

La Caravelle

Brussels, Belgium

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ENHANCED SUPPLY CHAIN

The new system means La Caravelle can now dispatch orders on the same day as they are received.

CONSULTANCY APPROACH

SDI's unique consultancy approach has resulted in a solution that is future-proof, being able to meet the future outputs needed, and other precise needs of the customer.



THE CHALLENGE

La Caravelle, based in Brussels, distributes books around 1,500 outlets in the Benelux countries, and every day processes up to 600 orders. The company was looking for a materials handling solution at its distribution centre that would enable the dispatch of orders on the same day as they are received.

THE SOLUTION

The SDI system takes books picked from the bulk store in an automatic sorter where they are separated into orders for individual stores. Cartons of sorted books then pass through automatic labelling and sealing machines onto a robotic palletiser ready for onward delivery, with the capacity to handle around 18,000 individual books each day.

SDIPromech, SDI's sister company based in Holland, developed a bespoke tilting tray system to provide a particularly 'soft' action, even when the sorter is operating at full speed, so the books slide gently from their trays down an angled chute onto an inclined roller bed and then into the store cartons. This slows the books down as they are released from the sorter's trays, and eliminates any risk of damage, a major condition that La Caravelle imposed upon SDI when the

system was being designed.

The system has the facility to take assembled orders – particularly for large quantities of single titles, best sellers, for example – direct from the bulk store to the scanner and labeller, by-passing the sorter. The installation also includes an automatic carton erector that feeds empty boxes to the drop stations and a spur conveyor that returns into the system the cartons in which the books arrive at the sorter from the bulk store.

La Caravelle is receiving up to 600 orders a day (400 repeat orders and 200 new titles). Orders are received up to 12.30, at which time the bulk picking commences. At 15.00 the picked books are sent to the sorter, and 17.30 the orders are dispatched.

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THE SYSTEM

As orders are received at the distribution centre, the required titles are picked from the bulk store, comprising shelving, a mezzanine floor and very narrow aisle racking, and placed into cartons that travel along powered conveyors to the sorter's three induction stations. The books are taken from their cartons where the publishers' barcodes are read by in-line scanners as they pass onto the sorter carousel carried on trays. Beneath the carousel are 111-drop stations that La Caravelle assigns to individual stores, with a carton placed at each drop station.

The system's software protocol, linking the facility's order processing platform and triggered as the items are scanned at the induct points, automatically monitors the progress of each tray-set round the carousel. As the tray passes over the appropriate drop zone, the software activates solenoids to tilt the trays, releasing the books into the cartons.

Lights above each drop station indicate when individual store orders have been completed, and a line-side PC carries full 'at-a-glance' information on the status of the whole sortation process.

As store orders are completed, a bar-coded packing list with invoice is manually placed on top of the books. The cartons then leave the conveyor, which runs round beneath the sorter carousel, and are carried on overhead gantry to an in-line scanning station. The scanner reads the bar-coded packing list and

automatically generates an address label, which is applied by an in-line printer further along the conveyor.

The cartons then pass to an automatic closing machine and onto a shrink wrapper and robotic palletiser. All goods leave the distribution centre on pallets, to be taken down to distribution satellites for final delivery.

ABOUT SDI GROUP

SDI group is an innovative provider of systems and solutions to the retail, wholesale, fulfilment and e-commerce industries for all aspects of distribution centre materials handling.

As both consultants and system integrators, the company provides clients with a total logistics solution package, which includes materials handling consulting, as well as design, engineering, fabrication, installation and integration services.



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