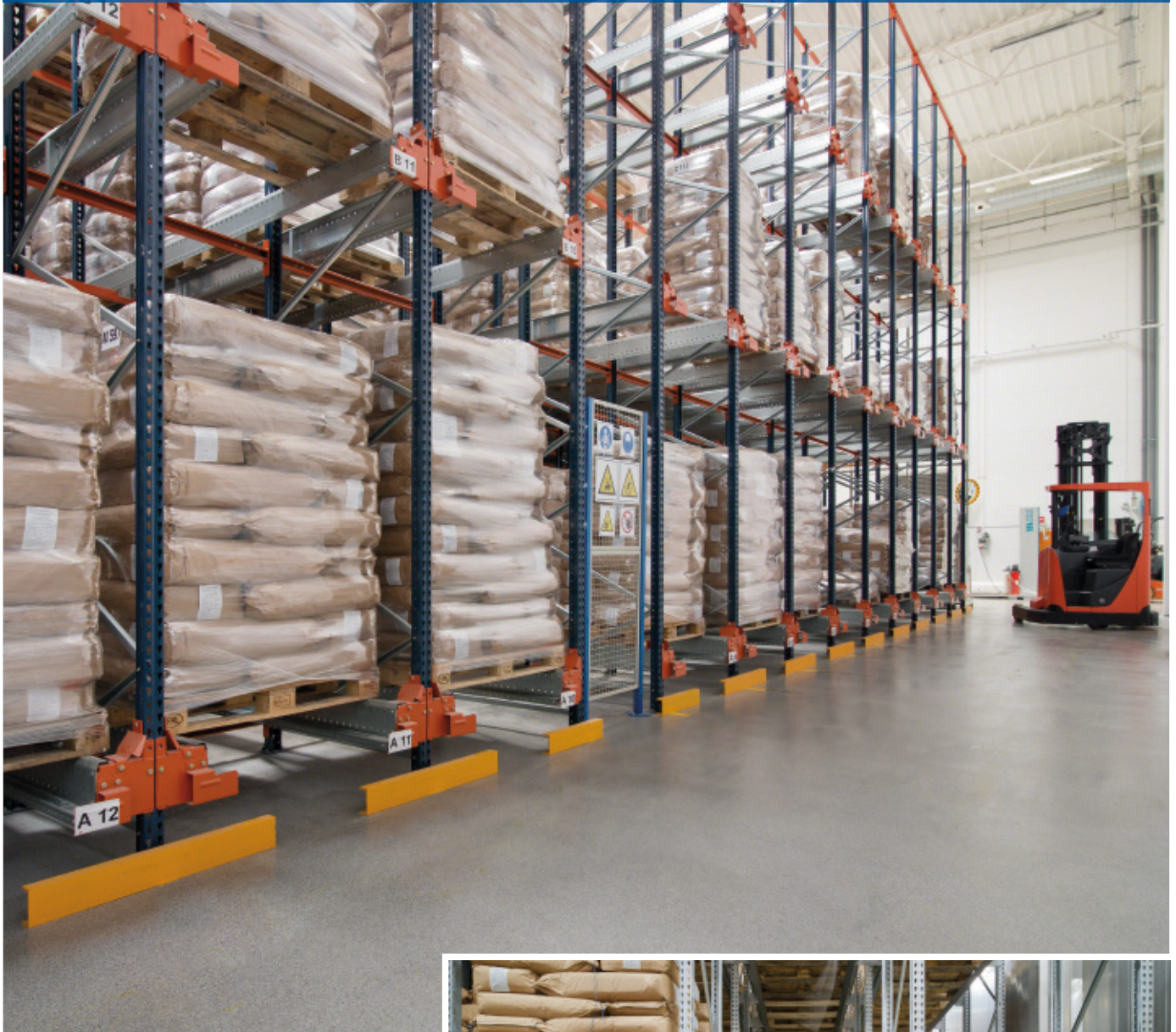


Case study: Eggs Product

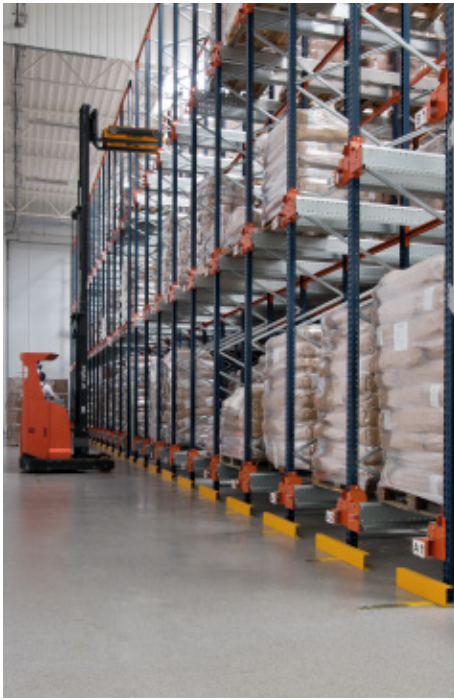
High-density storage systems from Mecalux in Eggs Product's production centre

Location: Poland



Mecalux has equipped the Eggs Product company's warehouse with high-density storage systems. This Polish manufacturer of egg-based products has gotten Mecalux to install drive-in pallet racks, the Pallet Shuttle system and rework a Pallet Shuttle/drive-in rack combi-system in its facility. By combining all these storage solutions, the installation accommodates over 2,200 pallets.





About Eggs Product

Founded in 2012, in Żylce (Poland), Eggs Product Grupa Producentów Rolnych Sp. z o.o. is a Polish manufacturer and distributor of egg products (i.e. egg yolk powders and liquids, etc.). Its end products are used in different industries –to produce confectionery, baked and deli goods, as well as pasta.

The company's goal is to meet market demands, create innovative products and be continuously under development –including in its logistics processes. Achieving that was made possible thanks to its cooperation with Mecalux.

The customer project included the installation of the Pallet Shuttle system in the main warehouse, drive-in pallet racks in three heated warehouses. In addition, an existing drive-in system was modified into a mixed drive-in/Pallet Shuttle solution.

Main warehouse with Pallet Shuttle system

The high-density Pallet Shuttle system fully uses available space to provide greater storing capacity. Mecalux has supplied a block of 21.5 m long, 9 m high, three-level racks operated by a Pallet Shuttle. Each racking channel can store 25 Euro pallets, meaning the entire installation houses 1,725 pallets overall.

Pallet Shuttle operations are fast, simple and require little intervention by operators. The operator places the motorised shuttle into the correct channel and

deposits pallets in the first position of the racks. While the shuttle transfers and deposits the pallet in the first free location, the operator places another pallet in the same channel. When the shuttle returns to the front of the lane, it can repeat the same movement. The reverse operation is performed to remove the goods.

The Pallet Shuttle's tasks are done automatically, following the instructions the operator sends through a Wi-Fi connected tablet installed with user-friendly software.

The Pallet Shuttle operated block of racks runs down the centre of the warehouse, with a work aisle on either side: one for entries and another for exits. The load is managed via the FIFO method (the first pallet to enter is the first to leave).

The lateral racking is covered with mesh to prevent the accidental fall of goods. For greater safety, the front of the rack installation has been protected to absorb impacts produced by the handling equipment while they move the unit loads.



Also, an enclosed passageway has been created down the centre of pallet racks, allowing operators to perform maintenance work.

Three heated warehouses with drive-in pallet racks

Products obtained from processing eggs require special treatment in terms of warehousing. To store them, Eggs Product has designated three smaller heated warehousing chambers. They are specially designed storage rooms kept at high temperatures. They serve as a buffer zone for semi-finished products before these materials are transported to the main warehouse.

Mecalux has installed 6 rows of drive-in pallet racks in each heated installation. These 5.4 m high blocks comprise three levels where pallets can be deposited seven deep, accommodating a total of 378 pallets. Each rack channel is equipped with support rails and pallet centralisers for proper insertion of the loads. Stored products can be accessed from a single aisle through a LIFO (last in, first out) method.

Modification of pre-owned drive-in pallet racks

Mecalux also reworked some pre-existing drive-in pallet racks, in addition to the new storage systems. The redesigned solution is a mix of two warehouse solutions: drive-in pallet racks, on the ground floor and run by operators with pallet trucks, and the

Pallet Shuttle system on the first and second levels. The installation is 8.5 m high, 14.9 m long and can house 183 pallets. The first level above the ground floor is protected with wire mesh, which guarantees the safety of operators who are handling goods with pallet trucks and prevents loads from falling.



Advantages for Eggs Product

- **Optimised warehouse capacity:** the installed high-density storage systems—drive-in pallet racks and the Pallet Shuttle system—use available warehouse space effectively, meaning more than 2,200 pallets can be housed.
- **Increased productivity:** automating of storage processes by means of the Pallet Shuttle system streamlines warehousing operations.
- **Safety is a priority:** the provided storage systems have been equipped with safety devices to protect the workers, the goods and the rack structures.



Technical data

Pallet Shuttle system

Storage capacity	1,725 pallets
Pallet size	800 x 1,200 x 2,400 mm
Racking height	9 m
Racking length	21.5 m

Drive-in racks in heated warehouses

Storage capacity	378 pallets
Pallet size	800 x 1,200 x 1,650 mm
Racking height	5.4 m
Racking length	7.3 m

Drive-in pallet racks and Pallet Shuttle system

Storage capacity	183 pallets
Racking height	8.5 m
Racking length	14.9 m

