SMA MAGNETICS

Case study: SMA Magnetics

Automated warehouse linked to manufacturing

Location: Poland

SMA Magnetics is company that uses highly-automated logistics and production processes to reach its peak performance. To do so, it requested Mecalux's collaboration when it came to automating its Zabierzów centre in Poland. This warehouse comprises three aisles with a stacker crane in each aisle that slots and extracts the goods. Additionally, this installation is connected to production through a comprehensive conveyor circuit.

About SMA Magnetics

Founded in 1981, this company makes electromagnetic components used in a large variety of industries, such as the power, automotive and transportation industry.

SMA Magnetics' products are well-known in Poland and Europe. Part of this company's success is due to its incorporation of cutting-edge technology in all processes, its continuous investment in R&D and its cooperation with customers in developing innovative, personalised solutions.

The new SMA Magnetics warehouse

Recently, SMA Magnetics opened a warehouse right next to its production centre in the town of Zabierzów (next to Kraków).

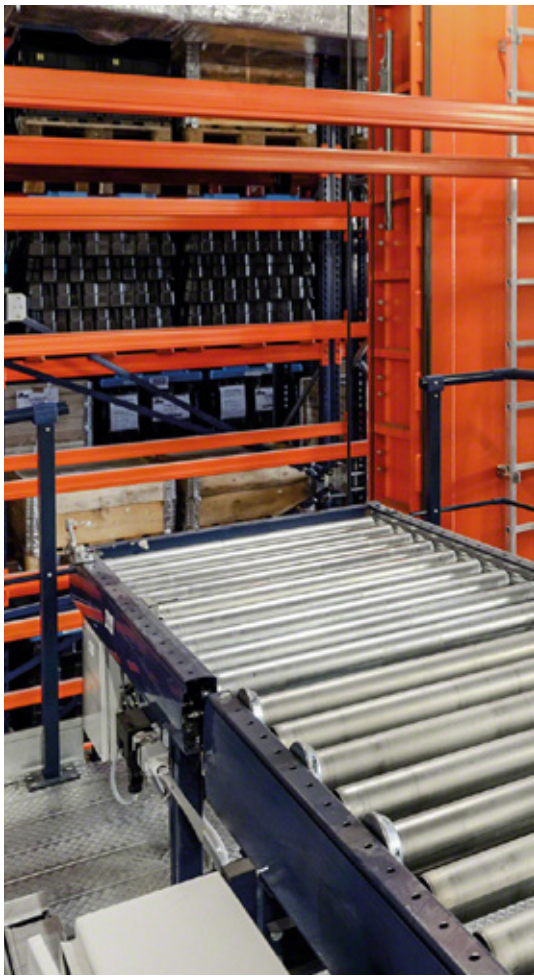
In fact, a conveyor circuit links the two installations together.

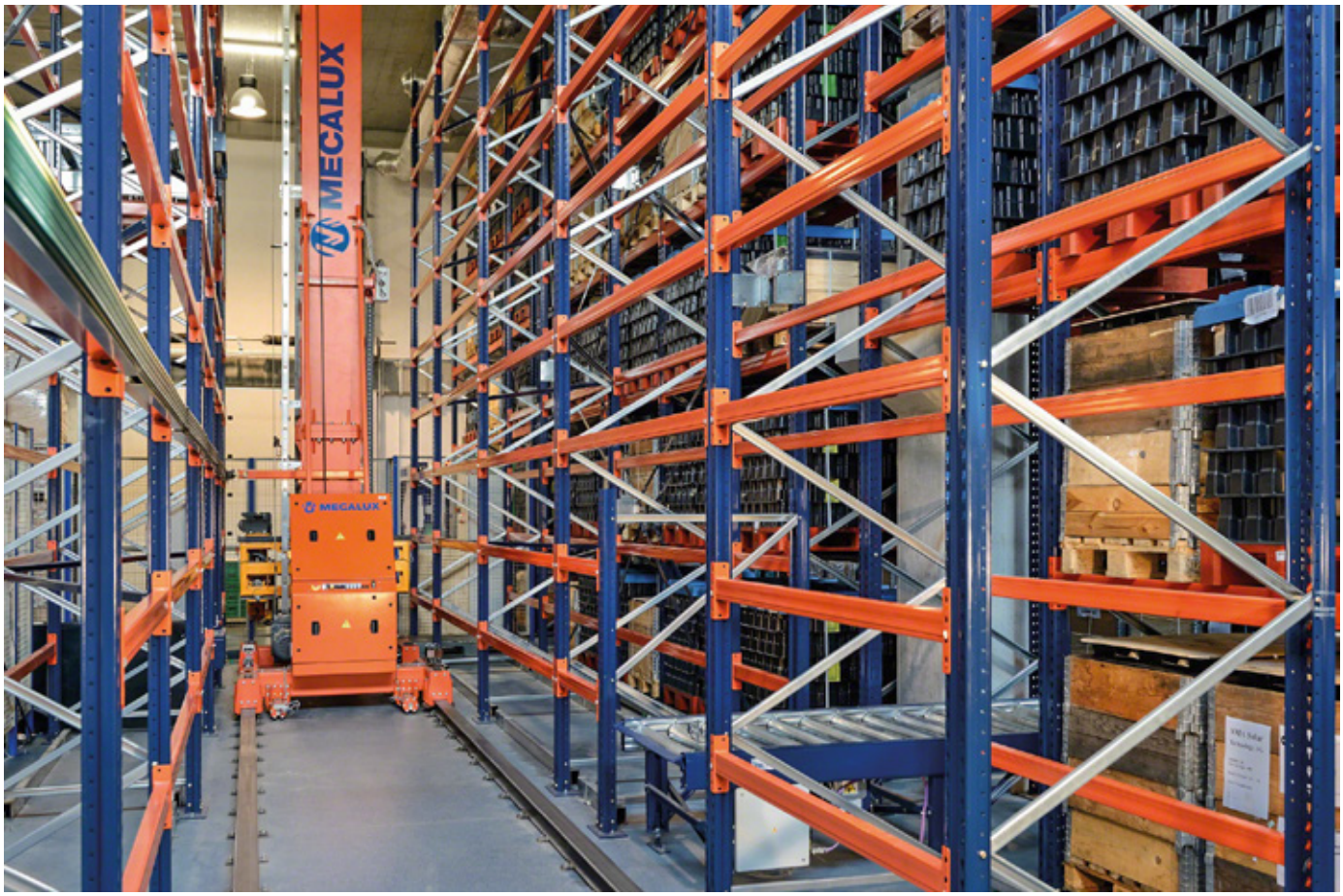
This warehouse's objective is to deal with increased production and make the company's foreseen growth a reality. To do so, it supplies production with the raw materials needed each day and, likewise, receives finished products ready to be shipped out.

The warehouse comprises three levels of conveyors (the ground floor plus two above). Thus, inputs and outputs of the different warehoused products can be better organised and interference avoided between the two operations. Each one of the levels is connected to a different production line.

Three aisles with single-depth racks were installed on each side that, in total, provide a 791-pallet capacity. They stand 10 m high, although, in one of the aisles racks only reach 7.7 m. The reason for the shorter bays is that the input and output conveyors are located right above.

Distributing the goods correctly strengthens the warehouse's productivity, thanks to the optimisation of handling equipment movements. Raw materials and finished products are deposited in two of these aisles, while a third hold semi-finished goods. Before entering, the semi-finished products are covered with a resin coating and stored for eight hours until the resin dries. Meanwhile, consumer goods are located at the front and the slower movers at the rear in each one of the aisles.





By being completely automatic, the warehouse operates non-stop 24 hours a day, entailing lower personnel costs, as well as higher product availability and productivity.

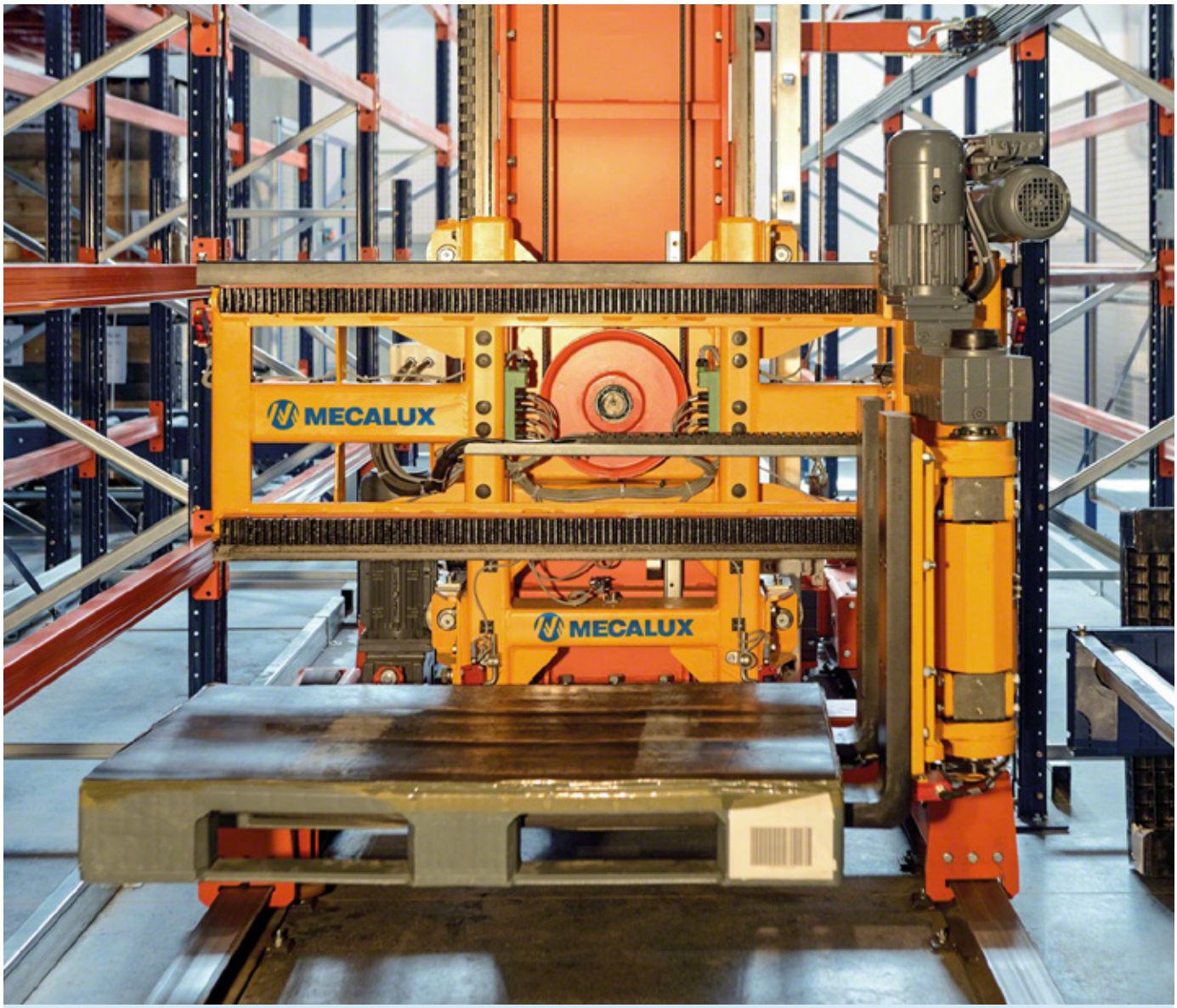
Automated solution

If anything characterises SMA Magnetics, it is how the company uses technology in all its processes and, as should be expected, this warehouse's operations are fully automated. A trilateral stacker crane in each aisle is tasked with inserting and extracting pallets from their slots.

Trilateral stacker cranes have a rotating head enabling them to pick-up and leave pallets in three positions: one frontal and two lateral. This equipment moves at travel speeds of 100 m/min.

The warehouse is also managed in an automatic fashion. Mecalux has implemented its Easy WMS, the warehouse management system (WMS) designed to assign locations to the goods while taking their features and demand into account.

The company uses this software to know stock levels in real-time and can offer customers efficient services, with on time, error-free deliveries.



Advantages for SMA Magnetics

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- **Well used space:** the warehouse optimises the full warehouse surface, with 10 m high racks that provide capacity for 791 pallets.
- **High performance:** SMA Magnetics' warehouse operations are fully automated, with trilateral stacker cranes responsible for the input and output of goods.
- **Connected to production:** the production centre and warehouse are connected through automatic conveyors, interchanging raw materials, finished and semi-finished products.

Technical data

Storage capacity	791 pallets
Pallet size	800 x 1,200 mm
Max. pallet weight	1,000 kg
Racking height	7.7 m and 10 m
Racking length	23.5 m