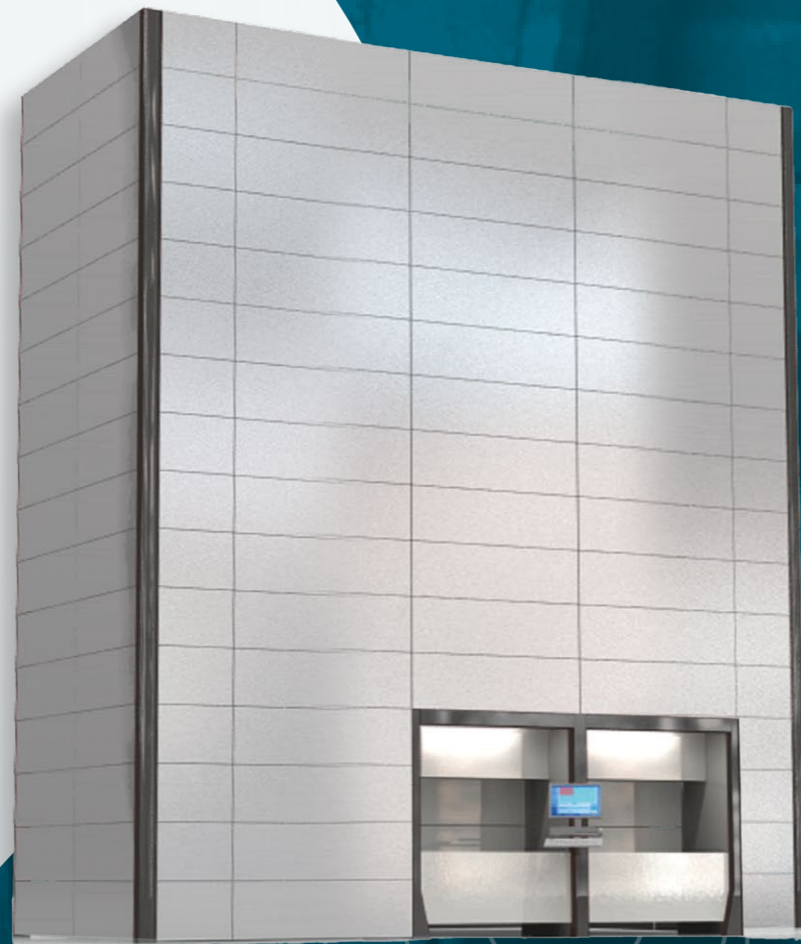


AUTOMATED WAREHOUSES



Our automated warehouses for trays and those with stacker cranes represent an **efficient** and **safe** storage solution for all sectors.

AUTOMATED WAREHOUSES



- > TRAYS
- > STACKER CRANES
- > WAREHOUSE MANAGEMENT SYSTEMS

AUTOMATED WAREHOUSES



AUTOMATED WAREHOUSES

The automated warehouse is a system that optimizes all intralogistics operations thanks to technologies implemented to handle goods automatically and software to coordinate operating cycles, often integrated with company management systems.

Using automated warehouses increases the speed, efficiency and safety of all activities.



AUTOMATED WAREHOUSES FOR TRAYS

Ideal for storing products of various sizes on trays, our automated warehouses maximize vertical storage spaces and speed up pick-ups, according to the «goods to man» operating concept.

- › **Single placement** and **pick-up point** allows for quick and easy operations
- › **Material pick-up** and **placement possible from any bay**
- › **High design flexibility:** option of providing one or more bays, same side or opposite sides, based on the needs

UNO

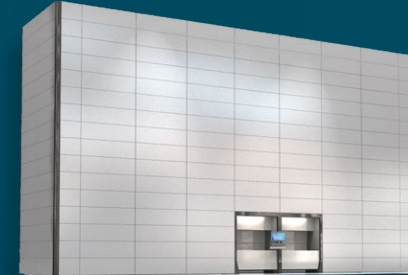
Automated warehouse with **single module, 2 axes, one bay**



- › Tray pick-up/placement trolley on both sides
- › Can be placed both inside and outside the plant
- › Standard maximum height: 14 m.

UNICO

Automated warehouse with **multi-module, 3 axes, one or more bays**



- › Option of increasing the number of modules, at any time, while maintaining the same handling system
- › Double column stacker crane that slides inside the warehouse through all modules (horizontal and vertical movement)
- › Tray placement on the front and rear shelves
- › Tray pick-up/placement trolley both front and rear of the system
- › Can be placed both inside and outside the plant
- › Option of combining multiple systems with interchangeable bays for increased storage capacity
- › Standard maximum height: 14 m.

SPAZIO

Automated warehouse with **2 to 10 modules, 3 axes, one or more bays**



- › Tray pick-up/placement trolley on both sides
- › Can be placed both inside and outside the plant
- › Option of combining multiple systems with interchangeable bays for increased storage capacity
- › Standard maximum height: 14 m.
- › Maximum achievable length: 10 m. (beam limit)

STACKER CRANES

The stacker cranes are designed for the automatic and intensive storage of loading units. Due to the different pick-up systems and the various structures types available, they represent an efficient and safe solution for all sectors. Furthermore, these systems work at temperatures of ≤ -25 °C.

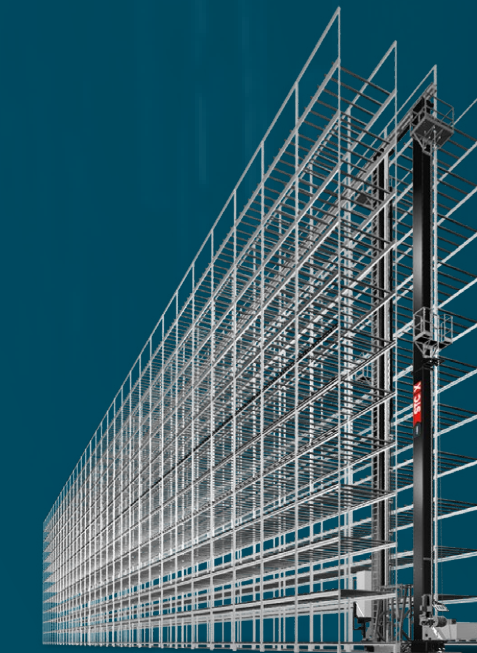
STRUCTURE TYPES

SINGLE COLUMN

- › Lean structure
- › Reduced overall dimensions
- › Fewer masses in motion
- › Ideal for storage up to 25 m.

TWO COLUMN

- › Suitable for large heights (over 25m.)
- › Ideal for storing LUs with unit weight of over 2000 kg. and bulky loads
- › Ideal for high speeds



LOADING SYSTEM TYPES

SINGLE, DOUBLE AND TRIPLE DEPTH FORKS

- › System ideal for handling loading units over 100 kg. and three deep

BATTERY POWERED SATELLITE

- › Ideal for storing multi-depth loading units, even at low temperatures

TRAY DRAGGING PICKING SYSTEM (applicable only in case of two column solution)

- › Ideal for loads over 500 kg.
- › Maximum optimization of shelf space

OTHER TYPES

MINI-LOAD STACKER CRANES

Systems for the storage of light loads with high handling flows

Loading system types:

- › Single fork
- › Side pick-up device

SHUTTLES AT LEVEL

For each warehouse level, the system provides a shuttle that distributes satellites in the various channels. In turn, the satellites take care of picking up the loading units stored in the warehouse.

The shuttles can be powered by busbar or battery. It is the ideal solution for handling in the case of high flows and low number of product options.

DRIVE-IN

Solution for reduced flows and low number of product options managed in semi-automatic mode by the operator (forklift) or in automatic mode by AGV.

FLS (FAST LOOP SYSTEM)

System composed of steering rail-guided shuttles that connects the automatic warehouses to the operator positions. Option of inserting an automatic shuttle extraction system inside the circuit.

WAREHOUSING MANAGEMENT SYSTEMS

The integrated and optimized management of plant intralogistics is essential for a modern factory:

- › It **increases** performance in terms of **efficiency** and **safety** of **storage operations, inventory management** and **order preparation**.
- › It **optimizes** the use of **storage facilities**.
- › It **reduces management costs** by automatically exchanging data with the customer's ERP.

To date, EMS Group has installed logistics automation software in hundreds of warehouses of every type and level of complexity and in every sector. The software natively includes both the WMS module and the WCS module: automation control and diagnostics are integrated into the WMS, increasing the simplicity of implementation and management of the system.

Overview of managed activities:

- › **Acceptance** and **identification** of **load units** (LU) entering the system (barcode eading, weighing, dimensional check)
- › **Storage** of **LUs in the warehouse** according to configurable logics
- › **Execution** of **loading/unloading/inventory lists** transmitted by the ERP or entered manually
- › **Automatic selection** of the **LUs** for **loading or unloading** according to configurable criteria (FIFO, emptying, etc.)
- › ERP controlled or manual blocking of goods
- › **Internal movements**, such as lowering or repositioning of stocks in order to improve the placement of the LUs and/or optimizing the use of the racks
- › **Shipping** of **prepared products**: goods checking and creation of shipping packing list
- › **Synchronization** and **sharing** of **warehouse data** with **ERP** via Web Service, shared tables, text files

AUTOMATED WAREHOUSES



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SCAN AND
LEARN MORE



EMMETI

METRA

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LOGIK
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EMS Group was born in 2018 from the merger of five leading companies in the handling, palletizing and storage of goods and materials. The Group quickly made its mark, becoming an industry standard on the global market.

Thanks to a wealth of expertise and a vast capacity for innovation and design flexibility, EMS Group is able to support customers with integrated digital solutions geared towards enhancing competitiveness.

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