



INNOVATING STORAGE & RETRIEVAL

Sterling, Inc.

Performance Report

Challenge:

Same day fulfillment of fine jewelry orders distributing to 950 retail stores.

Solution:

Order selection from 11 vertical carousels and a put system of six horizontal carousels.

Result:

Same day shipments. Operators can pick an average of 1000 pieces per hour.

Jewelry chain keeps inventory moving with 11 pick carousels and 6 put controls - increases productivity and security.



Custom designed carousels help keep operator productivity at a high level. A special counter has slots for each store in batch and sortbar display to improve accuracy.

Sterling, Inc., operates 950 retail jewelry stores across 42 states under 12 different banners – among them Shaw’s Jewelers, LeRoy’s Jewelers and Kay Jewelers. Orders for some 4,000,000 pieces per year, in 7,000 active SKUs, are processed at a single, high-security distribution center at their headquarters facility near Akron, Ohio.

White carousels are an integral part of the process, helping Sterling keep its distribution center’s inventory turns at 20 or higher. Picks are done daily for half of the stores, except during the very busy pre-Christmas season, when items for all stores are picked and shipped every day.

Customized vertical carousels

Eleven specially designed vertical carousels hold more than 95 percent of the high-turnover baggable items. Each carousel handles up to 216 SKUs. The balance, mostly small quantities of discontinued items, is stocked on static shelving nearby.

Each carousel has 18 pans, which hold 12 boxes in dedicated positions. Higher volume items are kept in “golden zones” in the center of each pan. Batches of orders for 16 stores are picked concurrently.

When picking commences, a special cart is wheeled beneath the carousel work counter. The cart has 16 totes, in two rows of eight, to align with eight slots in the counter, so that as the items are picked, they are simply dropped through the counter into the correct tote. The operator doesn’t have to take her eyes from the work being done. Guide rails were installed to ensure proper alignment of the cart.

The carousel rotates upon instructions from the computer. A light bar signals which box on the pan contains the items while the computer screen displays the quantity. At the same time, a 16-position sortbar, installed into the counter between the rows of slots, indicates the quantity of that item to be shipped to each store in the batch. After each line on the order, the operator hits on of several task complete buttons and the carousels rotate automatically to the next pan level required. Operators can pick an average of 1000 pieces per hour using this system.

Performance Report

Consolidation carousels

Once the store orders are completed, each tote is emptied into a small, corrugated carton with a barcoded license plate and sent via conveyor to the consolidation area in the vault next door. Here they are put into larger shipping cartons, which have been staged on six White horizontal carousels. Also in this vault are watches and other larger items, which have been picked and sent to the horizontal carousel workstation in totes.

The horizontals are arranged in three pods of two carousels, each with a spur of the incoming conveyor from the first vault. The carousels have dedicated positions for each store plus room for growth. Each in-use shelf is set up for two stores.

When the small cartons arrive from the first vault, the carousel operator scans the license plate, which causes the carousel to rotate to the proper position. A lighttree display light indicates the location the small carton is to be placed. This same process occurs when the totes with the large items arrive at the consolidation station.

Once the consolidation process is completed, the cartons are removed from the carousels and handed off to adjacent billing workstations where each item is scanned and repacked and a packing list generated. Then, they are routed via conveyor to the shipping department where items such as store mail are added prior to filling with dunnage and sealing.

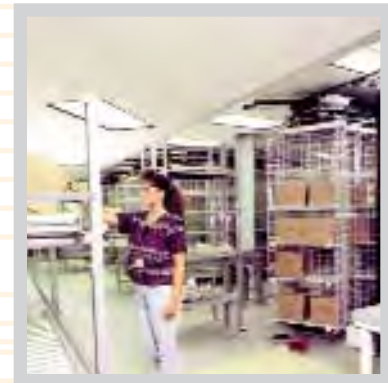
Replenishment orders are generated automatically when sales are rung up at the stores. They are accumulated and shipped on the next regular shipping day for the store. In addition, the distribution center processes special orders on a regular basis. Orders resulting in hot picks (unscheduled demands) that come in by 2 pm can be shipped the same day. All items are ticketed before they go into the carousels.



Put system operator scans the carton upon arrival from the first vault.



The operator then puts it into carousel. The lighttree displays the correct bin location.



After the consolidation process is complete, the completed order is sent to billing.

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