



Bertram Books

Norwich UK

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- SYSTEM INNOVATION
- AUTOMATED SOLUTION
- ENHANCED SUPPLY CHAIN
- CONSULTANCY APPROACH



Key Highlights

The SDI Solutions for Bertram Books

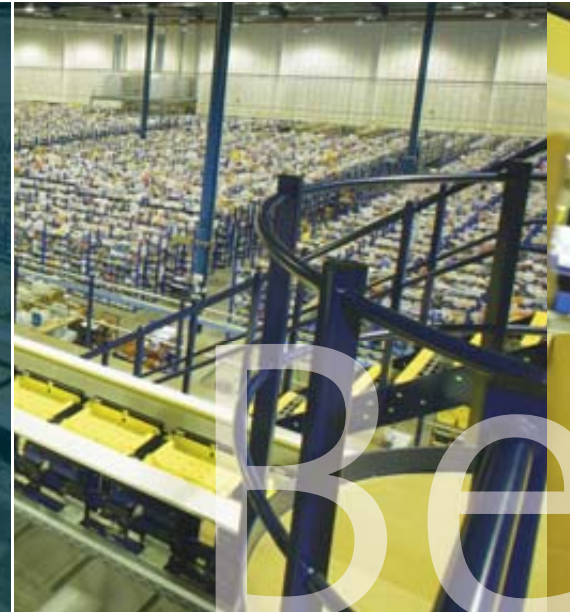
Bertram Books

SYSTEM INNOVATION - A high-capacity 'bomb bay' sortation system unique to the book industry.

AUTOMATED SOLUTION - an automated system that can process up to 2,000 orders comprising around 50,000 individual books, each day.

ENHANCED SUPPLY CHAIN - orders received before 6.00pm can now be sorted and despatched, to be ready on customers' shelves the next day.

CONSULTANCY APPROACH - SDI's unique consultancy approach has resulted in a solution that is future-proof and meets the precise needs of the customer.



THE CHALLENGE

Bertram Books, one of the UK's top book wholesalers, required a high-capacity, automated sortation system at its new 12,100 sq m head office and distribution centre complex in Norwich to keep pace with sustained growth and streamline its service to customers. The system was needed to process orders as well as sorting incoming consignments and handling returns. It would replace a laborious, time-consuming and potentially inefficient manual handling operation.

Bertram Books also provides a host of support services. The Norwich warehouse holds more than 1.5 million books, with around 3,000 new titles being added to the range each month. In addition, the company claims to be able to source any one of the three million-plus books currently in print. Bertam's assembled orders by hand, customer by customer, so staff had to walk round the bulk warehouse to pick books one by one,

with the distances travelled each week equated to walking to Moscow and back.

The picking process was both slow and extremely labour intensive, and at peak times such as Christmas the company was heavily dependent on temporary staff. With the continuing expansion of its customer base and the introduction of new support services this system was becoming inefficient, error-prone and costly.

THE SOLUTION

SDI developed a £1.4 million 'bomb bay' sortation system, unique to the book industry, enabling Bertram to process up to 2,000 orders comprising around 50,000 individual books, each day. With this new system titles are picked from stock in batches and automatically assembled into individual customer orders on the sorter. Orders received before 6.00pm can now be sorted and despatched, to be ready on customers' shelves the next day.

SDI secured the contract to design and install the solution on the strength of system functionality and flexibility, overall service and price. The company was the only one during the competitive tender process that could provide a full project management service, handling all the work in house – not just the sorter and its software but all the infrastructure such as the mezzanine, the sprinkler systems, all the electrical work and the associated health and safety issues.

THE SYSTEM

The new sortation system offers high capacity along with an enormous degree of flexibility. With an orthodox bomb bay system items are sorted by dropping through base flaps on trays carried round a rotating horizontal carousel. What makes the Bertrams' system unique is its double, dual action, trays. The 800 x 400 mm trays are split into two sections which can operate together or independently to drop items into



customer-specific tote boxes beneath the carousel. Small books are loaded into either of the tray sections whilst larger volumes occupy both sections.

The carousel has been built onto a 4.9 metre-high mezzanine to avoid encroaching upon valuable floor space in the warehouse. Arranged around the rim of the carousel are 200 drop zones that can be assigned to specific individual customers for each sortation wave.

The tote boxes are positioned beneath the drop zones. Orders arrive daily at Norwich by phone, fax or EDI. The day's picking lists are assembled and all the required titles, for all the customer orders, are collated into batches - much quicker and more efficient than picking individual titles for each customer. The batches of books are taken, in totes on trolleys, to the sorter.

The totes are then transferred by powered spiral conveyors to induct stations, where they are placed into the sorter's dual-action trays. To give maximum flexibility to the system there

are five induct stations located around the carousel. The books are placed in the trays with their existing ISBN bar codes (which Bertrams' uses for all inventory control) facing upwards. Scanners above the rotating carousel read the books' bar codes and this information is fed into the system control software, developed by SDI's sister company RTI, which interfaces with Bertrams' order processing system.

The sortation system software automatically counts the progress of each tray-set round the carousel and as the tray passes over the appropriate customer-specific drop zone (identified via Bertrams' order processing system) solenoids are activated to open the bomb-bay flaps in the tray, either singly or together depending on the book or books in the tray, to release the items into the tote box below.

Outfeed conveyors then take the customer tote boxes to the despatch area for delivery. With its dual bomb-bay arrangement the SDI system has double

the capacity of a comparable 'orthodox' sorter, and is capable of activating around 28,000 trays per hour.

The sortation system will also be used to handle incoming stock - around 70,000 new books arrive at the Norwich warehouse each day. The books are loaded onto the sorter, which separates them for put away in the appropriate zones in the bulk storage areas. Returns are also handled on the system, with the books sorted for sending back to the publishers. In this instance the system is instructed to sort by publisher, rather than by individual title, again with reference to the books' ISBN codes.

The speed and accuracy of these sortation processes, which again replace cumbersome manual operations, will bring significant improvements and economy to the stocking and returns processes.



“People are arguably our biggest expense. The SDI system brings much more structure and discipline, and will reduce troublesome bottlenecks at both the goods-in and order assembly ends of the operations. The system will reduce unit costs significantly.”

Terry Reilly - Bertram Books, Chief Executive

ABOUT BERTRAM BOOKS

Bertram Books, a leading book wholesaler in the UK, supplies around 2,000 customers in the retail book business on five continents, as well as distributing books for smaller publishers and operating call centres for Book Clubs run by major national newspapers.

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 systems 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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