

Protecting a Company's Most Valuable Assets - Omron makes safety work for Kerry Foods

Sainte-Clair, Quebec-based Kerry Foods has been producing and packaging milk and soya beverages for over 40 years. Their products can be found in major supermarket chains, convenience stores and independent retailers around the world. The company also produces private-label dairy products for some of the most recognizable names in retail. Due to high-demand and popularity of their products, Kerry Foods operates one of the most advanced production and packaging facilities in Canada.

Safety without Borders

"We operate a highly-integrated, automated plant to ensure our temperature-regulated products reach our customers on a just-in-time basis," says Jean-Luc Bédard, Projects Manager for Kerry Foods. "Operating in an automated environment, we not only need to adhere to safety regulations, we also have a social responsibility to provide a safe working environment for our personnel."

Bédard's partnership with Omron, primarily with automation solutions, extends over 10 years. So when Kerry Foods set out to meet CAN/CSA Z434 (an adoption of ISO standard 10218-2) - safety for robots and robotic devices - for their palletizing robot cell, Bédard turned to Omron's local safety expert Robert Lefebvre. "Omron's role in the project was to work with Kerry Foods' EH&S personnel to provide a complete safety solution that would facilitate machine operation, reduce downtime and educate plant personnel on proper protocols," says Lefebvre. "The first step was for one of our local TÜV functional safety engineers to perform a risk assessment, complete with machine-specific risk reduction recommendations."

With recommendations from one of Omron's TÜV functional safety engineers, Lefebvre met with Bédard and Kerry Foods' EH&S personnel to begin integrating the appropriate safety components.

In order to create a safe cell for the palletizing robot - without traditional, hard guard borders - the team opted for six F3SG-RA safety light curtains with smart muting functionality as well as Bluetooth programming capabilities. Because the F3SG-RA safety light curtains are non-obtrusive in the robotic cell, this allows for collaboration and movement between the robot and the operators in a safe, productive manner.

In order to efficiently monitor safety on the palletizing robot, Kerry Foods installed the programmable G9SP safety controller, along with the robust NB HMI (human machine interface) for intuitive, on-the-spot programming and troubleshooting. "Implementing a complete safety solution - from components to control - was exactly what we needed to maintain our current operations without disruption or major change to existing processes," says Bédard. "The system is functional and reliable, with no maintenance."

Safety as a Plant Standard

"With the palletizing robot cell project complete, and operating seamlessly with our environment, we decided to move ahead with our next safety project and standardize the rest of our plant," commented Bédard. "Safeguarding our filling machines from accidental stops due to movement became our focus."



Kerry Foods in Sainte-Clair, Quebec uses Omron automation and safety systems in their plant to protect their most valuable assets... their employees, their machines and their product integrity.

Kerry Foods' dedication to exceeding Canada's strict safety regulations brought their safety committee together with Omron's TÜV functional safety engineers to create a program that is second to none... a practical and reliable safety system that eliminates barriers to production and prevents downtime due to manual intervention.



Kerry Foods has four filling machines that run at high speeds over extended periods of time. All four of the filling machines are hard guarded, enclosed in rugged casing to prevent accidental stops and to provide operators with a safe area.

"With more stringent safety standards and significant advancements in safety technology, hard guarding was no longer the sole answer to safety," comments Lefebvre. "In order to properly secure the area surrounding the filling machines, we installed Omron STI TL4019 safety interlock switches with stainless steel slide bolts."

The TL4019 safety interlock switches are attached on the swinging doors of the hard guarding, locking out operators until the cell is safe to enter. The narrow-profile TL4019 offers a high locking force of up to 270 lbs (1,2000 N) and is integral to operator safety - meaning the filling machines will not start back up if the door is not closed properly.

"The key to the feasibility of the safety interlock switches are the stainless steel slide bolts," adds Bédard. "To maintain sanitation standards, we perform routine harsh washdowns of our filling machines and the stainless steel prevents the slide bolts from rusting under our conditions - they are resistant to our chemicals." Lefebvre adds that the IP67, NEMA 6 enclosure also adds to their durability during Kerry Foods' washdowns. Kerry Foods no longer experiences unplanned stops due to any of the four filling machines and the area is safer for operators, ensuring confidence in safety protocols.

Maximizing Safety

"One of the main factors that made this solution complete was the safety training," says Bédard. Omron's local TÜV functional safety engineer performed a 2-day Skill Builders seminar to provide Kerry Foods' operator, maintenance and engineering personnel with a better understanding of the new safety components, machine safeguarding requirements and proper application. "Our personnel walked away from the Skill Builders seminar with a greater understanding of how to identify potential machine hazards as well as how to address them before they become documented safety issues or before they affect productivity," states Bédard. "The seminars worked out well - our personnel are engaged in uncovering opportunities for practical improvement."

Omron has a proven process for successfully safeguarding a plant - and that starts with educating responsible plant - and corporate - personnel. It's about unifying safety awareness from the shop floor to the top floor.

Omron Automation is a leading global provider of machine safety and automation solutions, with more than 80 years of service experience in the controls and sensing business. Our customers can rest assured the automation strategy developed will meet the needs of today and include pathways for practical expansion and modification to address the many challenges of the future.

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