

PSI ENGINEERING:

Automating the Last 100 Feet of the Order Fulfillment Process

An Apparel Ecommerce Company needed pack station automation to improve the speed and accuracy of their order picking process and increase efficiency and throughput.

THE SITUATION

An Apparel Ecommerce Company, with an annual average order profile of 3.8 items per order, which includes 20% of single item (one SKU) orders, processed their base 4000 average orders per day with 15 operators. But the customer was having difficulty with improving order throughput at their packing station areas. They had previously implemented a put-wall system but still had issues with speed and accuracy processing their multi-item orders. Working with a major consulting firm to identify key efficiency issues, the company discovered there was too much time spent on barcode scanning, marrying the items to the put-wall position, manually adding their packing slip and other collateral such as gift cards, catalogs, etc. to their orders, and then bagging them manually. The bagging alone added nearly 90 seconds to each order. The consulting firm called PSI Engineering to help.

THE PROCESS

It was important that PSI Engineering had the opportunity to view the current pack line in order to make a best recommendation for an automated system. PSI's sales and engineering teams met with the customer numerous times to evaluate the entire order picking and packing process. From this evaluation, PSI not only recommended their fully automated packing station, the Rapid Sort-N-Pack system, but also helped the customer with other upstream transactions that simplified their picking process.

THE SOLUTION

In order to increase efficiency and throughput, as well as reduce labor costs in the last 100 feet of the pack station line, PSI Engineering recommended their Automatic Pack Station System, The Rapid Sort-N-Pack system which includes:

Automatically directed sort wall, conveyor transport system for wave totes and sorted orders, inline weigh scale, print-fold and feed documents, catalog feeders, gift card activation, random length automatic bagger c/w shipping label applicator, conveyORIZED completed order sorting into courier cages.

The PSI solution directed each wave of orders to the correct put-2-light slot with only one bar code scan. Each slot has a light that turns green for each barcode scan transaction, and items from different orders are placed into different cubbies. As the put-2-light (P2L) slots are filling up, once an order is complete, it is placed into a tray-freeing up the slot and keeping the order moving. This procedure is repeated until the orders in the wave are completely sorted. Simultaneously, the orders in the trays move via conveyor to automatically collect their packing slip and other collateral the company's customers requested and arrive at the Random Length Bagger. The bagger operator only needs to pick up the items inside the trays and insert them into a bag – which has been sized for the order. The shipping label and shipping courier are also determined automatically. The bagged order is then directed to the correct shipping sorter lane.

This Rapid Sort-N-Pack system was implemented in 6 weeks from delivery.

THE RESULTS

The Apparel Ecommerce Company is now able to process 270+ orders per hour and has reduced their operator overhead from 15 people to 3 – an annual labor savings of \$450,000. The system is designed with today's current technology, combining a semi-automatic put wall with PSI's document, weighing, bagging and conveyor technology.