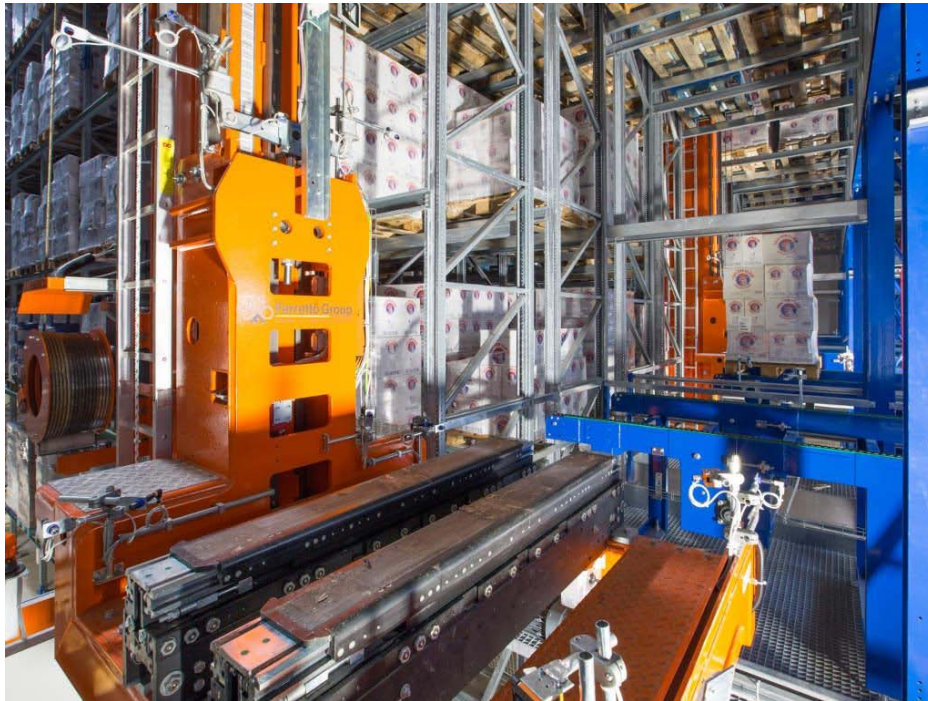


## Case studies

# SI.STE.M.



**Sector:** Cleaning / Home Care

**Place:** Bologna - Italy

### **Ferretto Group automation for detergent storage**

To implement the storage of pallets and improve distribution efficiency, Si.ste.m., with the support of the Ferretto Group, has built an innovative self-supporting automated storage system. Si.ste.m. is a Desa Group company founded in 1993 following the acquisition of a historic manufacturer of home cleaning products. The company's facilities cover an indoor area of 14,000 sq.m., with an area dedicated to production, another to packaging, featuring five automated palletising lines, and an area where the automated storage system is installed, housing pallets of finished products.

### **System features:**

The Ferretto Group automated storage system comprises four single-station stacker cranes serving self-supporting double-depth racking.

The four stacker cranes manage storage of pallets of finished products coming from the automated palletising lines, as well as preparation of orders for delivery. All the stacker cranes are fitted with on-board cameras for monitoring the entire system.

All incoming pallets from the production line are complete with identification label. This means that all the pallets can be identified and controlled on entering the storage system.

The in/out conveyors are managed by five steered shuttles that travel on a specially-sized closed circuit monorail.

The incoming shuttles carry the pallets from the five production lines to the automated storage system. The same shuttles then carry the outgoing pallets from the store to the four delivery bays. All of the operations are automated and interact with the inputs from the Si.ste.m business management system.

In the delivery area there is also a bay for loading products arriving from other Desa Group production sites.

The pallets are loaded onto the delivery vehicles using electric pallet trucks, which pick two pallets at a time from the four order preparation bays.

### **System cycles available:**

Incoming from production 100 pallets / hour  
at the same time

Outgoing for delivery 100 pallets / hour

### **The heart of the problem:**

Over the years, volumes have seen constant double-digit growth, and consequently the company has on a number of occasions adapted its structure to meet new manufacturing requirements, adopting investment plans aimed at bringing continuous development and keeping up-to-date technologically, while at the same time guaranteeing the best results in terms of cost reduction and occupational health and safety.

These same principles guided the reorganisation of internal logistics, with the creation of an automated storage system for finished products and a monorail shuttle system, supplied by the Ferretto Group.

To ensure a high level of competitiveness, response times to market requests needed to be shortened, reducing lead times and increasing the ability to customise the final product, while simultaneously optimising and controlling operating costs.

The investment in the Ferretto Group automated storage system - the interface between the production and order filling departments - ensured both objectives have been met.

### **Automation: synonymous with efficiency and safety**

The system developed however not only improves manufacturing operations and customer service, but also reflects a method of automation that stresses the value of the human element. During preliminary analysis, it was calculated that, at peak times, almost 70% of operator working time involved moving: this not only represented an inefficiency from an organisational viewpoint, but also hindered the professional growth of personnel.

With the Ferretto Group automated storage system, working conditions have changed radically, and above all ergonomics and safety have improved, introducing a "goods to man" logic and eliminating in almost all areas the use of handling equipment, possible causes of traffic and accidents.

The current layout is the result of a complete review of processes and a radical infrastructure upgrade. The optimisations brought by the automation system have highlighted possible new areas for improvement: in particular, as well as continuing the investments in the manufacturing area, to keep the solutions used at the cutting-edge, Si.ste.m. has also upgraded its IT system.

By introducing barcodes in every stage of the supply chain, Si.ste.m has adopted a system that fully exploits the potential of the new Ferretto Group automated warehousing system in terms of traceability and visibility.

### **Storage system facts and figures:**

## SYSTEM FEATURES

STORAGE CAPACITY	12420 UL
SYSTEM DIMENSIONS	102x28.8xH=20.7 m
TYPE AND NUMBER OF STACKER CRANES	4 stacker cranes with forks
RACKING FEATURES	
NUMBER OF LEVELS	9
NUMBER OF BAYS	46
UNIT LOADS	Wooden pallets 800x1200 mm
NUMBER OF AISLES	4







