



EUROPA  
SYSTEMS®



## **AUTOMATED TRANSPORT AND STORAGE SYSTEMS FOR INSULATED SHIPPING CONTAINERS**

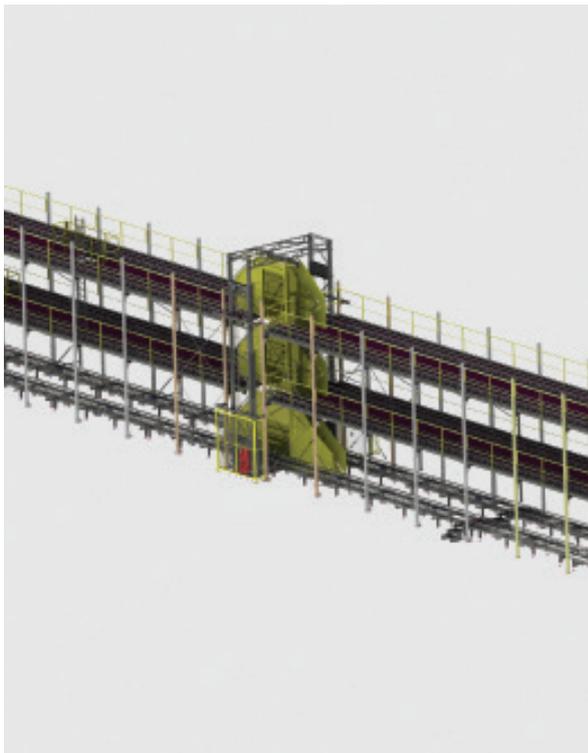
- ✓ Improved process efficiency
- ✓ Optimisation of storage space
- ✓ Energy savings
- ✓ Improved safety

# AUTOMATED TRANSPORT AND STORAGE SYSTEMS FOR INSULATED SHIPPING CONTAINERS

Europa Systems offers an automated, multi-level system for transporting and storing insulated containers, designed for logistics centres or centres distributing fresh and frozen products.

The system significantly improves the processes of storage and internal logistics of insulated containers - it reduces energy costs, optimises the use of storage space and improves safety.

The standard system is built as a multi-level steel structure, within a transport and storage channel. Transport equipment such as conveyors and lifts are mounted on this structure, arranged in independent transport lines. The independent lines ensure redundancy, guaranteeing constant availability of the system, even in the event of a shutdown of a particular line, and the use of a multi-level structure allows for an increase, several times over, of effective stor-



age space. The better use of storage space translates directly into lower costs of energy for cooling the buffer zones.

**Transport and storage systems for insulated containers offered by Europa Systems may also incorporate washing and drying devices.**

This solution further improves the entire system's functionality as well as the level of hygiene in the circulation of insulated containers between the logistics and storage centre and sales outlets.



## TECHNICAL SPECIFICATIONS:

- Load capacity: up to 300 kg / running meter
- Performance: 300 insulated containers / hour
- Capacity of the buffer zone: adapted to customer requirements. Completed systems for 800 insulated containers

## PURPOSE:

The system of transport and storage of insulated containers is suitable for all centres that distribute products in such containers. Facilities where this system would typically be used are distribution centres of supermarket chains, and frozen food production plants.

## BENEFITS:

- ✓ **Space saving** due to use of the entire height of the room
- ✓ **Increase in the safety** of logistics process and security of the stored insulated containers
- ✓ **Energy savings**
- ✓ **Faster handling of insulated containers**
- ✓ **Improved communication** between the container receiver and sender zones
- ✓ **The ability to integrate and automate** processes accompanying the transport of insulated containers

## ADVANTAGES OF THE SYSTEM:

- ✓ Reliability
- ✓ Low maintenance cost
- ✓ Low operating cost
- ✓ High utility of the system
- ✓ Quick return on investment
- ✓ Durability
- ✓ Great durability and long life

## CASE STUDY

A leading player on the retail market in Europe, with a developing commercial network, decided to modernise its transport and storage system for insulated containers. The objective of the project was to ensure optimal performance of logistics processes in distribution centres.

### DESCRIPTION OF THE PROBLEM:

The customer's problem was a bottleneck: inefficient transport using fork-lift trucks, and manual cleaning of insulated containers. Another major problem was the insufficient capacity of the buffer zone, which was dispersed between the areas where containers returned from branches and where they were re-filled.

### OBJECTIVE:

Optimisation of transport processes by minimising the time of cleaning, loading and transport of insulated containers, and an increase in buffer zone capacity.



## THE SOLUTION:

### BENEFITS

-  A **four-fold** increase in the use of space
-  Creation of a buffer zone for **600 TKT containers**
-  **Reduction of energy costs** for cooling
-  Improved **safety**

In the distribution centre, Europe Systems designed, produced and implemented a multi-level, automated system for transporting insulated containers of the following dimensions: **height: 2,150 mm, length 1,200 mm, width 900 mm.**

The system consists of two independent transport lines constructed from chain conveyors and transport lifts, electrically driven. The line is integrated with the container washing equipment. The transport of insulated containers in the entire system, from the loading bay to the cleaning and drying machines, and then to the buffer zone and onward to the collection zone, is automatic.

The forklift operators' work is limited to transporting the insulated containers to the storage area and picking them up at the end of the process. Elimination of cart transport reduced the number of movements in the warehouse, directly increasing safety. The buffer zone, in which insulated containers are cooled to 2-5° C, is enclosed by two fast-operating gates. The use of the gates resulted in minimisation of energy consumption for temperature control in the buffer zone.

## BENEFITS

This investment quickly resulted in an **increase in productivity**. The following benefits have also been achieved:

**Increased efficiency of the distribution centre** – the automation of the transport and storage processes and the integration of the system with the washing equipment significantly boosted the quality and effectiveness of the storage, washing and cooling processes. Automation made it possible to introduce a totally new functionality, and thus to increase the efficiency of the warehouse without additional employees.

**Saving of surface space** - using the entire height of the warehouse to implement a multi-level system allowed for maximum use of the available space. The company has gained more than four times more buffer space for insulated containers.

**Reduction in energy costs** - increasing the capacity of the buffer zone to 600 insulated containers generates cost savings on energy for cooling the containers.

**Better product control** - the system is based on the FIFO model, which allows full control over stored products.

**Safety** - In designing the system, much attention has been devoted to safety, which was examined from all possible angles. Above all, dangers resulting from forklift truck traffic were significantly limited, as their operating area was restricted exclusively to loading and unloading the system. In the system itself, state-of-the-art equipment has been used to improve safety. On the basis of a very detailed analysis, a safety system was developed and implemented based on full control of access to dangerous zones, thus meeting the strictest European norms.

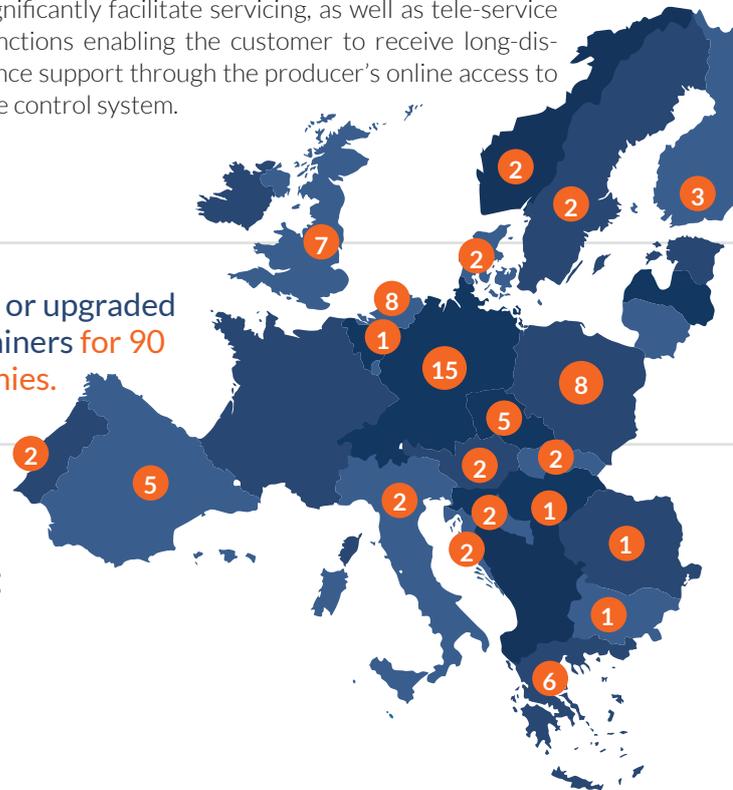
Safe automatic operation is guaranteed by operator panels with visualisation of the entire system. The system also has elaborate auto-diagnostic functions, which significantly facilitate servicing, as well as tele-service functions enabling the customer to receive long-distance support through the producer's online access to the control system.

**Europa Systems** has produced and implemented or upgraded transport and storage systems for insulated containers for **90 distribution centres of international retail companies**.

## EUROPA SYSTEMS DESIGNS AND MANUFACTURES:

- ✓ automated handling systems
- ✓ handling devices
- ✓ warehousing systems
- ✓ components

**Europa Systems specialises** in providing automated materials transport systems that ensure efficient and safe transport of various kinds of goods in short-distance transport. The solutions offered by Europa Systems provide internal logistics process optimisation in production halls and in sorting and warehouse areas.



### MAIN OFFICE

Europa Systems Sp. z o.o.  
Żabów 76B, 74-200 Pyrzyce

Phone: +48 91 579 03 50  
Fax: +48 91 579 03 51

### OFFICE IN SZCZECIN

Europa Systems Sp. z o.o.  
Piastów Office Center  
Al. Piastów 30, IV Floor, 71-064 Szczecin

Phone: +48 91 433 29 62