

Case study: Groupe Rand

A trend-setting picking design for Groupe Rand

Location: France



The Groupe Rand distribution center in Longueil Sainte Marie (France) stands out for its picking flexibility and agility. The installation supplied by Mecalux consists of an AS/RS for boxes with a storage capacity of more than 15,300 boxes, selective pallet racking and racks with put-to-light devices. These classify merchandise several orders at a time, without the usual errors stemming from manual management.



About Groupe Rand

This leading family business, who manufactures and sells jewelry and fashion accessories, is based in the heart of Paris (France).

Its popular private label products are distributed in more than 7,000 retail outlets located throughout 11 countries. The company

has more than 500 employees who strive to enlarge the business and develop new products, combining experience and tradition with innovation. Its pioneering vision and level of excellence have led Groupe Rand to be the leading French designer of costume jewelry, distributed in department stores and small stores.





The distribution center

The Groupe Rand distribution center occupies more than 1.48 acres and is mainly allocated to picking. To maximize operational throughput, merchandise is organized and classified according to the most appropriate storage system in terms of its dimensions and level of demand.

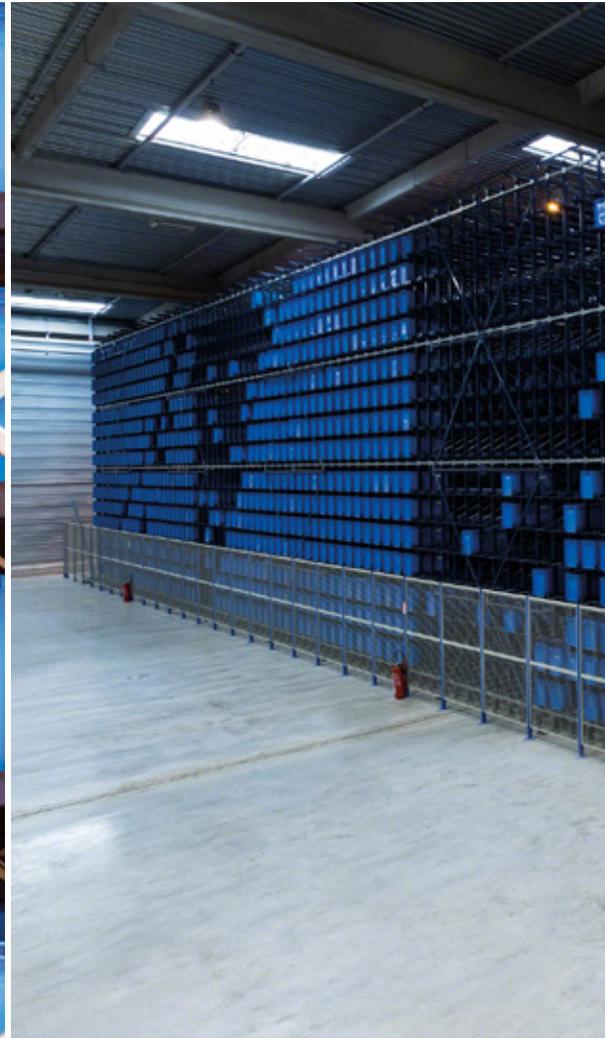
On one side of the installation are the selective pallet racks, where they house the large vol-

ume goods and consumer product reserves. This system gives direct access to the pallets, which provides great vitality when managing the merchandise and preparing orders.

On the lower levels, picking is done straight from the pallets. Mecalux has also supplied an AS/RS for boxes for smaller products and three picking stations. Directly opposite, there are five aisles with short shelving units on either side.

The picking shelves are highly accessible –as well as adaptable– for preparing orders. The number of operators varies according to demand





Miniload

The miniload AS/RS for boxes comprises three aisles with double-depth racks on both sides that measure 141' long, 29' high and have 15 levels.





Twin-mast miniload stacker cranes move along each aisle, tasked with managing the inputs and outputs of the goods. These machines operate at a travel speed of 820 ft/min and 295 ft/min when elevated.

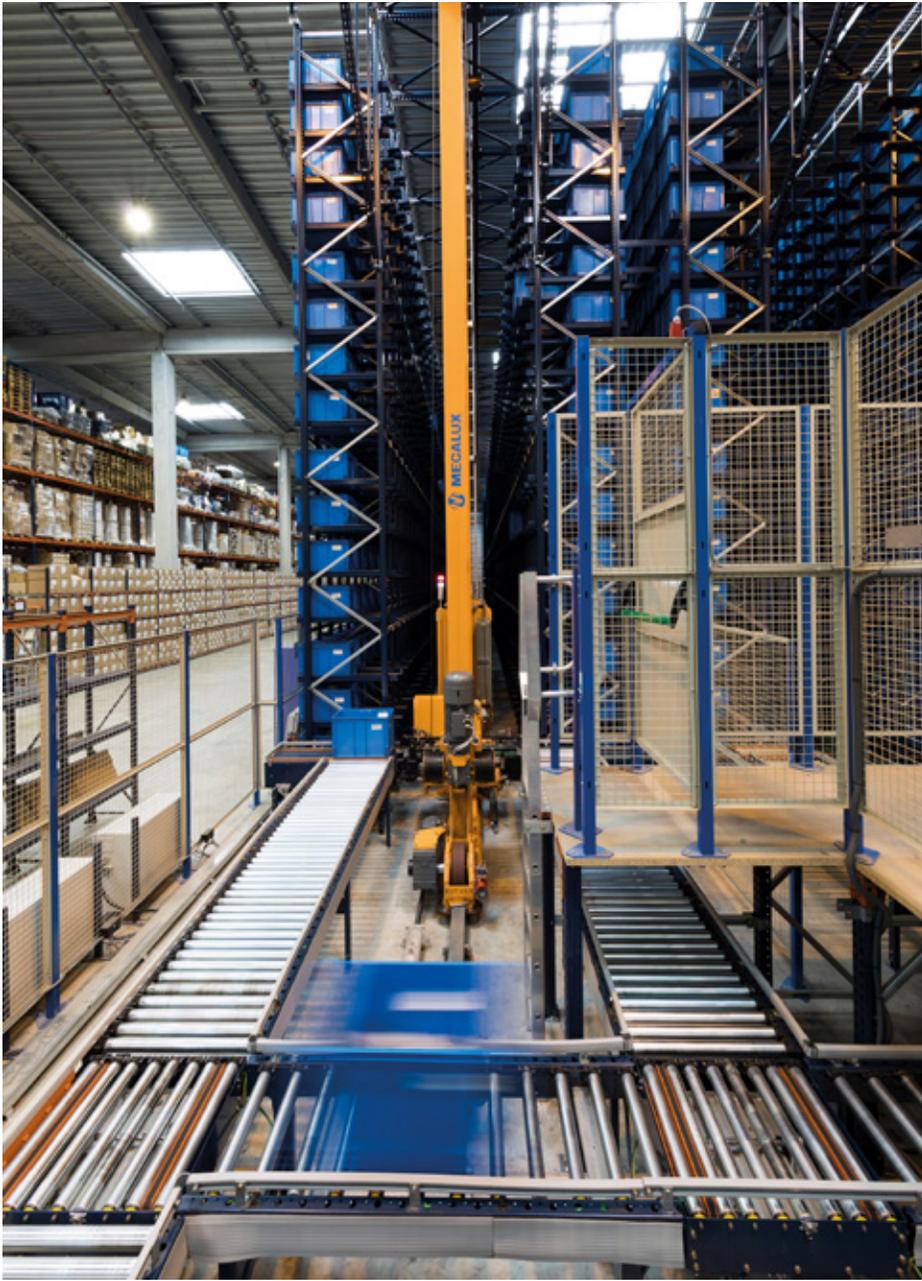
The racks offer a warehousing capacity of more than 15,300 boxes of 23" x 16", with a maximum unit weight of 110 lb

The miniload incorporates a double box extraction system in its cradle, able to handle two boxes at the same time and can even access the second position of each location. It has a fork and two moving joists able to pick the boxes up from either one side of the aisle or the other.

At the rear of the warehouse, space has been set up to perform maintenance work. The AS/RS stacker cranes are sent there when they require any sort of intervention or repair. This area is sectioned off via safety doors, which prevent unauthorized personnel from entering.

The warehouse is ready for future expansion. There is enough space to install another aisle, taking into account the needs and growth of Groupe Rand.

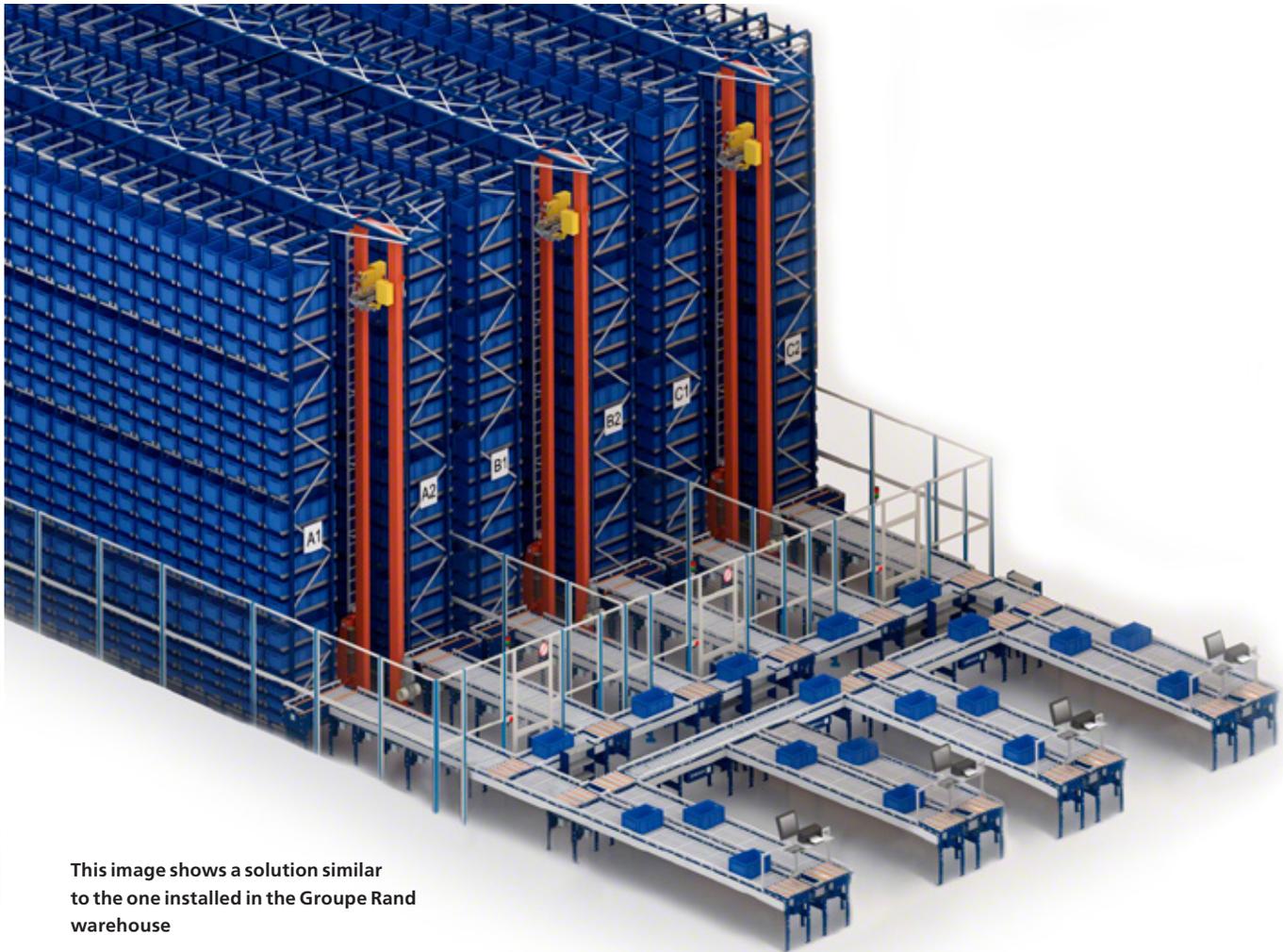




At the front of the automated warehouse are three picking stations where orders are prepared according to the product-to-person principle, in other words, the stacker cranes take the merchandise directly to the operators. To do this, they place the boxes on the conveyors, which automatically lead to the picking stations.

Although there are currently three picking stations, the installation of three more is planned, which will mean faster picking.





This image shows a solution similar to the one installed in the Groupe Rand warehouse



Very efficient picking

Once the conveyors have moved the boxes to the picking stations, operators consult a monitor to see what quantity of products must be removed and put them into hand-carts.

Operators go to the shelves behind them to distribute the products into the boxes that comprise each order. It is a grouped picking system: several orders are put together at the same time, in the same trip.



Each picking station is assigned a certain number of operators and locations, which can be modified (added or reduced) depending on the demand. Besides, this solution allows for optimized movements and avoids mixing orders.





Each location on the racks is equipped with a display that lights up and shows the number of required items. The operators walk the aisles, placing the products in the boxes signaled by the put-to-light devices, then press the indicator to confirm that they have performed the action.

Put-to-light monitors visually guide the operators via colors, which tell them where to deposit each item





Consolidation and dispatch area

Finished orders are removed from the racks and moved to the consolidation zone, consisting of prep tables with computer terminals, scales, sealing and labeling machines.

Here the contents of the boxes are verified and the packing, labeling and issuing of the necessary shipping documents take place.

In the dock area, operators distribute the boxes on different pallets, sorted by customers or shipping routes



Replenishment

On one side of the automated warehouse are two conveyors for replenishment work. One of them provides empty boxes so the operators can fill them with merchandise and, right next to this, the completed and addressed boxes are inserted into the automated warehouse on the other.



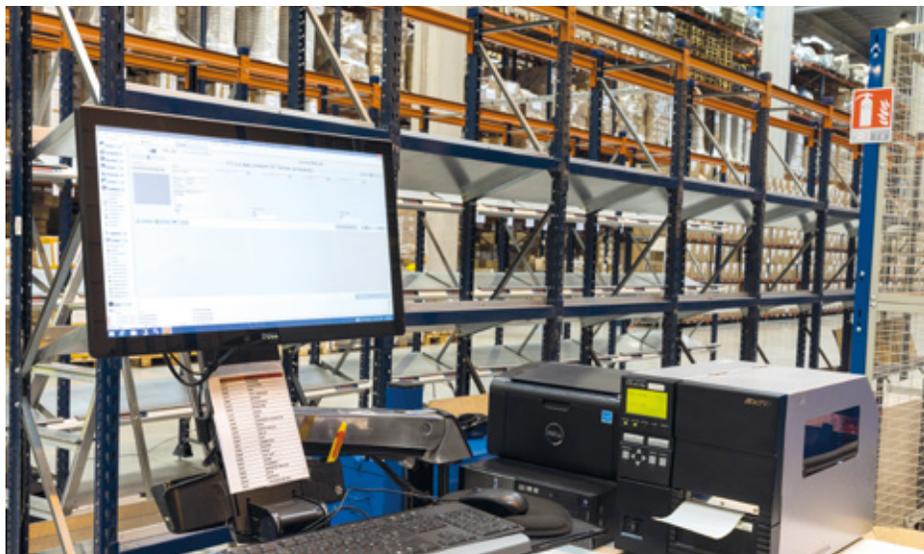
Easy WMS and Galileo

Mecalux's Easy WMS warehouse management system is a fundamental element that guarantees the correct picking of orders.

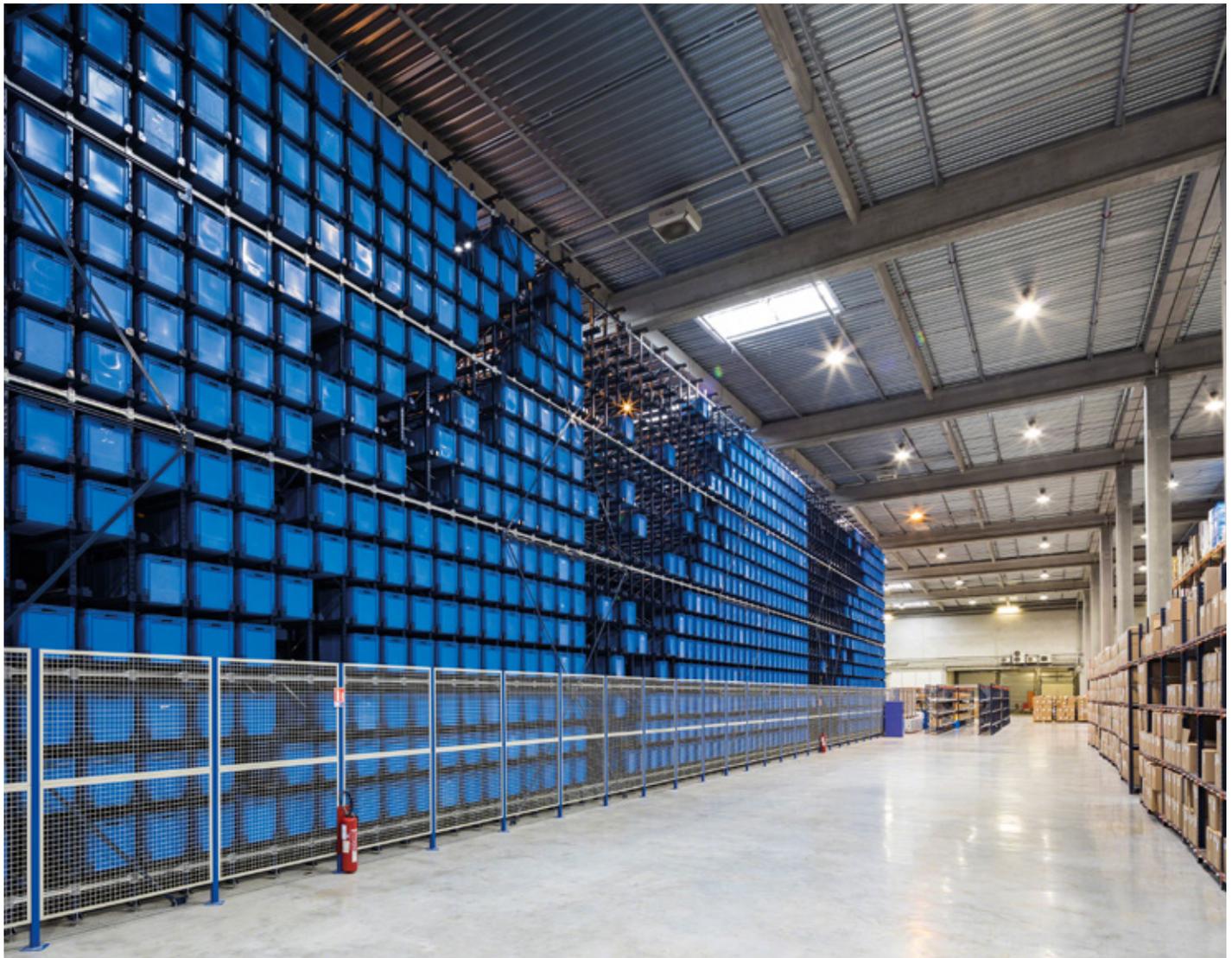
This is a very robust system, which performs different operations, including the appropriation of locations and box storage, goods extraction and order preparation. The software identifies the products, allocates an

order in each location and tells the operators where to place the merchandise. The installation throughput increases and errors are minimized by providing accurate sorting of products.

The Easy WMS of Mecalux is in permanent and bi-directional communication with the Groupe Rand ERP, transferring data for maximum productivity and picking yields.



The Galileo control module is responsible for directing the maneuvers the moving devices must perform in the installation, such as the miniload stacker cranes and conveyors



Advantages for Groupe Rand

- **A fully used surface:** on a 7,534 ft² area, Groupe Rand's automated miniload warehouse tops out storage capacity with more than 15,300 boxes.
- **Efficient picking:** the high degree of automation and the optimal organization of the warehouse, as well as the flexibility they provide to picking stations, let orders be prepared very quickly and accurately.
- **Vision for the future:** the installation has future enlargements planned, taking into account the increase in sales and the company's expansion.



Technical data

Storage capacity	15,312 boxes
Box size	23" x 16"
Max. weight per box	110 lb
Racking height	29'
Aisle length	141'

