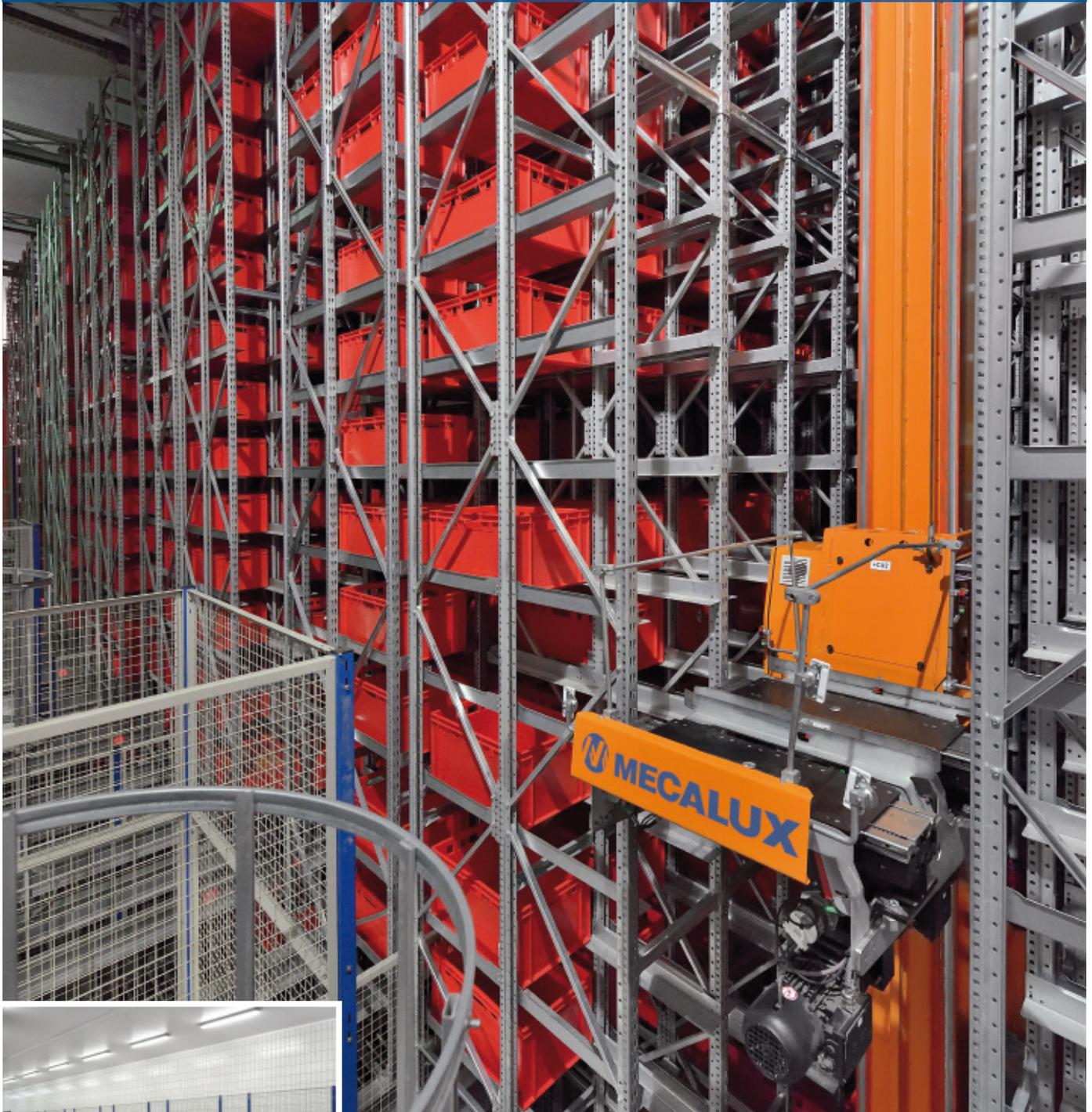




Case study: Zakłady Mięсне Henryk Kania

Mecalux has installed a new automated warehouse for boxes and pallets for the Polish meat products company ZM Kania

Location: Poland



Zakłady Mięсне Henryk Kania has decided to automate its new logistics centre in order to gain storage capacity, while making its order picking faster and more flexible. Mecalux's Warehouse Management Software, Easy WMS, has also been installed as part of the project.



Discovering the new logistics centre

The significant increase in sales in recent years has led Zakłady Mięsne Henryk Kania to build a modern logistics centre that meets their current and future logistics needs. As part of this production plant, the

company has entrusted Mecalux to supply and install the automated warehouse, the equipment required for connecting it to the production area, an efficient picking area and the warehouse management system, Easy WMS, which will manage the operational basis as a whole.

The project includes:

- Connection to the packaging lines
- Box warehouse
- Pallet warehouse
- Main conveyor system inside the warehouse
- External circuit and picking stations



Connection to the packaging lines

The packaging lines coincide with the end of the production chain, the point where Mecalux systems start to handle the goods.

The packaging station is connected to other areas through a double automatic conveyor circuit: one sends empty boxes into this area and the other sends the filled boxes to the warehouse.

Boxes can be filled directly on the end of each line or on a non-automated conveyor or that also serves as the preparation table. The continuous conveyor runs parallel to this, carrying the completed boxes.

In this area that connects to the packaging lines, the warehouse management software Easy WMS registers all products that are introduced into each plastic box and uses the data until they are dispatched.

From the identification point, conveyors are protected by metal mesh enclosures as a hazard prevention measure and to avoid any inappropriate intervention.

The large capacity for accumulating boxes en route to the warehouse means the exits to the picking areas can be prioritised, since both operations use the same conveyor systems.



The products are previously placed in plastic boxes of the eurobox type, measuring 600 x 400 x 300 mm, forming a transport and storage unit





The warehouse

The warehouse has been divided into two refrigerated and visibly distinct areas.

The first, which is larger, is for storing boxes containing finished products, while the second is for storing pallets with the prepared orders that are not dispatched immediately after preparation.

The warehouse equipped with the miniload system, with a total capacity of 19,848 boxes, allows smooth supply of all the picking stations, thus meeting the objective set by ZM Kania

Automated warehouse for boxes

This comprises six storage aisles with 8.7 m high double-deep rack fitted on both sides.

Each rack consists of 47 bays with 17 storage levels and two bays with 14, giving a total capacity of 19,848 boxes.

A miniload stacker crane, fitted with double-depth extractors, moves along each aisle two boxes at a time, for both entries and exits. The loading and unloading stations are set up to allow two boxes at a time.

So that operators can carry out maintenance work in complete safety, a space, protected by mesh enclosures, has been created at the back.

Moreover, each aisle has its own secure gateway that cuts the power to the stacker crane when an operator opens it.







Automated pallet warehouse

This warehouse has a single aisle along which a pallet stacker crane runs with product already prepared and ready for dispatch.

Double-deep racks have been fitted on both sides of the aisle; these are only three levels high and temporarily house 288 pallets

The same conveyor, which is located on the side of the picking area and next to the reception station for empty boxes, is used for both entries and exits. This conveyor connects the warehouse to the common area near the loading docks.

The operator is responsible for indicating the system which operation needs to be conducted (entries or exits). From that moment, the entire movement is executed automatically.



Picking

Eight picking stations with two conveyors each along which circulate the plastic boxes have been provided, making it possible to accumulate up to six boxes.

Any empty plastic boxes can be sent into the warehouse or, if more free space is preferable, they can be removed from the circuit and placed on pallets.

To this end, a position where the empty boxes can be re-sent to the packaging area has been created, as well as a significant number of accumulation positions to avoid the constant movement of these boxes.



Easy WMS

The warehouse management system Easy WMS is a powerful program developed by Mecalux which is able to manage any type of warehouse, regardless of its complexity.

While Mecalux's Easy WMS acts as the nerve centre and works using pre-established rules, in the case of Zakłady Mięsne Henryk Kania, because the warehouse is automated, it is connected to the relat-

ed Galileo control programme. This programme manages all the logic of the movements of the installation's various mechanical components.

The Mecalux Easy WMS has a permanent two-way connection with the customer's SAP ERP to exchange the necessary information and commands to ensure proper function and excellent control of the different operations.

Eight picking stations have been installed that allow up to six boxes in accumulation, and up to three operators can work in each position at the same time



Advantages for Zakłady Mięsne Henryk Kania

- **High storage capacity:** the miniload box warehouse can store 19,848 boxes, while the pallet storage capacity is 288 pallets.
- **Increased productivity:** automating the storage systems means an increase in the flow of boxes per hour, as well as the picking speed. Moreover, through automation, errors have been significantly reduced.
- **Total control of the warehouse:** using the Mecalux Easy WMS warehouse management system, ZM Kania is able to control and optimise all the flows, processes and operational bases that take place within its warehouse.



Technical data

Box storage capacity	19,848
Pallet storage capacity	288
Maximum weight per box	35 kg
Maximum weight per pallet	700 kg
Height of the miniload warehouse	8.7 m
Type of stacker cranes	single-mast
Picking stations	8

