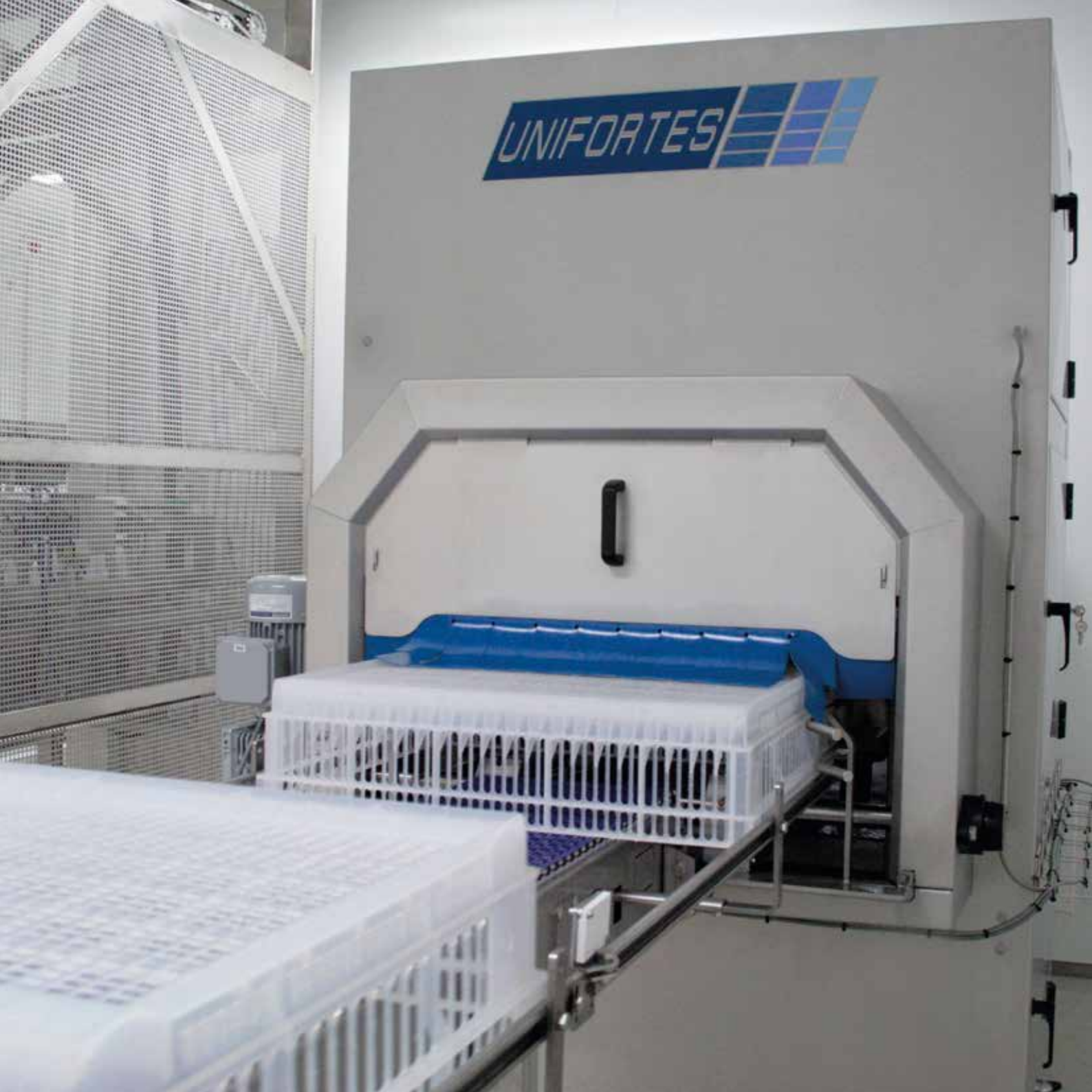


# INDUSTRIAL CLEANING SYSTEMS & LOGISTICS

“ OFFERING SMART CLEANING SOLUTIONS FOR EVERY CHALLENGE ”

UNIFORTES



**From ancient Latin, translated 'Together Strong', Unifortes is founded by two recognized companies who joined forces to become a market leader in the development, production and service of Industrial Cleaning Systems and Material Handling Products.**

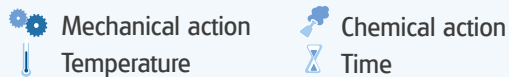
Based on experience, the use of new ideas, methods and techniques, a product range is developed to make perfect cleaning possible. The design combines this cleaning performance with a machine that is simple and predictable to operate, to service and to maintain, all at minimum costs.

## Unifortes

We offer turn-key solutions for handling your whole washing process. Our product range varies from stand-alone crate washers to the turnkey delivery of a fully automated washing and handling plant.

## Cleaning Principles

As with all cleaning processes, our cleaning principles are based on the Sinner Circle. The final cleaning result is influenced by the 4 interdependent factors:



A combination of these factors will be determined during every engineering phase, resulting in the best cleaning solution for the applicable product / situation.





# Unifortes Basic



## UNI-BW200.60

- 2m Wash Tunnel
- Main Wash Section
- Rinsing Section
- Up to 250 E2 crates/h



## UNI-BW300.60

- 3m Wash Tunnel
- Main Wash Section
- Rinsing Section
- Up to 400 E2 crates/h

## Basic Tunnel Washer

The “Basic” tunnel washer series is specially designed to offer some of the key features of the “Industrial” series but at a lower capacity and for smaller budgets. The washer is suitable for washing and rinsing trays, crates and boxes. The machine consists of a washing section and rinsing section. Available in 2 tunnel lengths.



## UNI-PW250.100

- 2,5m Wash Tunnel
- Main Wash Section
- Rinsing Section
- Up to 60 pallets/h
- 4m Total Length

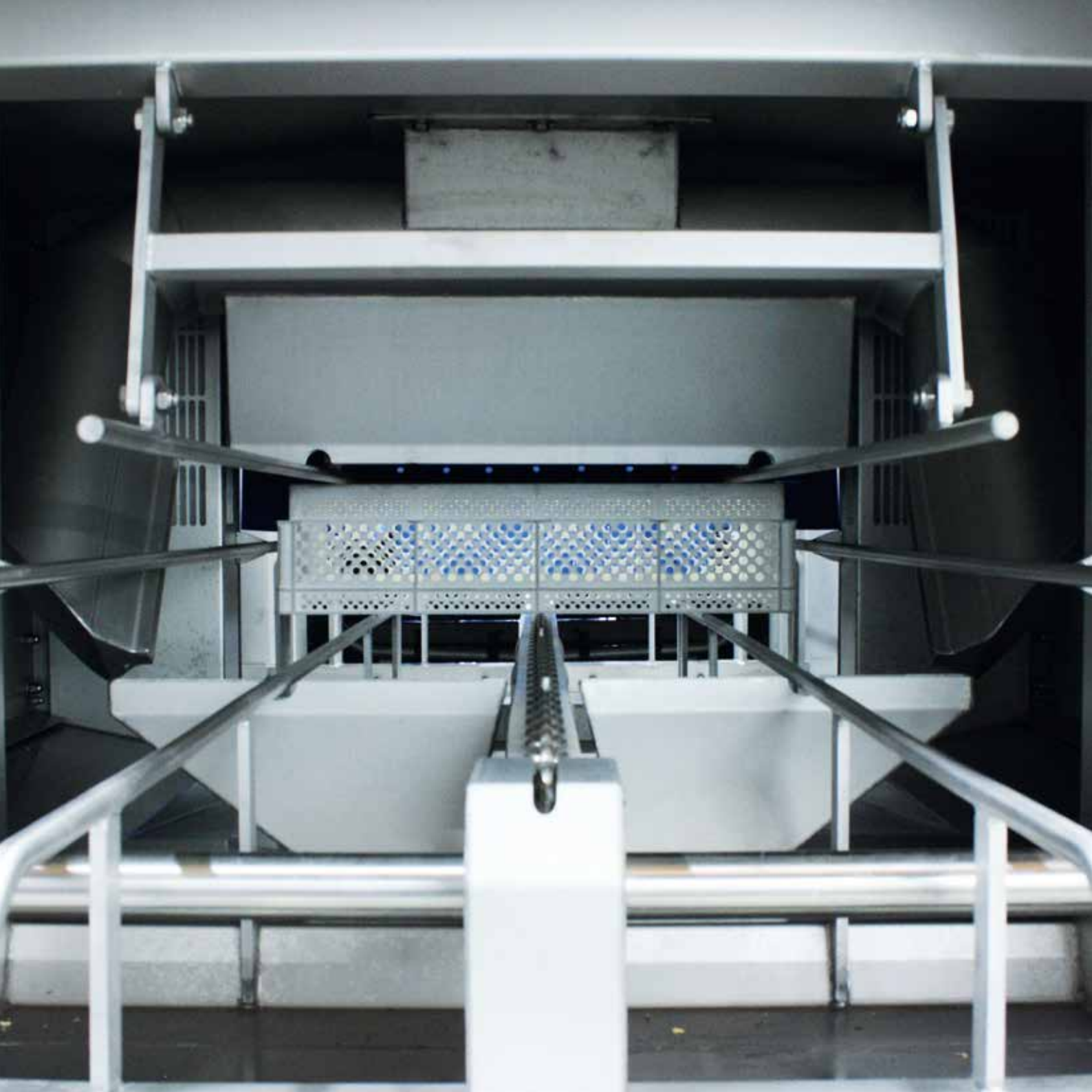


## UNI-PW450.100

- 4,5m Wash Tunnel
- Main Wash Section
- Rinsing Section
- Up to 90 pallets/h
- 6m Total Length

## Basic Pallet Washer

The “Basic” pallet washer series is specially designed to offer some of the key features of the “industrial” series but more suitable for smaller budgets. The pallet washer is capable of washing multiple types of pallets. The machine consists of a washing section and rinsing section. Available in 2 tunnel lengths.



# Unifortes Industrial

## Unifortes Industrial

The modular tunnel washer is a part of the "Industrial" series and is suitable for the washing and rinsing of trays, crates, boxes and pallets. The machine consists of at least one wash section and a rinsing section and is available in different widths. Due to its modular and standardized design the machine can be adapted according to the product and capacity requirements.



### UNI-W350.70

- 3,5m Wash Tunnel
- Main Wash Section
- Rinsing Section
- Up to 600 E2 crates/h

### UNI-W550.70

- 5,5m Wash Tunnel
- Pre Wash Section
- Main Wash Section
- Rinsing Section
- Up to 900 E2 crates/h

### UNI-W750.70

- 7,5m Wash Tunnel
- Pre Wash Section
- 2 Main Wash Sections
- Rinsing Section
- Up to 1250 E2 crates/h

### UNI-W950.70

- 9,5m Wash Tunnel
- Pre Wash Section
- 3 Main Wash Sections
- Rinsing Section
- Up to 1500 E2 crates/h

### UNI-W1150.70

- 11,5m Wash Tunnel
- Pre Wash Section
- 4 Main Wash Sections
- Rinsing Section
- Up to 1950 E2 crates/h

The above mentioned specifications are based on a 700mm transport width. The industrial series are also available in the widths of 1000mm and 1200mm and can be equipped with dual lane transport (max. transport width of 400 mm) for higher capacity.





# Unifortes Dryers

## Industrial Dryers

The air recirculation dryer uses blow off techniques to dry your tray, crate or pallet. This dryer is available in different configurations based on product size, desired drying results and needed capacity. The unit can be implemented in-line with a tunnel washer or positioned as a stand-alone working machine.

The high pressure ventilators with air knives are enclosed in a stainless steel housing. Air inlets are also enclosed in the housing, re-using the air inside. Due to this design, the possible contaminated air is kept outside of the installation, preventing contamination and maintaining the inside air temperature. Rest water is recovered and re-directed back to the washing tank when in line with a tunnel washing machine.



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Control panel featuring several indicator lights (red, yellow, green) and a prominent yellow emergency stop button. A triangular warning symbol is also visible on the panel.



# Unifortes Industrial

## Unifortes Dolly/Trolley Washer

This modular transit tunnel washer is suitable for cleaning dollies, trolleys and carts that are used in a wide range of sectors. This unique design has a transport height of only 250mm (without an extra tank or pump) and can therefore be placed directly on the production floor.



### UNI-TW450.80.30

- 3,5m Wash Tunnel
- Main Wash Section
- Rinsing Section
- Max. dolly height 300mm
- Up to 40 dollies/h



### UNI-TW450.80.120

- 3,5m Wash Tunnel
- Main Wash Section
- Rinsing Section
- Max. trolley height 1200mm
- Up to 40 trolleys/h



### UNI-TW450.80.220

- 3,5m Wash Tunnel
- Main Wash Section
- Rinsing Section
- Max. trolley height 2200mm
- Up to 40 trolleys/h

The above mentioned specifications are based on a 800mm transport width. The dolly/trolley series are also available in the widths of 1000mm and 1200mm.



## Unifortes Cabin Washer

This stand-alone cabin washer is usable for washing carts, dollies, trolleys, boxes, totes and bins directly on the production floor.

### UNI-CW75.75

- 200L & 300L bins
- Pre Wash Cycle
- Main Wash Cycle
- Rinsing Cycle
- Up to 40 bins/h

### UNI-CW120.100

- Containers & bins
- Pre Wash Cycle
- Main Wash Cycle
- Rinsing Cycle
- Up to 40 bins/h



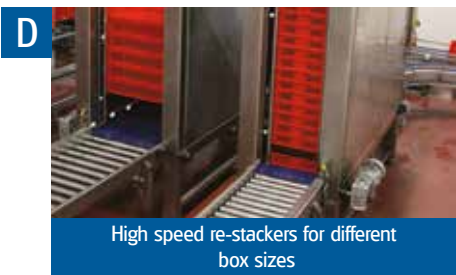
Infeed of dirty boxes



Shunter to transport stacks of boxes to the de-stackers



De-stackers for dirty boxes



High speed re-stackers for different box sizes



Palletiser for different box sizes



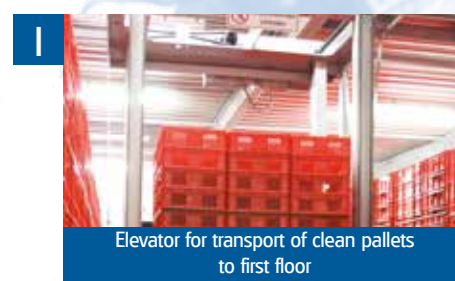
Strapping machine



De-stacker for empty pallets



Fully-automatic storage system for clean boxes



Elevator for transport of clean pallets to first floor



Shuttle for transporting pallets into storage



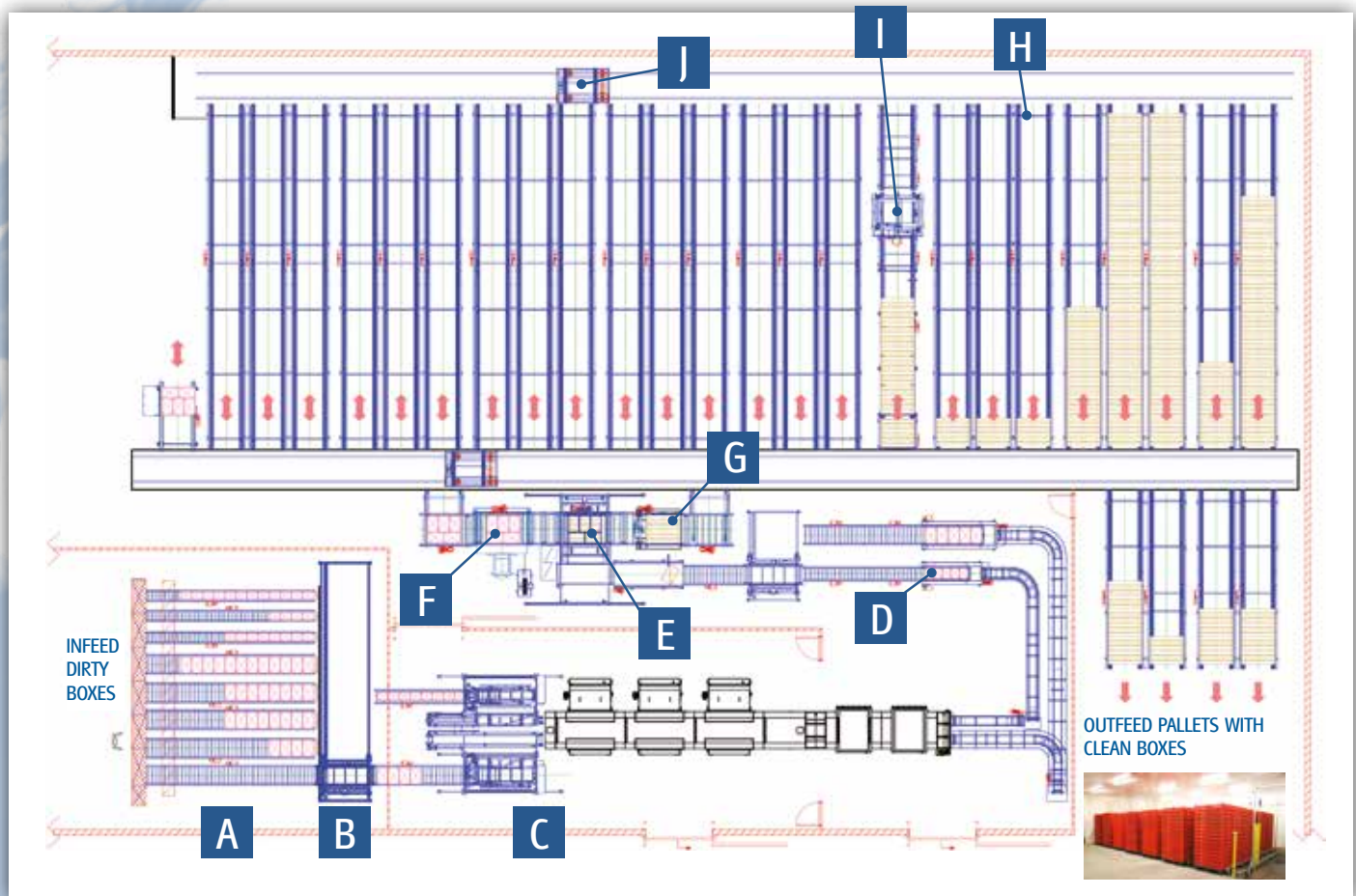
UNI-W750.2x40h dual lane modular tunnel washing machine incl. 2 label removal units, 3 rotating drum filters and 2 UNI-D200.2X40 dual lane blow off units.

# Professionals in Turn-Key Solutions

“ Turn-key solutions for handling the entire **cleaning** and **drying** process. ”

## Material Handling Solutions

- Stackers and de-stackers
- Palletizers and de-palletizers
- Sorting systems
- Conveying technology
- Loading and unloading systems
- Automatic warehouse systems



1.

### Products which need to be cleaned

This determines the height, width and configuration of the washing machine.



3.

### Pump/spraying system

Depending on the type of product and level of pollution a variety of pump types, water pressures and nozzle systems can be applied.



Custom-made nozzle pattern



Lean and open design

5.

### Drying system

Washed product can be dried by means of modular blow-off units.



Dryer air knives

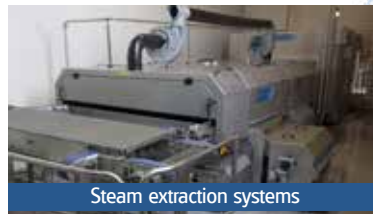


Air recirculation dryers

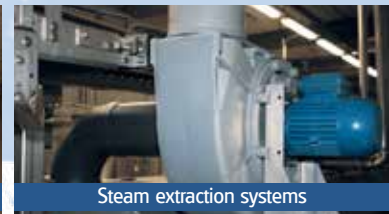
7.

### Steam Exhaust

To reduce the air humidity around the machine, a steam exhaust can be mounted on the machine.



Steam extraction systems



Steam extraction systems

# Configure the right machine for the job

2.

## Capacity of the washing machine

Due the modular design of our machines, the tunnel length can easily be adjusted according to the degree of pollution or the desired capacity.



4.

## Filter system

The washing water can be filtered in different ways. From (fine) filtration by means of filter drawers and/or different kind of rotating drum-filters.



Draw filter systems



Rotating drum filter systems

6.

## Heating system

The washing water can be heated by means of electrical heating elements, heat-exchangers of steam-injections.



Heating by hot water heat-exchangers



Heating by electrical heating elements

8.

## Reduce labour and improve efficiency

Material handling systems like stackers and de-stackers can be added. Besides the impact on labour, these automated systems will guarantee a constant and continuous output.



(De-)Palletiser systems



(De-)Stacking systems

# Unifortes Rental Service

## Machine Rental

Unifortes offers a flexible rental program that allows your company to accommodate any temporary or seasonal production demands. Due to its modular and standardized design our rental machines can be tailored to your specific needs.

Our rental service starts with running cleaning and drying trials with your products beforehand. This ensures you are provided with the right machine settings and delivers you the best cleaning result.

The rental machines are delivered ready to use. Staff training and installation of the machine can be done by Unifortes' own qualified service engineers if desired. Unifortes provides the option to rent air recirculation dryers as well.

For more information on our rental program please contact us on [+31 \(0\)78 629 12 62](tel:+310786291262) or at [info@unifortes.com](mailto:info@unifortes.com).





# Unifortes Test Centre



## Find out the definition of clean!

With the Unifortes Test Centre the bar is set even higher to offer the customer the possibility to run cleaning and drying trials with their contaminated products at real time production capacity.

During time Unifortes has gathered large amounts of technical information about washing temperatures, washing contact times, pressures and the use of detergents required to clean specific types of products in a broad variety of industries. The word “clean”, however, can sometimes be interpreted differently and therefore it is most important to get the customer involved with testing their own products to come to an acceptable meaning of the word “clean”. This approach ensures that the customer is provided with the most cost effective solution, saving any unnecessary investment costs for machine and building and enabling lower running costs for electricity, water usage and chemicals.

Unifortes can provide laboratory and testing reports for official documentation to support and underpin investment.





# Unique Advantages Unifortes

## Spraying Section

- Because every product, pollution and situation is different, Unifortes will perform a 3D simulation for each individual machine to define the optimal design for the spraying racks, nozzles and guiding system.
- The spraying section is designed to minimize pressure loss and to deliver a uniform and high impact spraying pattern.
- Easy removable nozzles make quick inspection and cleaning possible.
- Open and self-cleaning transport system (AISI 316 shackle chain) to prevent any spraying shadows and excessive wear.

## Overall Design

- Transportation height of 900mm results in ergonomic manual in-feed and easy integration for an automated process.
- Modular design makes it very easy to properly configure the machine to your project requirements.
- Symmetric design makes transport direction flexible (e.g. future relocations).
- For the smoothest and therefore easiest to clean surface the whole machine is pickled and passivated.
- An extra filter is placed in front of the intake of the pump to prevent large particles getting into the pump.
- Water height control is added to prevent the pump overflowing or running dry.

## Maintenance

- Lean and open design results in an easy to clean machine, from inside and outside.
- Large, supported safety guarded hatches at the washing sections give safe and full access.
- The primary filter consists of two easily (manually) removeable segments.

## Material Handling Systems

Unifortes supplies a full range of material handling solutions, such as (de-)stackers, (de-)palletizers, sorting systems, conveying technology, loading systems, and automatic warehouse systems. Due to this extensive scope of supply, Unifortes provides a turn-key project which is fully tested and ready to be used upon delivery. This minimizes installation time, and potential downtime during the early phase of your production.





- UNIFORTES OFFICE
- UNIFORTES AGENT

## Taking cleaning to a higher level

The company's background with many years of experience in 'Cleaning Technology' and 'Material Handling' enables Unifortes to provide its customers with the most efficient solutions and high quality equipment, using the latest technology from our modern production facilities. Unifortes' strength is offering smart solutions for every challenge. Our focus and pride is on efficiency, durability and hygiene as well as user friendliness. In order to maintain our strong position in the market, Unifortes will continuously develop and introduce new technologies to our customers and prospective customers.

With our worldwide network we can provide a full and comprehensive service in almost any country in the world, enabling us to react quickly and efficiently where necessary. The service and maintenance department offers on-site service and can be contacted 24 hours a day, seven days a week. Possible electrical malfunctions on a production line can also be located or solved from within our company using internet and webcam technology. This way, production downtime is reduced to an absolute minimum.

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