CUSTOMER SUCCESS STORY

Özgenç Makina achieves 30% higher throughput on door–window production machines

Özgenç Makina

Bursa,
Turkey

30% Higher production capacity

Superior precision & quality

Integrated operator safety

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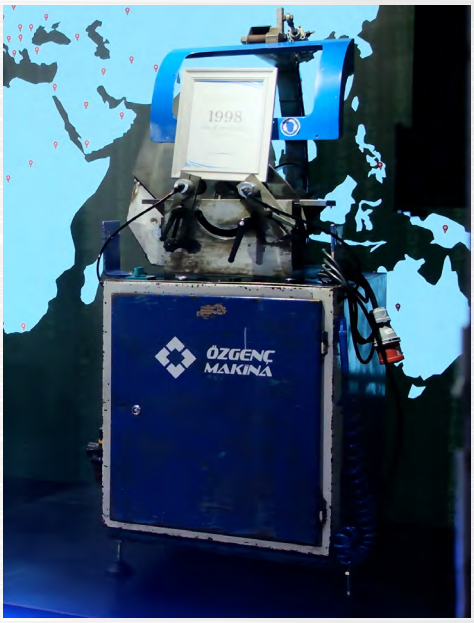
Key Benefits

1. Approximately 30% increase in machine production capacity
2. Reduced wiring and shorter assembly time thanks to EtherCAT
3. High-resolution servo drives ensure superior cutting and milling accuracy
4. Safety over EtherCAT architecture enhances operator and machine safety
5. Instant fault detection and faster maintenance with Sysmac Diagnostics
6. Modular, flexible, and reliable machine architecture via a unified Sysmac platform

At a glance

Özgenç Makina, a globally recognized manufacturer of PVC, aluminium, and wooden door–window production machines, transformed its next-generation equipment with OMRON's integrated automation technology.
By combining Sysmac machine controllers, servo drives, safety CPUs, laser sensors, and an EtherCAT-based network, all field devices now communicate through a single high-speed architecture. A PC interface developed by Özgenç enables real-time data exchange with the controller, improving visibility and responsiveness.
As a result, machine performance significantly increased: capacity rose by around 30%, wiring and assembly time were reduced, and accuracy and operator safety reached new levels. The company now benefits from a more modular, reliable, and globally competitive machine platform.



Özgenç Makina strengthened speed, accuracy, and modularity across its cutting, welding, cleaning, and machining centers.

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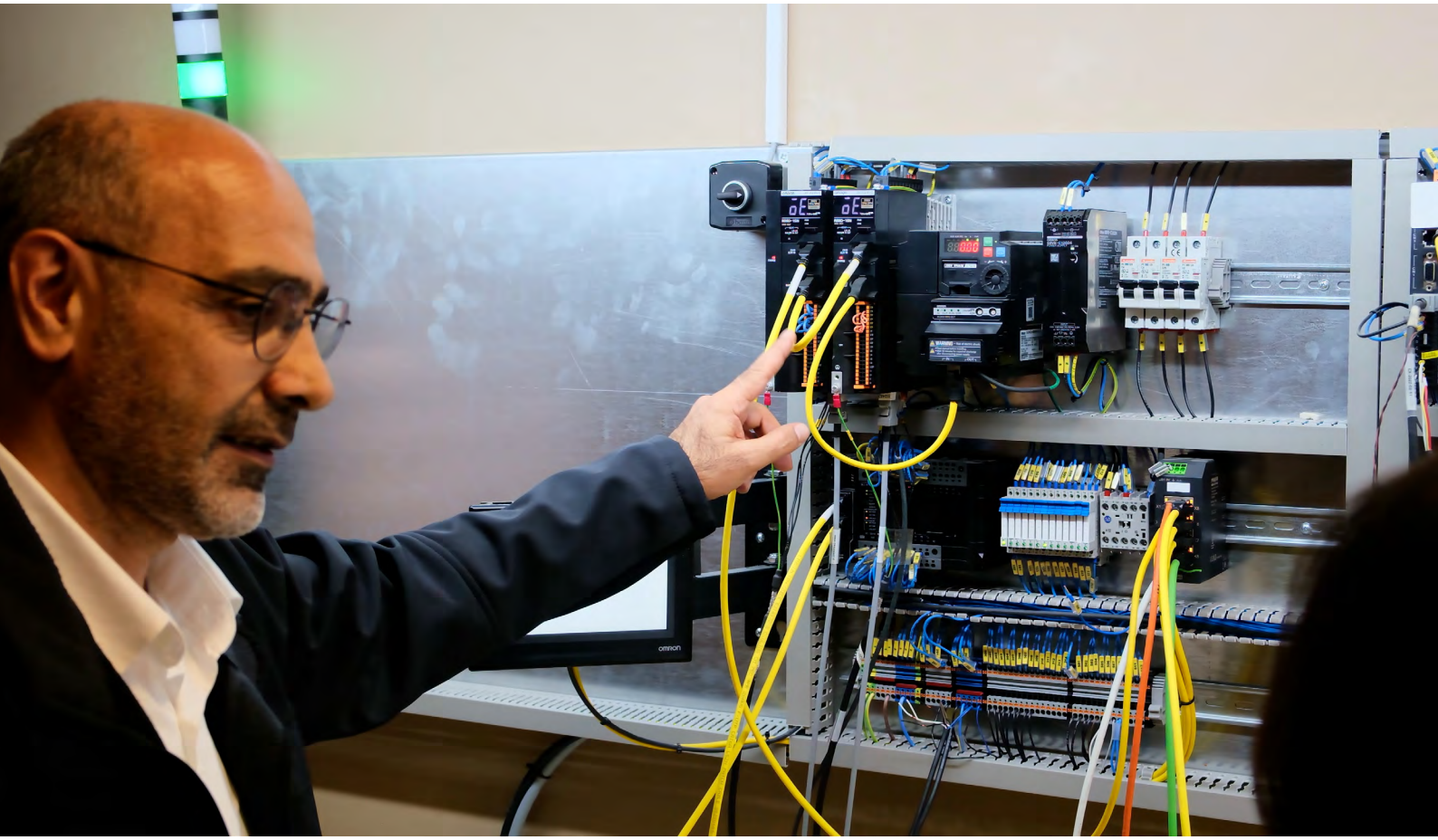
Integrated OMRON motion, safety, and real-time control enhance precision and reliability.

Özgenç Makina, a leading producer of PVC, aluminium, and wooden door–window machines with more than 45 years of expertise, has enhanced the performance of its new-generation equipment through OMRON's advanced automation technologies. Exporting to more than 100 countries, the company continues to develop highly precise, durable, and efficient solutions for global manufacturers. With OMRON's support, Özgenç Makina strengthened speed, accuracy, and modularity across its cutting, welding, cleaning, and machining centers.

The Challenge:
Increasing performance, accuracy, and safety in next generation machines

As Özgenç Makina modernized its equipment, it aimed to unify motion control, safety, and sensing technologies within a single architecture. Improving modularity and reducing wiring were also major priorities, as was enabling real-time data exchange between software and machine control systems.

Serkan Mışıl, General Manager of Özgenç Makina, describes the company's motivation for change: "Our collaboration with OMRON marked a new era in control and motion technologies. It allowed us to redesign our machines with a stronger focus on intelligence, safety, and efficiency." This shift required a technology partner capable of delivering a fully integrated, future-ready automation infrastructure.



The Solution:
High-speed EtherCAT, integrated motion and safety, and real-time data flow

To achieve this, Özgenç Makina deployed OMRON's Sysmac-based automation platform, integrating machine controllers, servo drives, remote I/O, safety CPUs, and laser sensors. The EtherCAT network architecture enabled all devices to communicate over a single high-speed channel, improving responsiveness, synchronization, and modularity.

Ramazan Erduran, Senior Field Application Engineer at OMRON Turkey, highlights the impact of this unified architecture: *"With our 'one controller, one network, one software' approach, logic control, motion, safety, robotics, vision, and HMI systems all operate from a single platform. At Özgenç Makina, this creates a fully integrated machine structure where motion and safety functions work seamlessly with every field device."*

He adds: *"The PC-based interface developed by Özgenç engineers communicates with the Sysmac controller in real time, which greatly enhances process visibility and coordination."* This integration empowered Özgenç Makina to design smarter, more flexible machines with simpler wiring, faster assembly, and improved reliability.

The Benefits: Higher capacity, better quality, enhanced safety, and faster maintenance

The transformation delivered measurable and immediate results. Production capacity rose by approximately 30%, while wiring and assembly time decreased significantly. High-resolution servo technology improved accuracy in cutting and milling tasks, and laser sensors ensured precise material positioning, leading to greater process stability.

Cem Yurdakul, Distribution Account Manager at OMRON Industrial Automation, explains: *"High-resolution servo drives delivered the accuracy needed for cutting and milling, while laser sensors guaranteed correct material positioning throughout the process. With the EtherCAT network, wiring decreased, assembly time shortened, and machine capacity increased by around 30%."*

Operator safety also advanced with integrated safety functions: *"Safety CPUs and the Safety-over-EtherCAT architecture created a fully unified safety environment,"* Yurdakul notes, *"and the Sysmac diagnostic interface detects faults instantly, which greatly reduces intervention time and speeds up maintenance."* Together, these improvements resulted in faster production cycles, greater reliability, and easier servicing.

The Future:
Laying the foundation for digital, connected and intelligent machines

The collaboration has established a strong basis for long-term digital transformation. Özgenç Makina plans to leverage advanced technologies such as predictive maintenance, energy monitoring, and cloud-based analytics to enhance machine intelligence and operational insight.

As Serkan Mışıl explains: “Our work with OMRON lays the foundation for the digital factories of the future. Technologies like predictive maintenance, energy monitoring, and data analytics will make our processes even smarter. Our next step is to integrate our machines into cloud-based platforms to increase efficiency even further.”
The company aims to continue developing smarter, more flexible, and safer machines in close partnership with OMRON.

About Özgenç Makina
For more information, please visit https://www.ozgencmakina.com

About OMRON Corporation
OMRON Corporation is a leading automation company with its core competencies in Sensing & 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