



## Right Shoes, Right Now

For DSW's distribution center, an automatic sorting system is a shoe-in

by WILLIAM F. KENDY

One of the most basic tenets of successful retailing is that if you don't have the products that shoppers want when they want them, you are losing sales and probably won't be in business long.

While inventory management isn't the most glamorous part of retailing, inventory control and an efficient and timely distribution system all contribute to increased velocity of merchandise, which is what makes stores profitable. That attention to material handling, sorting and on-time inventory delivery is especially important for multi-store companies and chains.

With more than 400 retail outlets in the United States, Designer Shoe Warehouse has evolved from a close-out operation to an in-season fashion retailer. Up to 70 percent of business comes from women's fashion, though the market is "continuously changing," says DSW Director of Distribution Steve Reade. "We haven't forgotten our roots and still have a clearance

section in the back of every store and it is very popular, but in the past years we have grown into a lot more."

### FLEXIBILITY FOR THE FUTURE

Responding to store and market demands, DSW decided to restructure its store inventory fulfillment operation and move away from a seasonal push strategy to an in-season replenishment system by shoe size. That change in models necessitated a re-evaluation of how merchandise was routed and handled in the distribution center located near company headquarters in Columbus, Ohio.

Automation and a sophisticated sortation system were the logical choices to facilitate greater levels of package volume and distribution, as well as the increased complexity involved in reaching that objective.

"When we moved from a push strategy to a more demand-oriented, in-season replenishment concept, we needed to change our distribution model to be able to fill those specific

needs," Reade says.

"The sortation system that we implemented provides tremendous accuracy, a high rate of throughput and allows us to efficiently and seamlessly manage a very complex system."

In order to achieve the desired performance levels, DSW decided that the distribution center should be automated with cross-belt sorters and technology that would interface with the warehouse management control system.

"We decided that a sortation system was the best route to go," Reade says, "and we also wanted to make sure that the system we decided on would have the flexibility to provide service now and be able to address changes in the future."

After researching vendors, DSW elected to work with the Beumer Corporation, an international company that specializes in automated package sorting.

"We wanted a partner that would bring innovation into the discussion



and work collaboratively with us to come up with ideas and solutions and deliver service day in and day out,” says Reade. “Since we re-engineered the system while we were operating we asked them to do a lot of crazy things, on or off shifts, and they were very good at executing projects inside a live operation.”

Beumer “didn’t come in thinking they had all of the answers,” he says. “They had the right solution but not 100 percent of the answers, and we answered those questions together and the executional collaboration matched

100-foot x 1,400-foot sorter in a very tight space.

A cross-belt sorter resembles a complicated mini-freeway system with a main traffic artery with different entrance and exit ramps. It allows packages to merge with each other on their way to packaging and distribution areas for specific store locations.

In the case of the DSW system, the equipment consists of four automatic induction lines, the Beumer BSL-7 cross-belt sorter, a camera scan tunnel and 500 half-pipe Teflon-coated chute destinations.



up very well. They were tuned in to the operating needs of our business and they delivered what they said they would on our schedule.”

### PRISTINE PACKAGING

As if implementing a complete change in a sorting and distribution system and handling procedures and protocol isn’t challenging enough, DSW and Beumer first had to figure out where the system would physically be placed in the distribution center.

Originally built during World War II for aircraft manufacturing, the building was converted into a warehouse in the early 2000s. The challenge was that the only optimal location for the sorter was an underutilized mezzanine, and available space was at a premium. Beumer managed to fit the

The focus “is on the overall sorter operation and the process of sorting items down to store destinations by the right quantity and [item number],” says Larry Townsley, Beumer account manager of sorting and distribution. “The Beumer chute design provides a gentle handling solution that ensures DSW pristine condition of the pair boxes on its store’s floors,” he says, noting the importance of box appearance for customer appeal.

Beumer software interfaces with the DSW warehouse control system and receives information on every box that is scanned for bar and item codes by a five-sided camera scan tunnel. Doing so allows DSW to sift down the stock from the general to the specific.

When DSW has an industry-standard case of 12 pairs of identical shoes and

those shoes need to go to four different stores, the Beumer software will strategically route those packages to the appropriate destination to be shipped and transported and close the order.

“Through the software interface, we utilize a dynamic chute assignment and the Beumer software decides which chute destinations to fill first,” says Townsley. “This allows DSW to close out and pack out the orders quickly and results in open chute destinations for the next store.”

### A ‘CULTURAL CHANGE’

Reade says that while implementation of the system was difficult, it went well. One of the biggest hurdles DSW had to face was the cultural change that comes with moving from a fully manual to a completely automated distribution system — the fears that go along with that change, as well as the impact on jobs.

“It was critical for us to understand what a cultural change it would be for us to transition the distribution system and Beumer was really good at training and helping integrate everyone into the new system,” says Reade. “They were actively involved in the process, not just in the background.”

The system “allowed us to do significantly more volume than we ever did before, and because we were doing much more we actually added positions,” he says.

“From a retail perspective it enables us to better deal with the complexity of the stores and a more demand-oriented situation. It also enables us to do real omni-distribution as we start to combine retail and e-commerce.”

In essence, the Beumer system allowed DSW “to take what was essentially a ceiling of 35,000 units a day and expand that to 80,000 almost immediately, with the ability to go as high as 150,000 a day,” Reade says. **STORES**

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