CASE STUDY

Automated solution keeps Camper one step ahead
In the foothills of the Pyrenees mountain range, Catalonia is a land steeped in tradition, passion and heritage. Anyone who’s enjoyed a sparkling glass of Cava, or marvelled at any of Salvador Dalí’s myriad masterpieces, can testify to the wealth of culture and talent that exudes from this unique region of Spain.

One company with its own proud history of innovation is Camper, the footwear designer, manufacturer and retailer, which was founded in 1975. Its pedigree goes even back further to 1877, when cobbler Antonio Fluxà investigated the latest methods of industrial manufacturing. By recruiting the best leather craftsmen in Mallorca, a style institution was subsequently born.

Now a global brand, Camper supplies over 400 individual shops, franchises, department stores and independent retailers across 40 countries. The company’s central European distribution centre (DC) was established near Barcelona in September 2003, primarily to reduce the cost of transporting goods from Majorca. It is represented around the world by other DCs in Russia and the USA.
Staying fit for purpose
From the beginning of operations in 2003, Camper’s DC in Barcelona was a fully manual operation. However, this process was labor intensive, and akin to ‘supermarket’ picking, in which operators selected goods from shelves and replenished them in a time-consuming manner. Camper also had to keep a high volume of stock in a third-party warehouse, which resulted in complex procedures and restricted growth.

The partnership between Camper and Vanderlande began in 2010, when an order was placed for a tailor-made, single-sided POSISORTER. This was modified to ensure a smooth handling of cartons. Successfully installed in 2011, it has been designed in such a way that sees the shoes slide across carriers to gently push product cartons to the 39 output chutes. These were engineered to guarantee hassle-free consolidation and shipment. There is also an additional ‘no-read’ chute for added functionality.

However, as Camper continued to look towards the future, it needed more than a state-of-the-art sorter. The company still had to cope with the many different sizes of cartons (up to 20 varieties) from the thousands of locations within the DC, and from its factory in China. In addition, Camper had to improve the handling of loose-lid boxes when processing replenishment orders.

Returns also had to be accounted for, which meant it required a flexible system that integrated within the complete solution. The ideal counterpart to the POSISORTER was Vanderlande’s QUICKSTORE miniload (v 3.2), with an in-built BARRACUDA load-handling device. The combined system was handed over in December 2014, with Vanderlande overseeing the entire integration.
“Our distribution center here in Barcelona is crucial to our operations, because it is the central hub for all our logistics,” says Camper’s Head of Logistics, Juan José Ojeda. “Beforehand, our procedures were complex and we had to handle up to 20 different sizes of cartons. Space was also tight. We needed to reduce costs and house all our processes under one roof. In addition, we also wanted maximum flexibility, and to increase productivity levels.

“A number of tenders were issued for the project, but we were extremely happy for Vanderlande to carry out the work following the success of the POSISORTER installation. This helped us to increase our productivity by 72%.”

Automation was the key
Camper’s objective was to have a system that improved productivity and could cope with peak system demand. To help overcome these business challenges, Vanderlande suggested the QUICKSTORE automated storage and retrieval system (AS/RS). Comprising of six double-deep aisles, this solution efficiently stores and collects cartons from over 60,000 racking locations.

The proposed solution was ideal for Camper, because QUICKSTORE offers high-storage density (up to a 60% reduction in required floor space), while guaranteeing high performance. If necessary, it can perform as many as 250 individual movements per hour to optimise throughput.

Within the QUICKSTORE, Vanderlande implemented a number of single-box BARRACUDA units, capable of storing and retrieving multi-deep products (of any size) within the racking. Positioned on shuttles, the individual units are capable of moving at speeds of up to four metres per second.

The unique function of the BARRACUDA is the moveable panels, which adjust to grab cartons of all dimensions in a safe way. A retractable floor reaches into the racking, and two metallic ‘fingers’ flip down to grip the required carton. It is then pulled into the BARRACUDA unit over a small, twin-belt conveyor.

Three goods-to-person, ergonomic workstations were also delivered to Camper as part of the total solution. An overflow chute that connects the QUICKSTORE to a minor manual picking area was also recommended. In addition, Vanderlande was tasked with integrating ERP/SAP software from an external supplier, as well as supplying a control system of its own design.

Due to the seasonal nature of the footwear industry, installation work needed to be planned at a time when demand was at its lowest in the warehouse. Moreover, all work was to be conducted while the rest of the site remained fully operational. Expert planning was vital to Camper, as it intended to gather all goods at this central hub as efficiently as possible.
Accurate, safe and straightforward
The unique combination of POSISORTER, QUICKSTORE and BARRACUDA has had a positive effect on Camper’s operations. Indeed, the confidence that Camper invested in Vanderlande owed itself to the legacy of the POSISORTER project.

“Our excellent relationship has remained from the first time we did business together,” continues Juan José. “In reality, Vanderlande offered the most optimal solution for our needs. They also have extensive knowledge about preventive and corrective maintenance. Our operators are now able to process around 300 cartons per person, per hour, or the equivalent of 6,000 pairs per hour.”

Vanderlande issued Camper with daily updates during installation, and ensured a representative was present on site every day. A maintenance engineer from Camper was also introduced at key stages throughout the project to learn about the system. This has helped the company to maintain the equipment more effectively.

“We are highly satisfied with the way the system is performing,” says Juan José. “The QUICKSTORE has improved our productivity levels by a further 46% and we have also increased our storage density by 33%. In addition, our colleagues now work in a safer, more ergonomic environment. I really value our relationship with Vanderlande and am confident they will be there for the entire lifetime of the solution.”

Coming full circle
At Camper’s DC, 30 people are employed covering two shift patterns from 6am to 8pm. The morning shift is reserved for automated storage, and the afternoon for manual procedures. In high season, this can stretch up to 24 hours over three shifts. Irrespective of a carton’s final destination within the DC, the process always begins at the inbound goods area, where two to three delivery trucks are received per day.

A telescopic conveyor covers the main docking doors, and offers flexibility when receiving goods. The extendable can reach all the way inside the trucks, which always deliver cartons (filled with shoe boxes) loosely. These are then scanned and diverted to the QUICKSTORE, or the manual storage area, depending on a range of filters, such as width and weight. It is important that correct information about the incoming cartons is relayed to the software controlling the BARRACUDA.

The QUICKSTORE is reserved for products that are classed as fast movers (the highest-selling products). Cartons categorised as being too large, ‘slow movers’ or ‘uglies’ (non-conveyable) are sent instead to the manual storage zone. Boxes in the latter category are immediately stacked and taken on roll cages by forklift from the inbound area to the appropriate position in the manual storage racking.
After the cartons have been diverted, an additional conveyor takes the 'fast movers' one by one to be received by the QUICKSTORE. The BARRACUDA units then take the cartons from the conveyor to the desired storage location. It is at this point that the retrieval operation begins. The three goods-to-person picking workstations are divided into two lanes: a roller conveyor brings the cartons to the operator; and a belt conveyor returns any remaining products to the storage system.

Scanners immediately identify the carton as it reaches the operator, who subsequently opens it. Three roll cages are positioned behind the picker, and a screen at the side of the workstation instructs them where to position individual shoe boxes (i.e., to the left, centre, or the right). The operator then presses the appropriate area on the screen to indicate that the procedure has been completed.

If a carton has already arrived at the DC 'complete' (i.e., not requiring operator intervention), it is automatically transported via the off chute to manual storage. From the goods-to-person area, the roll cages are transferred to the section of the DC that houses the POSISORTER.

It is here that the roll cages are broken down into individual shoe boxes and added to a conveyor belt, which runs past the POSISORTER's shoe diverts. These push the shoe boxes down the required chute at the correct time. Each chute represents a final destination, for example, a particular shop or retailer. At the bottom of each chute, operators fill empty cartons with shoe boxes. Once full, the finished carton is pushed on the conveyor, which runs through to the shipping area.