PEAKLOGIX

AN ALTA MATERIAL HANDLING COMPANY

EXPANDING OPERATIONS TO INCREASE EFFICIENCIES

Crutchfield's growth required operational efficiencies to improve customer service levels and increase throughput.

CUSTOM SOLUTION BY PEAKLOGIX RESULTED IN 25% GAIN IN THROUGHPUT AND $250,000 IN SAVINGS

CASE STUDY: OPERATIONAL EXPANSIONS AND INCREASED EFFICIENCIES

The Challenge

Crutchfield, an e-commerce electronics retailer, is successfully growing its business, which brings operational challenges to maintain or improve customer service. To meet demands and improve fulfillment efficiencies, Crutchfield considered increasing its labor force. Alternatively, the retailer explored implementing an automated process within its existing 40,000 sq. ft. distribution footprint without disruption to its daily sales requirements.

CRUTCHFIELD

The Solution

Phase 1: Streamlined Picking

PeakLogix streamlined the facility's picking by designing and installing a picking system using automated, MDR conveyor and pick divert technology that integrates into the existing order processing software. Racking was repositioned and carton flow replaced wire decks for greater access to high volume inventory. A warehouse control system was designed to improve picking accuracy and capacity, and to direct fulfillment orders to staff based on zone, reducing excessive travel and increasing overall efficiency.

Phase 2: Eliminated Shipping Bottleneck

PeakLogix removed the facility's shipping bottleneck by refurbishing and re-purposing the facility's 12-year-old sorter. Installing new MDR conveyor to replace outdated, noisy lineshaft conveyor significantly reduced the noise level in the shipping area. The print and apply machines were upgraded with Panther Industries current, all-electric models, reducing the facility's three units to two and eliminating the need for compressed air. A new PC-based conveyor control system was installed to ensure accuracy and efficiency.





The Results

Phase 1: Crutchfield was able to **decrease head count and labor costs** associated with picking, **reduce the amount of handling** during the fulfillment process, and **increase its productivity**. It's seen a **25% gain in picking throughput**, a **savings of nearly $250,000 per year**, and a **60% decrease in time to replenish**. The facility is on track to achieve its ROI for this installation within 3 years.

Phase 2: The facility has **doubled its shipping throughput** from 19 cases/minute to 38 cases/minute and **more than tripled the amount of accumulation** between packing and shipping.

Project Specs

Crutchfield's operations and systems personnel teamed with PeakLogix's automation design engineers to define project deliverables, create a system design, and execute a project plan. The results: Reconfigured existing 40,000 sq. ft. distribution facility with minimal impact to employee workspace and customer satisfaction. Installed over 1,100 feet of MDR conveyor with pick divert technology that networks the automation control requirements with existing order processing software to transport cases to multiple pick zones, including 11 diverts, 357 accumulation zones.

Product Spotlight: MDR Conveyor

PeakLogix installed MDR Conveyor for this project to eliminate the restrictions of conventional conveyor. The benefits using of MDR conveyor are vast, including:

- Less torque versus conventional motors
- Sprockets and chains are eliminated, reducing pinch points
- Photo sensors in side frames reduce catch points
- Reduced noise levels improve working environment
- On-demand operations result in less energy use and wear
- Failures effect a single zone increasing reliability and decreasing down time
- Variable speed suits specific requirements
- Modular design allows for easier and more flexible configuration
- Non-contact zero-pressure improves product protection
- Consistent operation and repair across modules
- No scheduled maintenance and fewer parts result in lower operating costs
- Simpler, less expensive installation