

# The 3D Automated Pallet Shuttle doubles capacity and cuts operating times by 20%

Clavo Food Factory installs Mecalux's high-density AS/RS to support the production of 14,000 tonnes of chilled and frozen food per year.

Country: **Spain** | Sector: **food & beverages**



## CHALLENGES

- Meet growing demand for chilled and frozen foods.
- Store large volumes of raw materials and finished goods at subzero temperatures.
- Ensure full traceability of perishable products.

## SOLUTIONS

- 3D Automated Pallet Shuttle
- Easy WMS Warehouse Management System.
- Mobile Pallet Racking.

## BENEFITS

- 20% reduction in operating times.
- 50% increase in storage capacity without expanding footprint.
- 24/7 control of 5,827 pallets of ready-to-eat food products.

Clavo Food Factory specialises in the production of ready-to-eat frozen and chilled food (fourth- and fifth-range products). The business, which began as a seafood processing operation, has become one of Spain's leading manufacturers of prepared meals. It operates three production plants in the Galicia, Castile and León, and Cantabria regions, along with 47,000 m<sup>3</sup> of cold storage space to ensure correct product preservation.

» **Founded: 1985**

» **No. of employees: 400**

Clavo Food Factory produces 14,000 tonnes of chilled and frozen ready-to-eat products annually. Its more than 1,000 SKUs are delivered to over 42,000 restaurants worldwide. The company has incorporated cutting-edge technology into its Tordesillas plant (Spain) to drive its domestic and international expansion.

To increase production throughput without disruptions, Clavo Food Factory implemented a comprehensive Mecalux solution. The 3D Automated Pallet Shuttle, Easy WMS warehouse management system, and Movirack mobile racking have transformed the in-house logistics setup at the Tordesillas facility. The plant now operates with faster

processes, optimised space utilisation and full inventory control.

The technological upgrade has marked a turning point in Clavo Food Factory's logistics operations. "With the 3D Automated Pallet Shuttle, we've doubled our storage capacity, reduced idle time and lowered costs," says Alejandro Lara, Plant Manager. Logistics Manager Iñaki Frías adds: "We've cut operating times by around 20%."

Clavo Food Factory's supply chain requires coordination at multiple levels. It involves receiving raw materials, housing pallets in freezer stores, and supplying seafood products to both production and dispatch for final customers. "Before, we assigned pallet locations in the freezer warehouse manually. Now, the WMS assigns slots automatically, so we no longer need to search for available space," says Frías.

#### **Multi-directional shuttles**

The 3D Automated Pallet Shuttle stores 5,827 pallets of raw materials and finished goods at -24 °C. Inside the automated storage and retrieval system (AS/RS), 10 autonomous shuttles navigate the aisles in multiple directions. They change levels in a coordinated manner to handle each pallet as required. A Mecalux-developed fleet management software program controls shuttle traffic, ensuring smooth and continuous operation.

**Clavo Food Factory modernises its logistics setup to support global expansion**



***"With the 3D Automated Pallet Shuttle, we've doubled our storage capacity, reduced idle time and lowered costs."***

**Alejandro Lara**  
Plant Manager, Clavo Food Factory  
(Tordesillas)



Through its high-density design, the new AS/RS maximises storage capacity, speeds up inbound and outbound frozen-food pallet flows and reduces energy consumption for Clavo Food Factory.

The automated solution has also completely overhauled order fulfilment. “Say, for example, we receive an order for 30 pallets, some of which require picking beforehand. The system first issues the list of materials to be picked and then dispatches the remaining pallets to complete the order. This new organ-

isation has saved us a significant amount of time,” says Frías.

The high-density AS/RS is managed by Mecalux’s Easy WMS software, which provides full traceability of food products. Integrated with the company’s ERP system, it gives advance notice of incoming goods to optimise slotting. “Easy WMS provides us with complete visibility of every pallet. It helps us anticipate demand, which improves accuracy and gives us peace of mind in daily operations,” says Frías.

**Automation that makes a difference**

Regarding the benefits of the AS/RS, Lara says: “Our customers are already noticing faster service, and we can now handle a higher volume of operations. Integrating Easy WMS with our ERP software and the AS/RS has enabled us to work 24/7, with continuous processes and greater efficiency.”

According to Frías, automation has also improved internal organisation for Clavo Food Factory. “We’ve streamlined order picking and optimised the layout of the freezer ware-

house. This has reduced cold loss compared to our previous setup.”

The company’s choice of Mecalux as its storage systems partner has proven successful over time. “We opted for Mecalux because of its innovative warehouse solutions and our positive experience working together on previous projects,” says Lara.



*“Easy WMS provides us with complete visibility of every pallet. It helps us anticipate demand, which improves accuracy and gives us peace of mind in daily operations.”*

**Iñaki Frías**  
Logistics Manager,  
Clavo Food Factory



**Looking ahead**

Following its logistics modernisation process, the company has significantly improved efficiency and agility, ensuring reliable operations even during demand peaks. This approach underscores Clavo Food Factory’s commitment to technological innovation as a key driver of growth, enabling it to further expand its global market share.