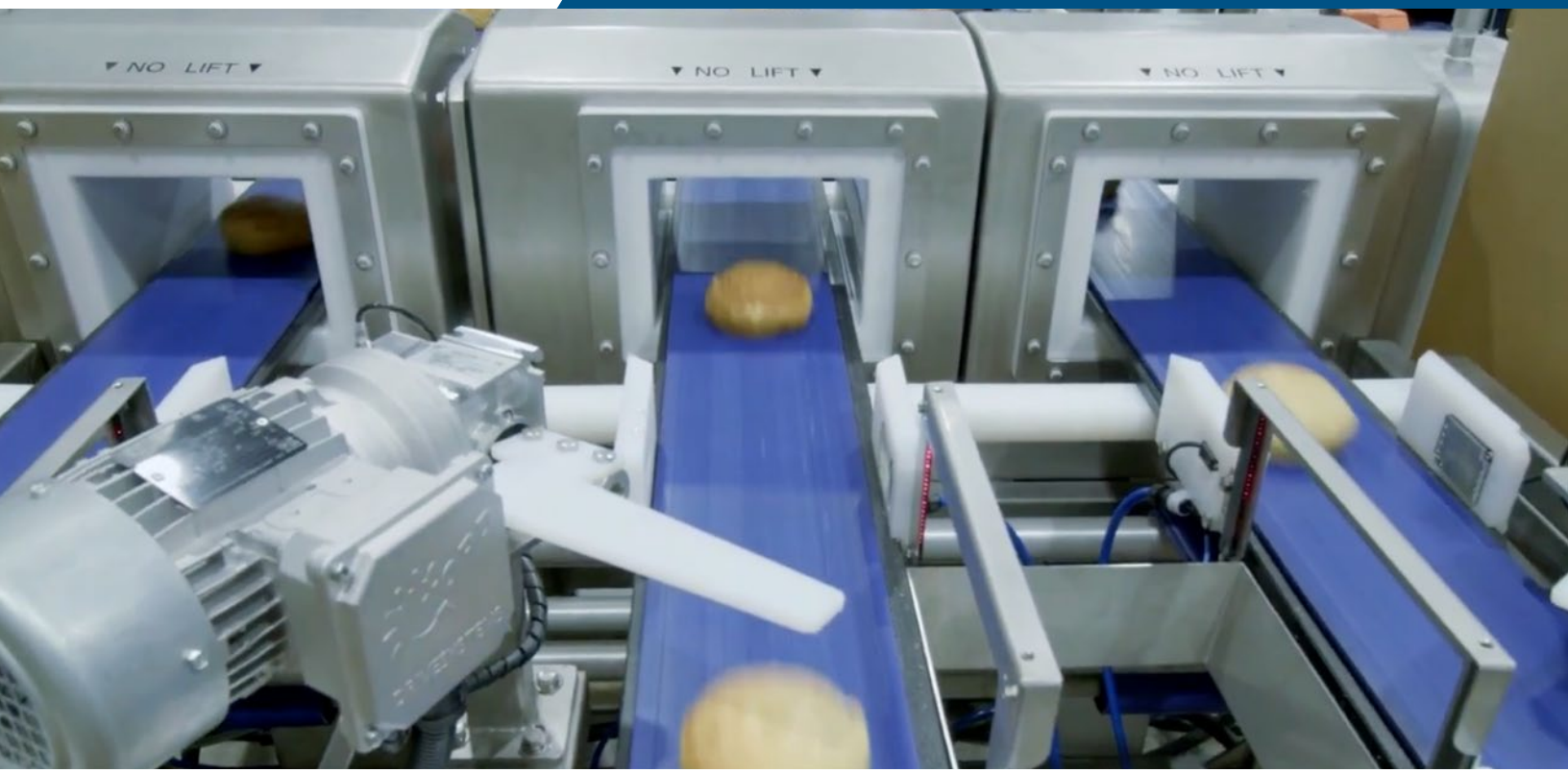
CASE STUDY

ERIEZ

Food Processing



Eriez and Artypac **Tailor Metal Detection Solution for High-Volume** Frozen Bun Production

A trusted partnership between Artypac Automation and Eriez helped a bakery manufacturer strengthen food safety, product quality and packaging efficiency with PrecisionGuard X8 metal detection technology customized for a high-throughput frozen bun line.

High-volume frozen bakery production requires a careful balance of food safety and operational efficiency. When a leading bakery manufacturer sought to strengthen metal detection on a frozen bun packaging line, Artypac Automation and Eriez combined their respective expertise to develop a solution matched to those needs.

Based in Laval, Québec, Artypac designs and integrates processing and packaging systems for food manufacturers throughout North America. The company has partnered with Eriez on numerous food processing applications over the years, turning to Eriez when customers require reliable contaminant detection, proven inspection knowledge and technology that can be adapted to demanding production environments.



For this project, Artypac worked with Eriez to develop a metal detection solution that would address the customer's operational conditions, food safety objectives and production goals. The resulting system was designed to protect product purity, maintain production flow and improve confidence in the manufacturer's frozen bun operation.

Application Fit
from the Outset

Food manufacturers are under constant pressure to protect product safety without slowing high-volume operations. Frozen bakery applications add another layer of intricacy. Product characteristics, washdown requirements and line-speed demands must all be considered to ensure reliable contaminant detection without disrupting production.

The manufacturer needed a metal detection solution that could deliver dependable inspection performance while supporting an automated packaging operation. The equipment also had to fit within the existing line layout, keep pace with throughput and avoid adding unnecessary complexity for operators.

As the system integrator, Artypac focused on selecting a metal detection approach that would align with the customer's process, rather than treating the project as a standard equipment installation. That application-first mindset helped guide the evaluation, testing and final system design.

Tested
On the Line

The frozen bun line operates within a packaging process where product moves from upstream handling into inspection before entering downstream equipment. The ideal inspection solution would maintain sensitivity and repeatability while fitting cleanly into an automated environment with little room for error.

The system had to detect ferrous, nonferrous and stainless steel contaminants consistently, withstand thermal shock and washdown conditions and operate reliably. Maintaining production flow without delays or excessive manual intervention was also essential.

Working as a team, Artypac and Eriez selected the new PrecisionGuard X8 Metal Detectors and carried out testing under multiple operating conditions to confirm performance. Sensitivity settings and product parameters were adjusted to reflect the realities of the production setting, helping ensure reliable detection while reducing nuisance trips.

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— Gabriel Laurin
President
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Why PrecisionGuard X8 Metal Detectors?

Engineered for challenging food processing applications, the X8 platform provides repeatable, high-sensitivity detection of ferrous, nonferrous and stainless steel contaminants. The system's touchscreen interface, automatic setup capabilities and adaptive product-learning features enable straightforward configuration and adjustment, allowing operators to fine-tune detection parameters to product and line specifications.



Those capabilities provided the flexibility needed to meet the demands of high-throughput frozen bun production while simplifying implementation and day-to-day operation.

Furthermore, the X8 system is manufactured for sanitary environments, with hygienic construction and an IP69 washdown rating suited to high-pressure cleaning. Built-in data storage, reject logs and event history support traceability, food safety documentation and audit preparation.

The combination of detection performance, ease of use, recordkeeping capabilities and operational flexibility made the PrecisionGuard X8 well-suited for the project.

"Eriez works closely with partners like Artypac to design and refine systems for each unique application," said Emmett Keim, Global Product Manager, Inspection Systems, Eriez. "That collaboration helps ensure the metal detection solution is matched to the product, the line and the customer's operational goals."



Integrated
Into the Process

One of the defining aspects of the project was the role metal detection played within the packaging operation.

Rather than functioning as a standalone inspection point or bolt-on device, the X8 units were incorporated into the production line, so inspection, product handling and reject management could operate as part of a coordinated process.

Positioned at a critical control point, the system automatically identifies and removes suspect product while allowing acceptable product to continue through the packaging line uninterrupted. This methodology helps reinforce food safety objectives while enhancing inspection performance and production efficiency.

Supporting Food Safety,
Product Purity and Productivity

Since implementation, the solution has supported reliable contaminant detection while helping maintain production flow. According to Laurin, operators can run approximately 350 buns per minute with the system in place, demonstrating the Eriez solution's capacity to keep pace with demanding production requirements.

The X8 platform captures rejects, verifications and system events to facilitate food safety audit readiness and compliance programs while delivering greater visibility into inspection performance.

For the manufacturer, the project illustrates the value of matching inspection technology to the realities of the operation. By bringing together Artypac's system integration expertise with Eriez PrecisionGuard X8 technology, the teams delivered a solution capable of maintaining detection performance without compromising throughput.

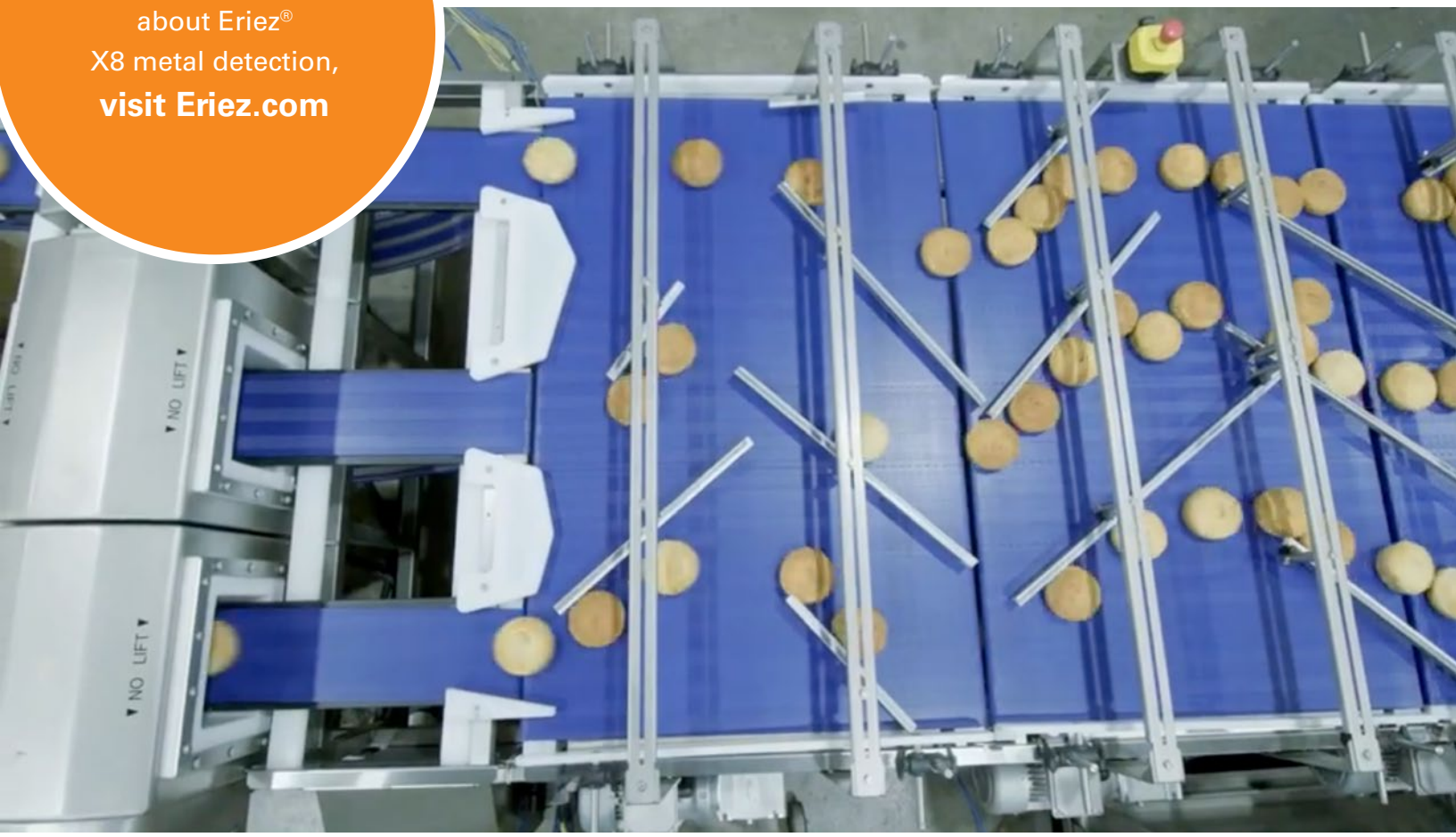


Solving a Challenging
Frozen Bakery Application

Frozen bakery processes present unique inspection demands, requiring processors to balance production speed, food safety regulations and operational efficiency.

By working jointly to evaluate, test and implement the right solution, Artypac and Eriez delivered a metal detection system tailored to the needs of a high-volume frozen bun operation. The project highlights how application know-how, proven technology and close collaboration can help processors meet food safety objectives while maintaining efficient production.

For more information
about Eriez®
X8 metal detection,
visit Eriez.com



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Established in 1942, Eriez is a global leader in separation technologies. Our commitment to innovation has positioned us as a driving market force in several key technology areas, including magnetic separation, flotation, metal detection, and material handling equipment. The company's 900+ employees are dedicated to providing trusted technical solutions to the mining, food, recycling, packaging, aggregate, and other processing industries. Headquartered in Erie, Pennsylvania, USA, Eriez designs, manufactures, and markets on six continents through 12 wholly owned international subsidiaries and an extensive sales representative network. For more information, visit www.eriez.com.

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