

FACTORY AUTOMATION

Customer Reference

Reducing commissioning time: Case Link and SCAN revolutionise sausage packaging

How modular control architecture and high-speed SCARA robotics transformed a manual process into a highly efficient, "on-the-fly" packaging solution

Key points

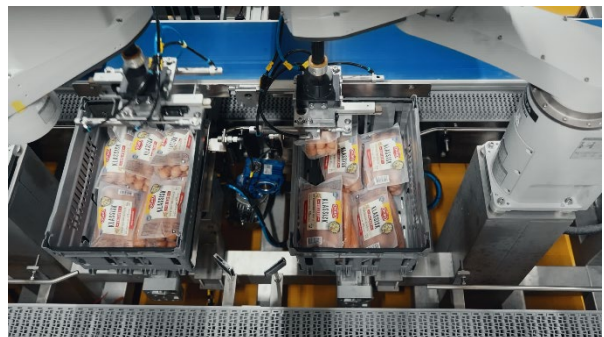
- **90% reduction in commissioning time:** from 2 weeks to just 2 days
- **Seamless automation:** Successful transition from manual handling to high-speed robotic picking and placing
- **Enhanced shelf life:** Integration of Modified Atmosphere Packaging (MAP) ensures superior product quality and longevity

SCAN, one of Sweden's most iconic meat and sausage producers, operates in a market where tradition meets high-volume industrial demand. To maintain its leadership, the company sought to modernise its packaging lines, moving away from manual processes towards a fully automated solution. Partnering with Case Link, an agile system integrator from Southern Sweden, and Mitsubishi Electric, they developed a cutting-edge packaging line that sets a new industry benchmark for speed, flexibility, and rapid deployment.

The Challenge: Sausage packaging is a high-variability process. At SCAN's facilities, products come in numerous sizes, weights, and configurations, requiring a system that can adapt instantly. Previously, the process relied on manual packing, which limited throughput and consistency. When considering automation, traditional Gantry (XYZ) systems were initially explored but ultimately rejected. These legacy systems lacked the necessary dynamics and the ability to pick products "on the fly" without stopping the conveyor, which would have compromised the required production rhythm.

The Solution: To address these requirements, Case Link implemented a "Full Line Solution" powered by Mitsubishi Electric's latest automation technology. The heart of the system features two MELFA RH-6FRH SCARA robots, specifically chosen for their high-speed precision. These robots are capable of tracking the

conveyor movement and picking products in motion, eliminating the need for costly and inefficient "stop-and-go" cycles.



The control architecture represents a significant departure from traditional designs. Instead of a single, large control cabinet with complex, long-distance cabling, Case Link adopted a modular approach. The line is divided into three distinct sections:

1. **Preparation:** Handling and positioning containers.
2. **Packing:** The core robotic section where the SCARA units execute rapid pick-and-place operations.
3. **Palletising:** Final arrangement on EURO pallets.

The results: The impact of this modular and robotic strategy was transformative. The most significant achievement was the reduction in on-site commissioning time: what typically takes two weeks was completed in just two days. This "killer claim" was made possible by the pre-tested modular cabinets and the seamless integration of Mitsubishi Electric's software environment.

For SCAN, the transition from manual to automated packing has delivered immediate gains in stability and throughput. The implementation of Modified Atmosphere Packaging (MAP) has significantly extended the shelf life of the products. Furthermore, the system's flexibility allows SCAN to handle multiple formats with minimal downtime, ensuring the facility can respond rapidly to changing market demands.

Advanced robotics & modular control: The heart of the system comprises Mitsubishi Electric's MELFA RH-6FRH SCARA robots, orchestrated by MELSEC iQ-F Series (FX5U) PLCs. This unprecedented coordination is enhanced by the high-speed CC-Link IE TSN network, which connects the robots with MELSERVO-MR-J5 drives. This setup allows for micrometre-level accuracy even at the highest production speeds, ensuring that every sausage is placed perfectly within its container without interrupting the flow of the line.

Why it matters: This project demonstrates the power of a "solution-first" partnership. Case Link chose Mitsubishi Electric not only for the high-performance hardware but for the intensive application support provided. By involving Mitsubishi Electric's engineers for two days of on-site assistance, Case Link was able to deliver a world-class solution with zero delays.



"This type of modernisation is a game-changer for both the integrator and the end user," explains Niclas Kristensson, Marketing Manager at Mitsubishi Electric. "By reducing installation time from weeks to days, we are not just selling products; we are delivering a competitive advantage."

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