

Case study: Abafoods

Five storage systems: bolstered drinks productivity

Location: Italy



Abafoods expanded its central warehouse located in the Veneto region in Italy, allocated to provisioning the production centre and store finished projects.

Mecalux supplied five storage systems that share a 4,500 m² space to optimise it, increasing capacity to more than 6,000 pallets and meeting the growing market demand.



Needs of Abafoods

Abafoods is an Italian company specialised in the manufacture of organic drinks with natural ingredients like rice, soy or oats.

In the last few years, they have successfully incremented exports thanks to its consistently innovative products.

The company, which has always worked side by side with Mecalux to find the best solution for its logistics needs, again re-

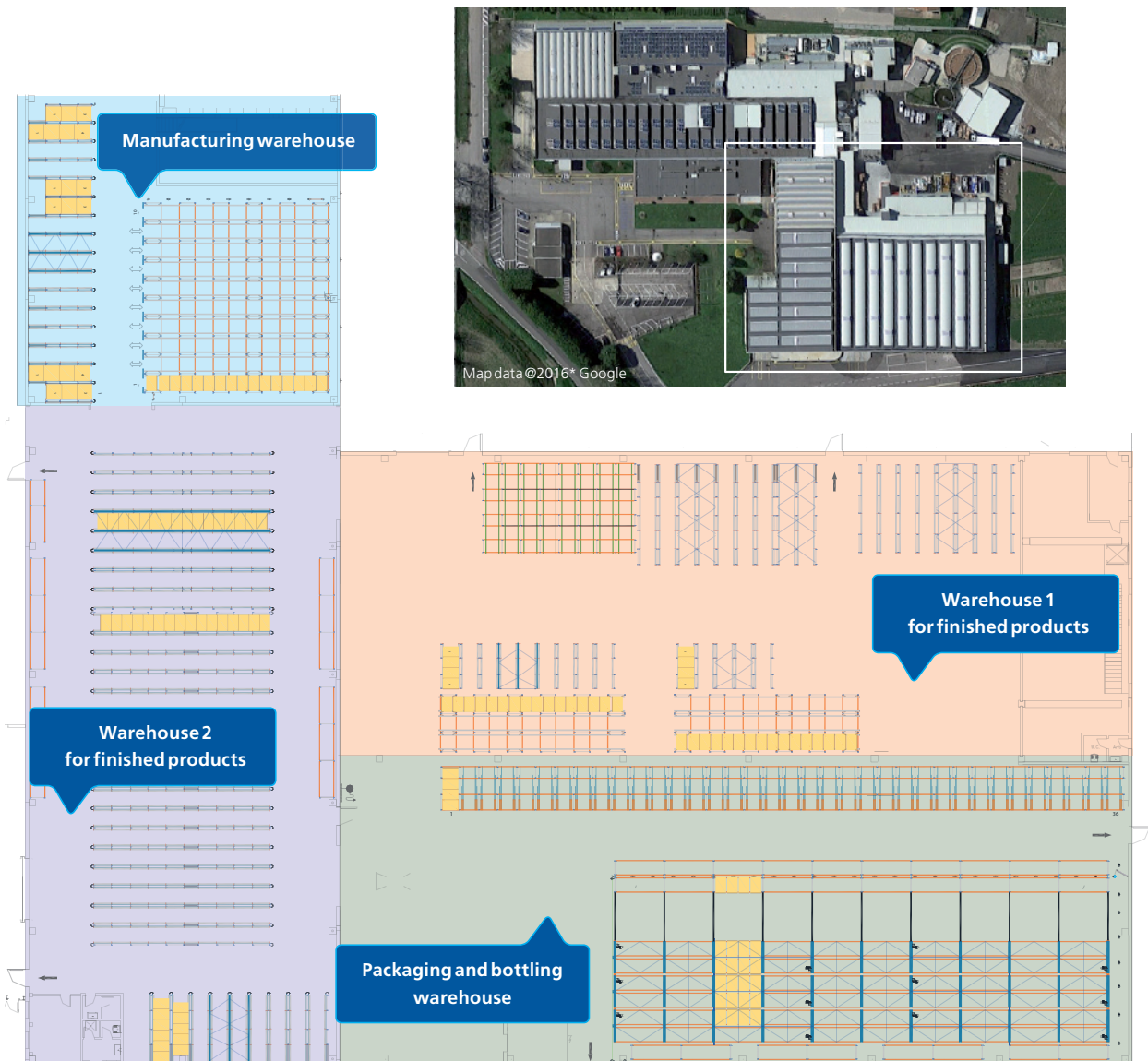
quested the collaboration of Mecalux in order to expand the warehouse and to adjust it to the stock. The company needed greater storage capacity and to speed up all operations.

Warehouse composition

The Abafoods installation consists of four different areas: the packaging and bottling warehouse, the manufacturing one next to the production centre and two warehouses with finished products, which sort the

goods depending on its turnover. Mecalux provided five different storage systems, four of which are high-density, that permit a capacity of more than 6,000 pallets of diverse sizes and weights:

- Drive-in pallet racking.
- High-density push-back pallet racking.
- The semi-automated high-density Pallet Shuttle system.
- Movirack mobile pallet racking.
- Pallet racking.





The packaging and bottling warehouse

Two different storage systems with very different applications share the same area.

Push-back pallet racking was installed with 144 channels that store up to four pallets deep. Handling is very agile and is performed on the same side of the racks.

The operators do not enter into the storage aisles, but instead introduce pallets into each channel and pallets are pushed along with the assistance of forklifts.

The first pallet is placed in the first position of a level (the one closest to the aisle) on trolleys.

The second pallet is used to push the first and so on, until the level is full. The racks are slightly inclined.

The front part is lower to help facilitate unit loads to move forward via gravity towards the first exit position, when the pallet in this location is removed.



In addition, the Movirack system was supplied. One single and four double access racks were set up (three of these on mobile bases).

The pallet racking is placed on mobile bases. They move sideways autonomously, when the operator gives the order via a RF remote control.

The shelves are mesh, electro-welded type, which allows highly variable, low and medium quality pallets to be deposited.

It is a high-density system that makes full use of the available space by eliminating aisles. In addition, it facilitates direct access to the goods when the working aisle corresponding to the products to be accessed is opened.

Meanwhile, safety measures that safeguard operators were incorporated, both external and internal barriers with photocells that stop all activity when there are operators working in the aisle.





The manufacturing warehouse

The manufacturing warehouse is found beside the production centre and is equipped with two different storage systems, which fulfil very specific functions. In order to supply products indispensable to Abafoods' production processes, ma-

terials used daily in packaging and bottling tasks are temporarily deposited in the drive-in pallet racking.

On the other side, a racking block was constructed with the semi-automatic high-density Pallet Shuttle system, reserved

for goods that remain in quarantine, i.e., stored during a certain time while awaiting its verification and the performance of quality controls. Once each pallet passes this imperative phase, it is sorted depending on its turnover and it is assigned a location.



Drive-in pallet racking



Pallet Shuttle



Push-back and drive-in pallet racking



Pallet Shuttle



Drive-in pallet racking

Warehouse 1 for finished products

There are two warehouses for finished products. Medium and low turnover goods (type B and C) are stored in one of these. Mecalux supplied three different storage systems: push-back pallet racking, drive-in pallet racking and the semi-automated Pallet Shuttle system.

The semi-automated Pallet Shuttle is adapted to the logistics needs of Abafoods and the size of their goods. This noticeably reduces the manoeuvring time-frames of the operators, as well as optimising the storage capacity that the high-density system delivers.



Warehouse 2 for finished products

This warehouse is allocated to high consumption goods (type A), which are deposited into the drive-in pallet racking. The system fulfils Abafoods' requisite of making full use of the surface area and thereby obtain greater capacity.

The forklifts enter into each load aisle with its forks raised at the height level the operation will be performed at.

The guide rails on the floor on both sides of the storage aisle facilitate the movement of the forklifts inside, which diminishes the possibility of accidental damage to the racks

Pallet racking was also set up, which gives direct access to the goods and allows for direct picking on lower levels.





Advantages for Abafoods

- **Efficient organisation:** each product is deposited in the most appropriate storage system to suite it features and turnover within Abafoods' four warehousing areas.
- **Optimum operations:** the location of each warehouse follows a logical and agile circuit, taking into account production processes.
- **Boosted storage capacity:** by mainly incorporating high-density systems, optimised storage volume is achieved in order to meet the storage capacity needed by Abafoods.



Storage systems

Manufacturing warehouse

Drive-in pallet racking
Semi-automated high-density Pallet Shuttle

Warehouse 1 for finished products

High-density push-back pallet racking
Drive-in pallet racking
Semi-automated high-density Pallet Shuttle

Warehouse 2 for finished products

Drive-in pallet racking
Pallet racking

Packaging and bottling warehouse

High-density push-back pallet racking
Movirack mobile pallet racking