floor B.V. is the worldwide leading manufacturer and supplier of horizontal loading and unloading systems which are exported all over the world. With more than 30 years of experience, excellent quality and an extremely high level of service, Cargo Floor B.V. is now recognized in the entire industry as the **world wide renowned market leader!** Cargo Floor B.V. manufactures its products in Coevorden, The Netherlands, under the **ISO 9001 quality label**. Before delivery, each system is tested extensively for proper functioning. This ensures that every CargoMatic conveyor system supplied is easy to install and performs excellently anywhere in the world.

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

- **CargoMatic “The Logistic Solution”**

A dock-to-trailer conveyor system for quick, safe and fully automatically loading / unloading of all kind packed materials.

- **Cargo Floor mobile**

Hydraulic moving floor systems for the transport of all kinds bulk material.

- **Cargo Floor stationary**

Hydraulic moving floor systems for self-unloading transport/dosing systems in factories (engineering, design, advice).

- **Service and installation**



References



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