

Case study: Vandemoortele

Logistics with a taste of automation

Country: Spain

Mecalux equips the modern logistics centre of multinational company Vandemoortele with five storage systems.



THE CHALLENGE

- » Efficiently manage goods leaving the production lines.
- » Boost productivity in the movement, storage and dispatch of the goods.
- » House SKUs of different sizes, characteristics and turnover.

THE SOLUTIONS

- » Clad-rack warehouse for pallets with a curve-going rail-guided stacker crane system.
- » Live pallet racking.
- » Push-back pallet racking.
- » Conventional pallet racking.
- » Picking shelves.

THE BENEFITS

- » Storage and distribution of 1,200 pallets every day with finished goods from production.
- » Safe, uninterrupted transport of goods at a controlled temperature to maintain their flavour and quality.
- » Storage systems that maximise the use of the space.

Founded in 1899 in Izegem, Belgium, Vandemoortele is a leading business group in the food industry in Europe. It has two business lines: one for pastry and bakery products and another centred on the production of margarines, oils and cooking fats. In addition to Europe, the company is present in the US.

- » Products: **4,700**
- » European markets: **17**
- » Employees: **5,100**
- » Production centres: **31**

The role of a finished goods warehouse in the supply chain is critical, as it has a direct impact on customer satisfaction. There is no point in optimising management of raw materials and production processes if, in the end, the finished goods warehouse lacks efficiency.

A few years ago, multinational company Vandemoortele opened a modern production plant in Santa Perpètua de Mogoda (Barcelona, Spain) to manufacture margarines and fats. The facility also has an area allocated "solely to the storage of finished goods coming off the seven production lines," says Oriol de Haro, the business's Logistics Manager.

The warehouse stores pallets with a high turnover, acting as a buffer in which products are deposited temporarily until they are distributed to end customers. To manage the goods efficiently, Mecalux has installed five distinct storage systems. In addition to housing around 360 SKUs of varying characteristics, sizes and turnover, these five solutions have optimised the storage space.

An automated clad-rack warehouse; pallet, live and push-back racking; and picking shelves vitalise a logistics facility that manages the movement of 1,200 pallets a day: 400 from the production lines, 400 that are distributed to end customers or other warehouses where picking is carried out and 400 that are sent to suppliers.

"We used to work with pallet racks. The area with the automated warehouse and live pallet racking didn't exist; it was built when we began to ramp up the volume and pace of production," says Haro.

Automated clad-rack warehouse

"The rack-supported building has radically changed our logistics infrastructure," says

Haro. "It's helped us to boost productivity in moving, storing and dispatching our goods. Moreover, this solution has optimised the available space, improving organisation of the finished goods that leave the production lines."

With a height of 16.5 m and capacity for 4,721 pallets, the automated warehouse operates at a controlled temperature of 5-15 °C. The clad-rack structure fosters energy savings, as the cold air is distributed among a larger number of stored pallets.

The facility is made up of three 65-metre-long aisles. During the first phase, Mecalux installed a single twin-mast stacker

crane, which operated in the three aisles. It did so by means of a system of curved rails set up at the back of the warehouse, enabling the stacker crane to change aisles as required. This solution is implemented when the storage volume is high and the flow of movements is moderate.

During the second phase, and due to the spike in production, Vandemoortele decided to instal a second (single-mast) stacker crane. Its position was fixed in the first aisle, with the twin-mast stacker crane operating in the other two. "The second stacker crane has enabled us to increase the flow of movements and ensure that the warehouse is always operational," says Haro.





Oriol de Haro
Logistics
Manager

“We’re pleased with the automated warehouse and the investment we’ve made because they’ve helped us to raise our productivity and throughput. Thanks to the different storage systems installed, we store our goods in the best possible conditions.”

The pallets from the production lines enter the warehouse via a conveyor system. They then go through a checkpoint and are stored in the racking with the help of a transfer car and a stacker crane. The various automated elements are also charged with moving the pallets to the dispatch area, where the five loading docks are located.

Four complementary storage systems

Mecalux has also installed four non-automated storage systems with different functions:

» **Live pallet racking.** With capacity for 640 pallets, this compact system houses many pallets per each SKU of finished product, making the most of the space. Each channel, capable of storing up to 16 pallets, is reserved for a single SKU. The pallets are moved by gravity from the highest part of the channel, which has a 3.7% slope, to the last free position.

» **Push-back pallet racking.** This high-density solution stores drums and intermediate bulk containers (IBCs) on larger pallets. Standing 6.5 m tall, this system makes it possible to push pallets back into the lanes on each level.

» **Pallet racking.** This storage solution, which stands out for its versatility and strength, stores finished product, empty containers and the packaging used on the production lines. The racks have five lev-

els and can accommodate up to 800 pallets. This type of racking was chosen because of its direct access to the products, which greatly expedites management of the goods.

» **Picking shelves.** Located on the lower level of the pallet racking, the picking shelves house the samples from the production lines.

Scalable, efficient logistics

Vandemoortele is an innovative company that, from the start, has demonstrated a commitment to continuous change and

improvement in order to guarantee the excellence of its products.

At its plant in Barcelona, the company has a finished goods warehouse that has been expanded to allow it to cope successfully with the high rate of production.

The various storage systems and optimised layout of the facility enable the movement of around 1,200 pallets a day. Likewise, the clad-rack warehouse ensures the safe, continuous flow of goods at a controlled temperature to maintain their flavour and quality.

