

Eroski, the Spanish grocery giant, has become the first supermarket chain in Spain to automate its order picking of fresh produce. The result is an award-winning distribution center in Madrid that has doubled the productivity of its available space.

# Fresh developments

With over 2,300 stores – including both branded and franchised hypermarkets, supermarkets, urban convenience stores, gas stations, cash and carry centers, sports stores, perfume shops and travel agencies – plus a growing e-commerce operation, Eroski is a major player in the Spanish retail market. Operating on a co-operative model, the group generates revenues of over EUR 8 billion and employs over 40,000 people. Naturally, the distribution servicing this network is key to Eroski's continued success.

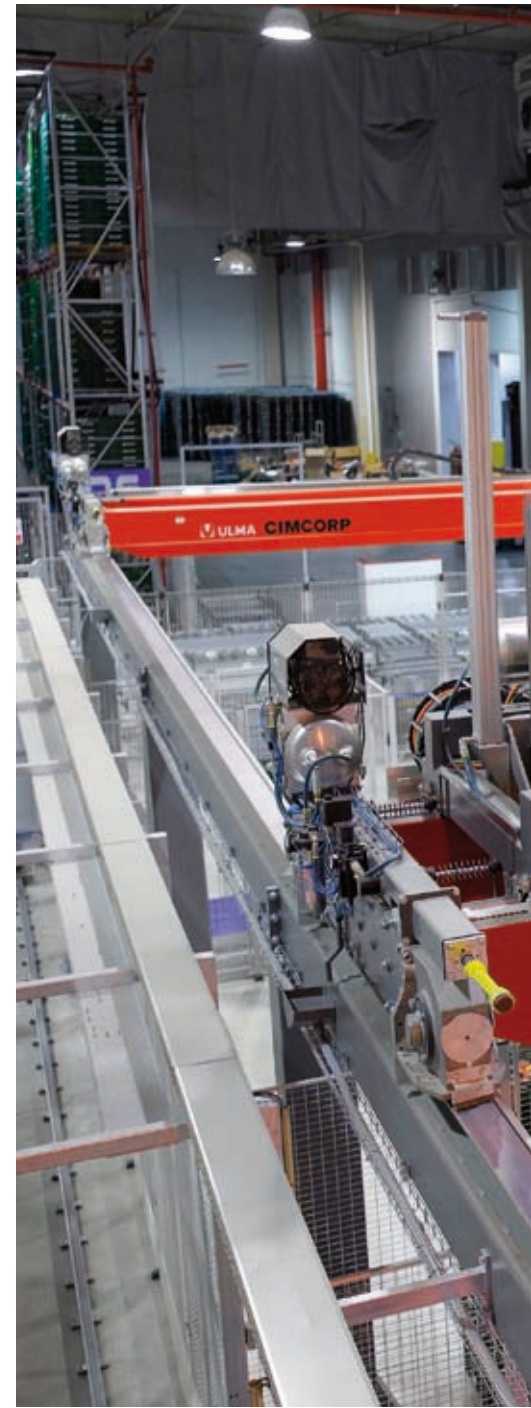
Back in 2006 the company restructured its fresh produce distribution, centralizing its product flows in a 28,000m<sup>2</sup> consolidation

facility in Madrid, rather than ten regional distribution centers. This had the effect of reducing transport kilometers by 30% and product storage times from 1.2 to 0.3 days. Now Eroski has taken another leap in its logistics by automating the order picking of its fresh produce lines.

## Three key objectives

“The main objective driving this project was that we wanted to minimize our manual handling,” explains **Imanol Alberdi**, Logistics Director for Eroski's Distribution Centers. “The negative ergonomic impact of such handling is something we want to avoid. In addition, we sought a solution that would allow flexibility in our distribution and, of course, that would reduce our handling costs. The system we have achieved,” continues Mr Alberdi, “is a perfect combination of all three of these elements, so we are delighted with the result.”

Previously, sorting of goods arriving at the facility, buffer storage of produce and picking of orders were all carried out manually, with operators using ride-on pallet trucks and hand-held radio frequency terminals. With large volumes of crates being marshaled on pallets around the warehouse floor, the system was inefficient in terms of both space and labor. The new, automated system – installed last year through an innovative partnership of



Eroski, Euro Pool System and Ulma Handling Systems – has completely transformed the Madrid facility. As Europe's largest logistics service provider for returnable packaging, Euro Pool System engineered robust, foldable, food-grade crates that were suitable for automated handling. Logistics integrator, Ulma Handling Systems, designed the automated handling solution, appointing Cimcorp to supply the robotic order picking system.

## Shuttle car system

Now, a shuttle car system sorts the pallets of produce, automatically directing them to the buffer stock, the picking area or dispatch positions. Traveling at an impressive 200 meters



*Automation of the order picking has reduced lead times and increased shelf lives.*

per minute, the shuttle cars achieve a throughput of 336 pallets per hour. The shuttles – which operate at a temperature between 4 and 6°C, although they could work down to -30°C – can be maintained or repaired without the need to stop the system, and the number of cars can be adapted to suit throughput needs. The buffer stock is handled by a high-bay store served by three automatic stacker cranes. With a capacity of 800 pallets, the store sequences the supply of pallets to the order picking area and dispatch, maintaining strict inventory control. As well as optimizing the use of available space, the store is environmentally friendly, using regeneration technology to minimize power consumption.

### **Robotic picking system**

Key to minimizing manual handling at the site is the automatic order picking system, which has a handling capacity of 150,000 crates per day and is engineered for cold stores. Cimcorp's MultiPick solution features two robots operating on an overhead gantry, enabling them to cover a large work area. Whereas 65% of goods in the Madrid facility are shipped as full loads, being transported by the shuttle cars directly to dispatch, some 35% are transferred to the regional distribution centers as mixed loads. Pallets of produce required for these mixed loads are delivered to the order picking area by the shuttle cars, where the robots retrieve the stacks

of crates and distribute them among specific customer locations directly on the floor. When a pallet load for a particular destination is ready, the robot deposits these crates on the outfeed conveyor, ready for collection by a shuttle car and transfer to dispatch.

### **Ergonomics and labor savings**

Automation of the order picking process has reduced lead times, a critical factor for products with limited shelf lives and stores requiring frequent deliveries. In addition, by operating on an overhead gantry, the MultiPick solution brings the benefit of a clear floor and therefore easy cleaning of the entire picking area,

an essential hygiene requirement in food distribution. Other advantages include improved product quality through gentle, robotic handling and error-free orders through automated picking. Most important, however, has been the advantage of virtually eliminating manual handling. “The automatic picking system has replaced 300 tons of manual handling each day,” says Imanol Alberdi, “and the work of some 30 order picking staff is now completed by the automated equipment, supervised by just five operators.”

### Increased flexibility

Operations at the distribution center can also be adapted more easily to the demands of the various shops it serves. “Our warehouses prepare almost a million packages a day for over 1,200 stores in a constant struggle against time,” explains Mr Alberdi. “We ensure a guaranteed service and have to balance the needs of our shops with the handling risks to our warehouse staff. This is where automation brings added versatility. Our project in Madrid has acted as a pilot for a series of automated installations we are planning at our regional distribution centers, with the aim of eliminating the manual handling of fresh produce, as well as dry foods.”

### Lower costs

Along with minimizing manual handling and improving flexibility, cost reduction was another key objective for Eroski. Automation has secured not only ergonomic benefits but also labor savings. “After the first few months of adjustments,” says Mr Alberdi, “we can say that we will achieve savings of over 20% with this system, compared to the costs of our traditional methods.”

### Logistics award

The impressive results of the automation have not gone unnoticed. The project scooped the award for ‘Best Logistics Project’ from the Spanish logistics organization, Club de la Logística. The accolade was presented to Eroski, Euro Pool and Ulma in recognition of the efficiency of the automatic order picking – the key component of which is Cimcorp’s MultiPick robotic system – and the close collaboration between the three companies to realize this pioneering solution. “We were delighted to win this award,” admits Imanol Alberdi.

“It’s an important external recognition of the work carried out and is very satisfying for the teams involved.” ■



## Meeting global traceability standards

Cimcorp’s MultiPick system tracks product movement from warehouse to consumer without the additional investment required for barcode or RFID tracking

As new track and trace legislation moves into the global food supply chain, manufacturers and distributors need traceability solutions to meet compliance challenges. Material handling automation is the key to effectively managing the workload and accuracy requirements. Cimcorp’s MultiPick fully automated robotic gantry with its advanced warehouse control system (WCS) ensures crate-level product traceability, from production all the way to the consumer.

If there is a product recall, it is easy to trace shipments back to the source by accessing MultiPick’s securely stored tracking data tables. Here’s how it works – the MultiPick WCS integrates seamlessly with the WMS, providing real-time reporting on task status including goods receiving, buffering, picking, replenishment, order consolidation, palletizing, loading and dispatch. The Cimcorp order fulfillment software handles order management, and maintains all vital tracking data, including product and batch numbers, with total accuracy.

MultiPick applications include pre-baked and fresh-baked wholesale bakeries, snack food operations, candy, manufacturing and ingredients distribution, and dairy operations. ■

**For more information on Cimcorp’s MultiPick please contact [info@cimcorp.com](mailto:info@cimcorp.com)**