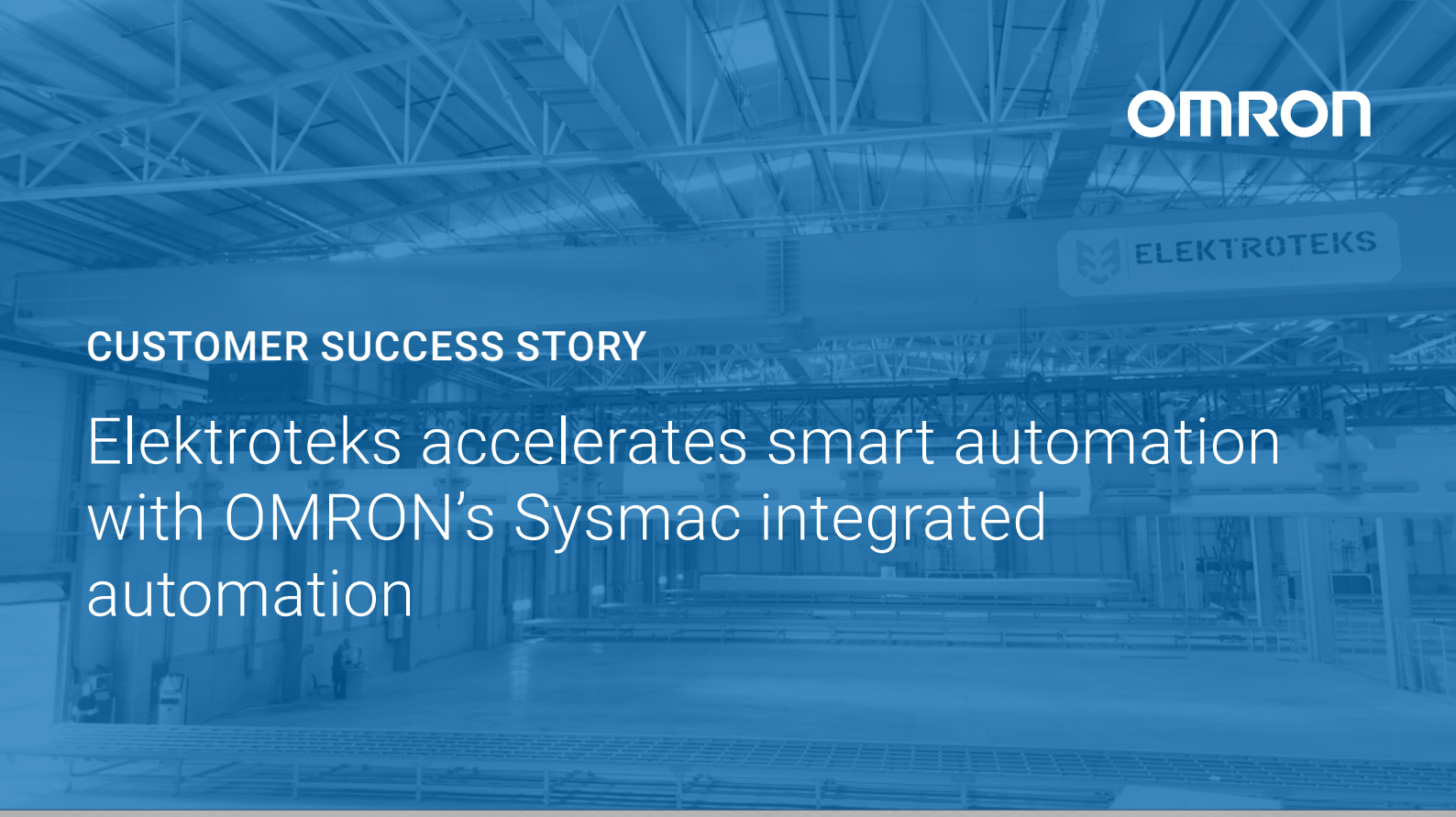


CUSTOMER SUCCESS STORY

Elektroteks accelerates smart automation with OMRON's Sysmac integrated automation

Elektroteks

Up to 50% faster cycle times
Anti-sway technology and synchronised motion control

Enhanced precision and repeatability
EtherCAT-synchronised multi-axis control

Real-time operational visibility
OPC UA integration for data-driven decisions

Click here for more information on Elektroteks

Key Benefits

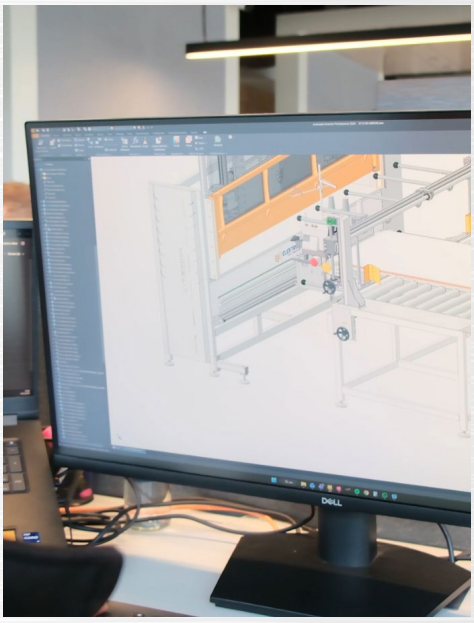
1. Centralised automation control through OMRON's Sysmac platform
2. Enhanced production speed with 40-50% improvements in specific applications
3. Superior precision and repeatability through synchronised EtherCAT communication
4. Faster assembly, fault diagnosis, and maintenance processes
5. Reduced equipment wear and maintenance costs through Anti-sway technology
6. Real-time operational data visibility via OPC UA integration
7. Modular and flexible machine architecture for customer-specific requirements

At a glance

Elektroteks, the world's largest mattress machinery manufacturer, has implemented OMRON's Sysmac-based Integrated Automation platform across its comprehensive range of production equipment.

Operating from five locations with a presence in over 120 countries, Elektroteks supplies quilting, border, and edge-stitching machines, complete automated mattress production lines, and advanced foam cutting and storage solutions.

By integrating OMRON's intelligent automation controllers, servo drives, inverters, and Anti-sway technology, Elektroteks delivers scalable solutions from individual machines to fully automated factory installations, establishing itself as the technology partner of choice for hundreds of manufacturers globally.



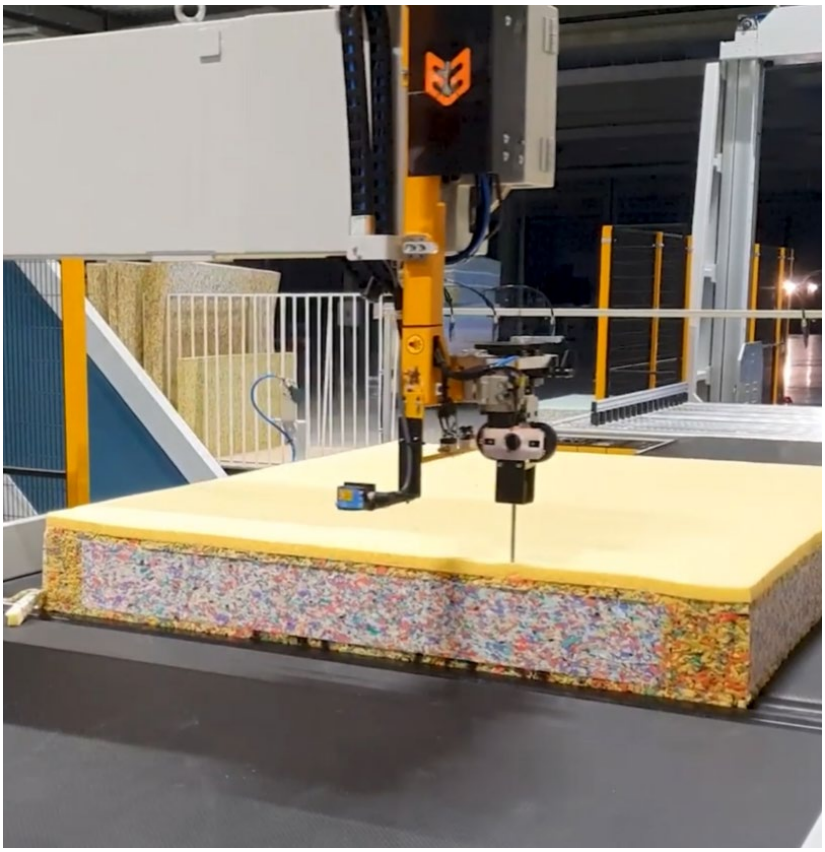
Our strong collaboration with OMRON makes this structure even more stable, reliable, and sustainable," Güler emphasises.

Elektroteks Machinery Achieves Enhanced Precision and Productivity with OMRON's Sysmac Integrated Automation

Elektroteks has established itself as a global leader in manufacturing machinery for the mattress production and foam sectors. The company's extensive portfolio spans quilting machines, border and edge-stitching equipment, packaging solutions, fully automated mattress production lines, integrated foam production facilities, storage solutions, and advanced foam cutting machinery.

"Our ability to offer scalable solutions, from a single machine to the full automation of an entire factory, allows us to provide our customers with a single point of service," explains Orhan Güler, CTO and Vice President of Elektroteks. "This makes Elektroteks the preferred technology partner for hundreds of factories around the world."

The company's approach combines technical excellence with customer-focused flexibility. Each machine is designed with high repeatability, long service life, low maintenance requirements, and consistent production quality. By working with a boutique, tailor-made engineering approach according to each customer's capacity and production model, Elektroteks delivers comprehensive technological infrastructure rather than simply equipment.



The challenge: Meeting Demanding Production Requirements

Modern mattress and foam manufacturing demands exceptional precision, speed, and reliability. Manufacturers require machinery that can deliver consistent quality across high-volume production runs whilst maintaining the flexibility to accommodate varying product specifications and production scales. The complexity of multi-axis systems, the need for synchronised motion control, and the imperative to minimise downtime present significant challenges.

Traditional approaches often struggle to balance these competing demands simultaneously, resulting in compromises in either throughput, quality, or operational safety. Additionally, operators need real-time visibility into production processes whilst physical material handling must balance speed with safety.

Having all devices synchronize via EtherCAT gives us high flexibility and modularity

The solution: OMRON Sysmac Integrated Automation Platform

Elektroteks has addressed these challenges by implementing OMRON's comprehensive automation ecosystem throughout its machinery range. The solution centres on a single automation controller that centrally integrates logic control, motion control, safety functions, and communication infrastructure on the Sysmac platform.

"Having all devices synchronize via EtherCAT gives us high flexibility and modularity," explains Tuba Yavuz, Product Marketing Manager at OMRON Industrial Automation Turkey. The company integrates OMRON servo drives, inverters, remote IO modules, and IO-Link solutions throughout its machines, whilst OPC UA integration creates secure, open data flow between IT and OT systems, enabling real-time monitoring of all operational data on a central platform.

The technical advantages are substantial. The interpolation capabilities of servo drives and inverters provide high accuracy and increased repeatability in multi-axis systems. Synchronising all devices via EtherCAT makes machines more modular, flexible, and efficient, significantly accelerating assembly, troubleshooting, and maintenance processes. In short, OMRON's integrated motion control both increases production speed and ensures product quality through precision and consistency.

Enhanced Safety and Efficiency Through Anti-sway Technology

For crane applications within Elektroteks machinery, OMRON's anti-sway technology has delivered measurable improvements in both safety and efficiency. The system continuously monitors load movement and instantly balances crane movements, making operations more stable and safer.

"Since the operator no longer needs to wait for the load to stop swinging, process times are shortened," explains Ramazan Erduran, Senior Field Application Engineer at OMRON Industrial Automation Turkey. "In some applications, we are seeing speed increases of up to 40-50%."

The technology enables quick and precise load positioning even in confined spaces. Reduced sway improves product quality whilst lowering equipment wear, which helps reduce maintenance costs. The result is a much more controlled, faster, and sustainable operation.

Measurable Benefits: Speed, Precision, and Reliability

The integrated motion control capabilities have elevated both production speed and product quality through enhanced precision and consistency. The modular architecture facilitated by EtherCAT synchronisation has streamlined maintenance and troubleshooting procedures, reducing downtime and associated costs.

Beyond operational efficiency, the anti-sway technology delivers safety improvements and equipment longevity. By minimising mechanical stress and reducing maintenance interventions, Elektroteks' customers benefit from lower total cost of ownership whilst maintaining higher throughput levels.

The platform's inherent flexibility allows Elektroteks to continue its tradition of bespoke engineering solutions without compromising on standardisation or reliability. Each customer receives machinery optimised for their specific requirements, backed by the proven performance of OMRON's integrated automation platform.

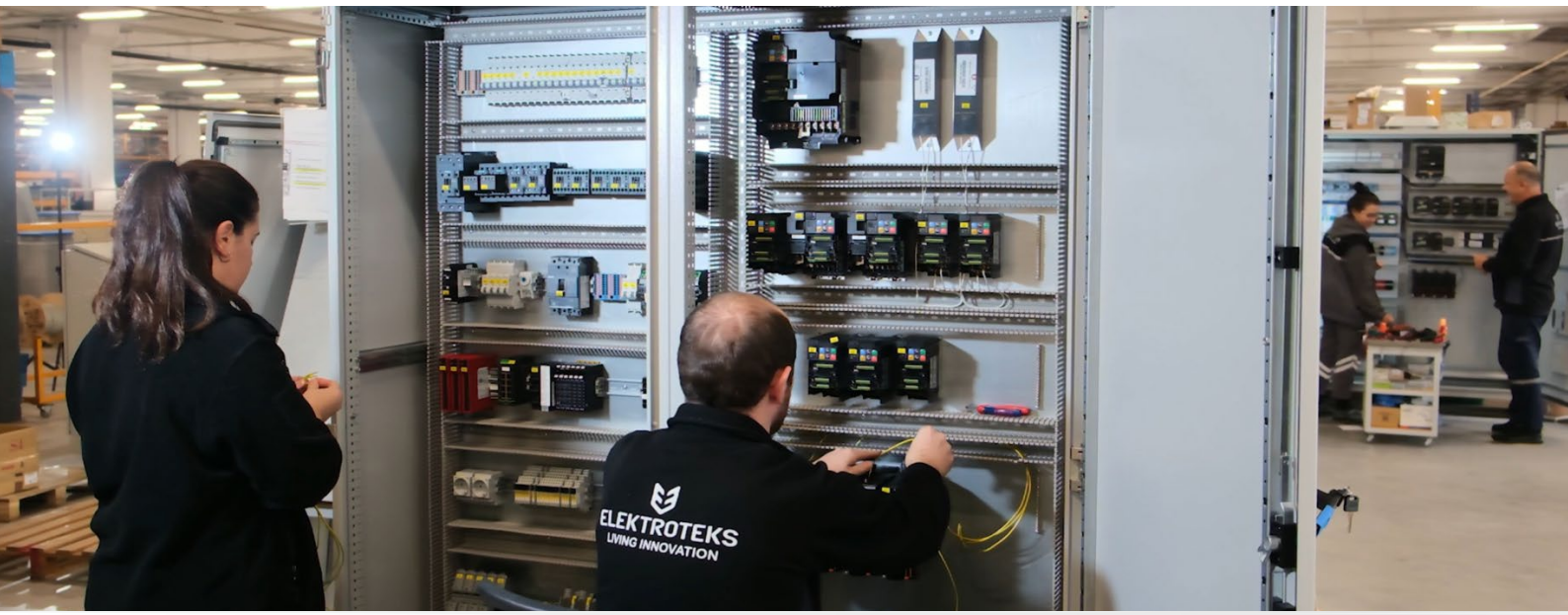
Future Outlook: Advancing Towards Intelligent Manufacturing

The collaboration between OMRON and Elektroteks plays a crucial role in the company's digitalisation and Industry 4.0 vision. Today, operational data collected from machines is monitored on centralised platforms, enabling more controlled management of production processes. This infrastructure forms the basis of a data-driven management culture in both mattress and foam production lines.

"In the coming period, we plan to make this data even more meaningful," states Orhan Güler. "Specifically, AI-powered analyses will provide new capabilities such as earlier detection of anomalies and proactive guidance to operators."

The company plans to strengthen its existing monitoring infrastructure with smarter visualisation dashboards and algorithms that can interpret production behaviours. The objective is transitioning to a structure where production performance is evaluated in real-time, potential risks are anticipated, and operators can make the right decisions instantly. OMRON's sensor technologies, motion control solutions, and data-driven automation approach provide a strong foundation for this transformation.

"By working with OMRON, we are moving away from systems that simply record or display data towards decision-making mechanisms that make production smarter, safer, and more sustainable," Güler concludes. "We believe this collaboration will create even greater value in the future in our journey towards digitalization."



Elektroteks
For more information, please visit: https://www.elektroteks.com/

About OMRON Corporation
Control + Think technology. OMRON is engaged in a wide range of businesses including industrial automation, healthcare, social systems, device & module solutions.

Established in 1933, OMRON has about 28,000 employees worldwide, working to provide products and services in more than 130 countries, contributing to the creation of a better society. For more information, please visit http://industrial.omron.eu