

## Material Handling System Streamlines Order Processing And Shipping at Distribution/Manufacturing Facility

Prior to building a new 180,000 square foot distribution/manufacturing center in West Chester, Ohio, Bakery Crafts challenged Advanced Handling Systems, Inc., a Cincinnati-based distributor and systems integrator, to outfit the

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new state-of-the-art facility with a material handling (MH) system that would streamline order processing and shipping.

A distributor of decorative baking accessories, Bakery Crafts handles a large, varied inventory - some 9000 different finished products and raw materials. With such a vast inventory, prompt order fulfillment was a challenge. In order to be efficient, the customer stressed that large orders needed to be consolidated during the picking process to prevent extra totes and boxes from clogging the shipping sortation area.

Accordingly, Advanced Handling Systems, Inc. analyzed Bakery Crafts' needs, looking at every factor, from the number of orders handled to the methods of product storage. Chuck Frank of Advanced Handling Systems comments about the project: "The customer's operations entailed some light manufacturing as well as a rigorous quality control program. We

examined all of these factors in preparation for system design."

Once the process was underway, it became evident to Advanced Handling Systems personnel that products offered by Ermanco Incorporated, a global supplier of MH systems and equipment, were ideally suited for this application. Advanced Handling Systems and Ermanco then worked together to engineer a system that quickly, quietly and effortlessly passed orders through all pick zones while meeting throughput goals and shipping deadlines.

### System Utilizes Two Line-Shaft-Driven Conveyors

Advanced Handling Systems personnel, working in conjunction with Ermanco engineers, selected two of their most popular line-shaft-driven conveyors - XenoROL XR40 and XenoPRESSURE XP44 - for Bakery Crafts' pick, pack and ship systems.

Both models have a capacity of 100 lbs./ft., amply covering Bakery Crafts' load requirements. XP44 features zero-pressure, non-contact accumulation to prevent product damage.

The engineering of XenoROL and XenoPRESSURE provides exceptional energy efficiency and extremely quiet operation. Line-shaft-drive technology enables a single motor to efficiently drive both conveyor types. Because of the small number of drives needed, the entire system consumes far less energy than a system with alternate drive mechanisms. The use of fewer drives dramatically decreases noise levels to create a calm, quiet working environment at the Bakery Crafts facility. Constant belt tension suppresses roller noise, contributing to the quiet work environment.

For the automatic sortation of orders through pick zones, Ermanco urethane belt transfers (UBTs) were selected. UBTs efficiently sort totes



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and boxes into various picking zones using zone-to-zone diverters, which enable orders to be consolidated during the picking process. Reflective tape affixed to each tote allows the operator to identify to which zone it needs to be transferred next. The operator positions the reflective zone indicator on the tote and places it onto the powered take-away conveyor. When the tote reaches the next zone, it is scanned by a series of photoeyes. The information is transmitted to and

processed by the programmable logic controller (PLC), which determines whether to divert it into the next zone or to bypass to another zone. The early consolidation of orders prevents extra totes and boxes from clogging or slowing shipping sortation. Additionally, conveyor-to-conveyor external jump chain connections allow the UBTs to be slave-driven without the need for additional motors.

Maintenance requirements are reduced due to the use of fewer

drives and other moving parts. In addition, self-cleaning circumferential belt grooves, parabolic spools, greased-for-life roller bearings, and the absence of grime-gathering flat belts considerably reduce the amount of cleaning necessary for optimal performance.

High-energy efficiency and quiet operation, automated zone-to-zone transfers, and low maintenance requirements, make the Ermanco system an effective solution for Bakery Crafts' new facility, affording the company accurate, on-time order fulfillment with extensive savings of labor, time and money.

In forward motion since 1964, Ermanco Incorporated provides material handling systems and services to the global marketplace. The company originated the line-shaft driven conveyor in the early 1970s, well known as XenoRol - the first of many innovations in material handling technology. The Ermanco product line now encompasses two main families - line-shaft-driven live roller XenoROL conveyors and belt-driven liver roller AccuROL conveyors.

