

A global provider of tooth replacement and regeneration solutions recently upgraded from a manual order picking process to a pick-to-light and zone-routing conveyor system to better serve their customers' growing demands.

Challenges

After acquiring several businesses in the dental market and experiencing rapid growth, the company outgrew their space to store their product offerings. Product was stored on shelving and manually picked from printed pick tickets. This process was a slow and costly way to fulfill orders and would not be feasible for future growth.

The company leased additional space that had become available in their building to help manage some of their growth and meet rising marketplace demands. However, they still needed to maximize space, upgrade the efficiency of processing orders and reduce shipping errors between picking and packing processes in their distribution center.

Solution

After researching several integration partners, they chose Abel Womack to customize an automated solution based on trust built from



working with them in the past, and their proximity to Abel Womack's Massachusetts office.

First, a zone routing conveyor system was installed with four pick zones on both sides. Empty totes with

barcode labels circulate the conveyor. As orders drop from SAP to the warehouse control system (WCS), they are assigned to the next empty tote that passes the barcode scanner. The tote automatically gets diverted into the appropriate pick zone where the operator scans the tote label. The display on the flow rack lights up to the part location and quantity to be picked. Once picked, the operator presses the acknowledgement button to verify completion. When the picks in that zone are completed the totes are pushed onto the takeaway conveyor where they are diverted to either the next zone or to a packing area. Based on order type, the WCS software assigns orders to one of two types of totes. Overnight shipments are marked in red so they can be visually distinguished from regular orders on the conveyor and handled first, both, in the pick zones and packing area.

In the center of the conveyor system are two large TV screens that provide the status of orders waiting to be assigned. A supervisor monitors these for bottlenecks, adjusts the ratio of regular vs overnight totes and the number of pickers to packers, all based on orders in queue, which keep orders flowing through the system.

Inbound stock shipments coming from overseas are replenished directly into the carton flow racks, eliminating the double handling of moving product from

reserve locations into the forward pick locations. Slower moving SKU's are stored in divided totes on shelving with zone pick lights that display the shelving pick face location and quantity.

Results

By maximizing storage density with flow rack, implementing a pick-to-light paperless picking system, along with a zone routing conveyor for automation and a WCS controlling the operation, the company is leveraging their new warehouse



system. The number of pieces picked increased 50%, from 16,000 to 25,000 per person per month and they experienced a significant reduction in errors, approximately 80%.

Operational Excellence & Supply Chain Sr. Director said, "Abel Womack has an entrepreneurial spirit. There were interruptions and changes in the process on both ends, but they were very resilient. We're pleased to have them as our systems integrator and are continuing to partner with them on additional automation projects."

Customer Challenges

- Manual picking process
- Inefficient order fulfillment
- Lack of storage space

Abel Womack Solution

- Hytrol zone routed conveyor
- Wynright pick-to-light system
- UNEX carton flow rack

Benefits

- Increased picking accuracy, efficiencies and throughput
- Improved fulfillment process
- Offer more value-added services for customers