



Mitsubishi Electric Launches New Servo System

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New servo drive line addresses manufacturers' need for costeffective automation solutions

Mitsubishi Electric has introduced MELSERVO-JET, a new line of servo drive systems that enables manufacturers to implement advanced automation without significant investment. Amid ongoing economic pressures, this new solution allows for strategic production modernisation while maintaining budget control.



Image Caption: MELSERVO JET servo system [Source: Mitsubishi Electric Europe]



"MELSERVO-JET is designed for companies looking to make targeted automation improvements, for example faster more flexible production machines that maintaining or improve the production quality and whilst maintaining machine or production costs," explains Oliver Giertz, Strategic Product Manager for Servo & Robots at Mitsubishi Electric. "It responds to today's approach to automation investments, where quick and measurable return on investment is essential."

High efficiency without high investment

Deloitte's "2025 Manufacturing Industry Outlook" indicates that manufacturers continue to face high costs and market uncertainty, leading them to focus on automation technologies that offer clear and rapid ROI - MELSERVO-JET responds to this trend.

A faster, more accurate machine is one way to deliver this ROI and the extremely high positional accuracy needed to deliver improved product throughput, whilst maintaining or improving the product quality is through Mitsubishi Electrics high performance high accuracy servo systems.

The system delivers high positioning accuracy through encoders with resolution up to 24 bits and fast response (up to 3.2 kHz) for precise motion control. High overload capacity (up to 450%) and high inertia ratio (up to 1:25) allow for smaller drives while maintaining required performance, directly translating to cost savings.



Simplified installation approach

Engineering skill shortages mean manufacting and commissioning needs to be completed sometime with less skilled people. MELSERVO-JET reduces assembly time through a simple installation concept. At the core of this approach are the multi-axis drives, which reduce overall wiring requirements. This reduction in wiring complexity is further enhanced by the one-cable motor solution that consolidates power and feedback signals into a single connection. Building upon these efficiencies, the system incorporates network-based safety features that replace conventional safety wiring altogether. At the end, these design elements create an installation process that balances technical sophistication with practical simplicity.

"MELSERVO-JET systems address common challenges faced by manufacturers," says Oliver Giertz from Mitsubishi Electric. "Features like automatic motor detection and auto-tuning make the system accessible even for companies taking their first steps in advanced automation. The One-Touch Tuning function is particularly valuable, as it adjusts system settings in just 0.3 seconds, requiring less specialist knowledge and helping companies cope with skilled worker shortages."

Industry 4.0 compatibility

Mitsubishi Electrics range of MELSERVO-JET servo systems integrate fully into several motion-centric networks such as CC-Link IE TSN and EtherCAT thus supporting supports modern manufacturing seamless factory integration.



These connections enable integration with manufacturing execution systems and enterprise planning platforms, supporting data collection for predictive maintenance and process optimisation—key capabilities for manufacturers moving towards data-driven operations.

The MELSERVO-JET range

MELSERVO-JET features a compact design, simplified setup and flexible implementation options. The system offers power ranging from 0.1 kW to 3.0 kW" for 200V versions and the 400V versions are available from 0.6kW to 7kW, making it suitable for various industrial applications. The smallest models, such as the MR-JET-40G measuring just 40 x 196 x 205 mm, save valuable space in control cabinets while maintaining high performance.

Sources:

Deloitte's "2025 Manufacturing Industry Outlook": <u>2025 Manufacturing</u> Industry Outlook | Deloitte Insights





About Mitsubishi Electric Corporation

With more than 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognised world leader in the manufacture, marketing, and sales of electrical and electronic equipment used information and in processing communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation, and building equipment. Mitsubishi Electric enriches society with technology in the spirit of its "Changes for the Better." The company recorded a revenue of 5,521.7 billion yen (U.S.\$ 36.8 billion*) in the fiscal year ended March 31, 2025. For more information, please visit www.MitsubishiElectric.com

*U.S. dollar amounts are translated from yen at the rate of ¥150=U.S.\$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2025.

For more information, please visit <u>www.MitsubishiElectric.com</u>.

About Mitsubishi Electric Factory Automation Business Group

Offering a vast range of automation and processing technologies, including controllers, drive products, power distribution and control products, electrical discharge machines, electron beam machines, laser processing machines, computerised numerical controllers, and industrial robots, Mitsubishi Electric helps bring higher productivity – and quality – to the factory floor. In addition, its extensive service networks around the globe provide direct communication and comprehensive support to First released in English: 24/06/2025



customers. The global slogan "Automating the World" shows the company's approach to leveraging automation for the betterment of society, through the application of advanced technology, sharing knowhow, and supporting customers as a trusted partner.

For more about the story behind "Automating the World" please visit:

www.MitsubishiElectric.com/fa/about-us/automating-the-world

Factory Automation EMEA

Mitsubishi Electric Europe B.V., Factory Automation EMEA has its European headquarters in Ratingen near Dusseldorf, Germany. It is a part of Mitsubishi Electric Europe B.V. which has been represented in Germany since 1978, a wholly owned subsidiary of Mitsubishi Electric Corporation, Japan. The role of Factory Automation EMEA is to manage sales, service, and support across its network of local branches and distributors throughout the EMEA region.

For more information, please visit emea.mitsubishielectric.com/fa

About e-F@ctory

e-F@ctory is Mitsubishi Electric's integrated concept to build reliable and flexible manufacturing systems that enable users to achieve many of their high-speed, information-driven manufacturing aspirations. Through its partner solution activity, the e-F@ctory Alliance, and its work with open network associations such as the CC-Link Partners Association (CLPA), users can build comprehensive solutions based on a wide-ranging "best First released in English: 24/06/2025



in class" principle.

In summary, e-F@ctory and the e-F@ctory Alliance enable customers to achieve integrated manufacturing but still retain the ability to choose the most optimal suppliers and solutions.

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