

PSI ENGINEERING:

Automating Order Picking and Fulfillment Improves Throughput and Efficiency

When manually picking heavy catalogs was slowing order fulfillment down during peak periods, putting an end to operator touches by using automation increased throughput to meet peak demands.

THE SITUATION

The manual labor of selection and inserting catalogs, as well as other packing station transactions, was limiting this customer's ability to ship orders during their end of quarter peak periods. The biggest time waster was the heavy and cumbersome catalogs.

To address this, as well as other automation issues, an Integrator was contracted to add automatic and semi-automatic devices to their order picking and fulfillment process to improve speed and increase throughput. Each operator catalog touch (choose one and insert) was taking up to 10 seconds, and there were up to six choices of one or more catalogs depending on the order profile. In addition, the cartons of catalogs were heavy and needed to be distributed to many packing stations.

THE PROCESS

The Integrator's distribution center design transported cartons containing the products picked for an order into the two new automation lines. The cartons were weighed with an inline checkweigher, dunnage/void fill was inserted, and the cartons were then transported past six PSI LC In-Feeders.

The preselected catalogs were then inserted according to the order specifications. After the catalogs were fed into the cartons, they were then transported to a carton sealer where the shipping label was also applied. Cartons of catalogs only needed to be delivered to one area, and only one operator was needed to supply each PSI LC In-Feeder and other devices on the two lines.

THE SOLUTION

The Integrator approached PSI because of their existing installations for print-fold and feed systems, and knew the LC In-Feeder had existing installations feeding catalogs at fast rates of speed. The Integrator designed a system for the customer using two lines, where each line consisted of six PSI LC In-Feeders. The order throughput from two lines increased to over 1200 cartons per hour.

THE RESULTS

The customer is now exceeding their shipping requirements during peak periods. The automation increased order throughput using a minimal labor force, and ROI is expected to be 12 to 15 months. PSI's LC In-Feeders were crucial in creating saved time for this customer and Integrator.