



Revolutionizing the dairy industry with cutting-edge warehouse automation

The Kroger Company achieves warehouse efficiencies and product traceability, while benefitting from cost savings and waste reduction in its new Mountain View dairy facility.

THE CHALLENGE

To deliver exceptional quality and freshness to its customers, Kroger sought to build its first new fluid milk plant in more than 20 years, with the goal to provide an avenue for innovation in the dairy category. Kroger also wanted a state-of-the-art facility with a low reliance on the human involvement in order to minimize the facility workers' exposure to injury and work-related strain. The new facility had to meet the requirements of Kroger's zero-waste-to-landfill initiative, which began more than three years ago, in addition to conserving water and facility floor space and being energy-efficient.

THE SOLUTION

After reviewing best practices from around the world, Kroger selected Cimcorp Group (Cimcorp), a manufacturer and integrator of turnkey robotic gantry-based order fulfillment and tire handling solutions, to help meet these goals and overcome the challenges of traditionally designed facilities. Additionally, Kroger favored Cimcorp's simplistic designs and long, successful track record in the industry. Cimcorp's automation solutions have been tested and implemented in 40 countries across five continents and are designed to reduce operating costs, ensure traceability and improve efficiency - all qualities that Kroger wanted to achieve with its facility.



SCAN THE QR CODE TO SEE IT IN ACTION!

32k
CRATES PER DAY

100%
ORDER ACCURACY

+1 M
STORAGE PER MONTH

QR CODE CIMCORP ORDER PICKING



CIMCORP

Passion for optimized material flow

Located in Denver USA, the facility officially opened on Memorial Day weekend 2014 and now services about 160 stores in two states.



CIMCORP DEVELOPED A COMPREHENSIVE, end-to-end automated warehouse solution for Kroger's Mountain View Foods facility that is centered around Cimcorp MultiPick, a fully automated, robotic production storage, handling and order processing system. The system can store up to 36,000 crates, and is able to pick 32,000 crates per day. The 215,000-square-foot facility processes fresh conventional and organic milk in half-gallon and gallon containers, and packages aseptically processed milk, creams and juices in quart-sized and smaller bottles.

THE CIMCORP SOLUTION includes a warehouse management system (WMS), robotic gantries, software modules and an inter-platform communications system. Instead of installing a traditional in-floor mounted 'drag-chain' style conveyor, Cimcorp MultiPick handles stacks of and single, plastic dairy cases on non-traditional, knee-high, plastic belt conveyors. The cases and/or stacks are picked according to Kroger's specified sequence on one end of the facility and then palletized for truck loading onto delivery trucks at the other end of the facility, allowing for significant storage buffering in between.

CIMCORP MULTIPICK also utilizes case stackers, manual in-feed stations, and inbound and outbound conveyor systems. This hardware is seamlessly integrated with the complete suite of software needed to operate the facility and is controlled and monitored through Cimcorp's WMS. The WMS also controls order processing, gantry movements, stack transport and storage facility data, while the ControlLogix PLC manages the conveyors, stacking equipment palletizer and strapping system. Additionally, Cimcorp ensured inter-platform communications and messaging to oversee the entire system and inventory reporting.

BENEFITS & RESULTS

The Cimcorp MultiPick solution precisely controls the entire material flow of the facility and provides Kroger with rapid material handling, flexible use of space, easy cleaning and improved labor savings. This end-to-end solution allows for the automatic operation to collect vast amounts of data and execute detailed analysis of both dispatch operations and production planning. This data provides Kroger with 100-percent traceability, an important factor for perishable dairy products and consumer safety.

BY INCORPORATING an automated system and removing the need for workers to use long-handled hooks to pull 250-pound stacks of dairy cases onto the chain conveyor, Kroger reduces workers' injury risks. Additionally, Kroger benefits from orders picked with 100-percent accuracy, at faster speeds, which results in shorter lead times, maximized product shelf life and fresher products.

Kroger is a shining example of innovative thinking backed by solid research and smart decision making. Incorporation of a fully automated warehouse system helps the company improve accuracy, product traceability and faster turnaround times.

Derek Rickard
Distribution Systems Manager
Cimcorp

MOUNTAIN VIEW FOODS is one of the first dairies in the U.S. to deploy robotic technology that enables packing, picking and palletizing of crates in the cold storage areas entirely by automation. Kroger is seeing a dramatic difference between its traditional, manual facility and the Mountain View Foods' automated system through increased efficiencies and rapid handling, reduced labor costs and errors, and product traceability. In addition to the benefits and streamlined operations that have already made a positive impact to Kroger's bottom line, the company has also received recognition for its innovative facility design and was named Dairy Foods 2015 Plant of the Year. Kroger plans to continue to expand its use of automation and has already begun assessing other facilities for consideration in 2016.



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