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ROBOTIC PALLETIZER ROI IN 1 YEAR



A robotic system helps Dirt Devil save 70% on labor and palletize products into 150 different configurations for delivery to retailers.

By Noël P. Bodenborg, Managing Editor

DIRT DEVIL DIDN'T clean house, but it did redeploy all workers that were manually palletizing more than 1,000 boxes per hour. The Glenwillow, Ohio, distribution facility needed to improve the manual palletizing process in its facility and meet a corporate mandate to get a return on the investment in one year.

And did they ever. The new palletizing system not only delivered their payback, but the ROI was met on labor savings alone: 70%. And with the redeployment of skilled workers, much of the physical labor was eliminated. Plus, throughput was up from 1,010 boxes per hour to 1,440.

Workers were manually palletizing all the company's products for distribution to retail stores. Employees unloaded boxes of vacuums and household appliances from trailers,

put them on conveyors, sorted them by product type, stacked them on pallets, and wrapped the pallets in plastic. They used lift trucks to move the finished pallets back to trucks for delivery to retail stores.

The workers needed to be skilled. They had to know and emulate different pallet configurations for each order for each retailer.

Enter two robotic palletizers.

The new palletizers installed with software from a system integrator (Han-Tek, 800-836-0237, www.hantek.com) can now load up to 50 different products into as many as 150 different configurations. The robotic arm has a vacuum on the end that lifts the box and stacks it on the pallet. Then, an out-feed conveyor moves the pallet to another staging area where it is automatically stretchwrapped.

The solution is equipped with a programmable controller (Rockwell Automation, 414-382-2000, www.rockwellautomation.com) and software that allows operators to program customer orders, enter the dimensions and select from a predetermined set of pallet configurations based on the retailer's preferences.

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