



Bertus

Capelle aan den IJssel, Near Rotterdam, Holland

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PRODUCT DIVERSITY

The new system has increased the range and types of products processed.

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.

AUTOMATED SOLUTION

A new automated system, which decreases the amount of sortation runs per day with the help of 292 more drop zones, making it more efficient.



THE CHALLENGE

Bertus is one of Benelux's leading suppliers of rare and obscure music titles, including back catalogues and world music, as well as titles on vinyl, which is still in demand from the club DJ community. The company also handles distribution of some of the mainstream record labels that have outsourced their operations to reduce costs. Bertus supplies to mainly specialist record shops throughout Benelux, with around 300 regular customers.

In 2001, SDI supplied Bertus with a simple custom-built sortation system that had 30 drop zones each allocated to specific stores. As Bertus took on more customers, the manually loaded sorter had to run several times a day, with the store allocations changing for each run. This was slow and cumbersome, and was impacting on the efficiency of the order assembly operation – incapable of keeping pace with the increasing demand driven by growth in sales.

THE SOLUTION

With a new SDI sorter Bertus has adapted the way orders are assembled. On receipt of orders from the various customers, Bertus's warehouse management system (WMS) generates picking lists identifying which titles need to be taken from stock. At this stage the products are not assembled according to customer; they are instead batched by title and shape (single CD, Double CD, DVD). They are stacked in specially made pigeon-hole units on trolleys, which are wheeled up to the SDI sorter.

The core of the system is the flat sorter, in a large (46 metres long) carousel format, which has been modified for the Bertus application. A conveyor carries flat trays, specially designed to carry CDs and DVDs round the carousel, with each tray carrying one

item. There are around 322 drop zones, more than enough to accommodate all of Bertus's existing regular customers, so once the sortation system is loaded, only one sortation run is now required each day.

THE SYSTEM

Products are loaded onto the system via a 'de-stacker' from where they travel by an inclined flight conveyor into the trays to the overhead induction station on the carousel.

The custom-designed de-stacker is a particular innovation. Previously, CDs and DVDs had to be fed individually into the system. Batches of product are now taken from the pigeon-hole trolleys and loaded in to the de-stacker. The de-stacker can take up to 75 items at once, and can be adjusted to take different types of product – single or double CDs, CDs in plastic or cardboard sleeves, or DVDs. The De-stacker feeds items onto the flight conveyor, where they are automatically spaced and synchronised with the orientation of the trays on the carousel.

At the induction station at the top of the flight conveyor, the products' bar codes are read by an in-line scanner. Bar code labels on the CDs are notoriously small and difficult to read, so to minimise interference with the cover design, SDI had to fine-tune the scanning process to ensure guaranteed first-time accuracy.

Information is scanned from the barcodes and fed into Bertus' WMS, so it knows which items are in the system and in which trays. The WMS then issues signals to the sorter which, by reading the barcode on each CD with in-line scanners installed round the system, releases the required items into the correct store-specific drop zones.

The base flaps on the trays carrying the CDs are activated by solenoid trip switches, which receive pulses from the WMS to open the required drop zone. The trays open with the flow of the conveyor so the CDs slide out gently – to prevent damaging the cases – down chutes into store boxes that are mounted on rollers.

When the store boxes are full they are rolled off, and items are transferred for consolidation, packaging and dispatch. Because of the increased number of drop zones the sorter can now run uninterrupted, topped up with consignments loaded into the de-stacker, until the entire store orders have been completed.

The system automatically detects when a store box at a drop zone is full, and will not release any more items into it. When the box is full, a light on the drop station illuminates, and the drop zone number flashes up on an LCD display panel above the sorter.

“Other companies simply wanted to sell us standard kit, SDI was prepared to think outside the box to come up with creative solutions.”

Frank Schippers - Bertus

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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