

Press Release

Premiere at SPS 2025: Lenze presents the new m650-F inverter-optimized motor

Nuremberg/Hameln, 25 November 2025: Lenze is presenting its new m650-F inverter-optimized motor for the first time at this year's SPS in Nuremberg. The new model is based on the m500 motor platform and impresses with its compactness, wide speed control range and a comprehensive range of options such as spring-applied brakes or integrated incremental encoders. In combination with gearboxes and decentralized frequency drives from Lenze's i-series, the result is a powerful, reliable and space-saving drive system for sophisticated machine automation.

Innovative motor technology for maximum efficiency

The m650-F has been specially developed and optimized for operation with frequency drives. Compared to conventional three-phase AC motors, it is two sizes smaller, offers a low moment of inertia with high overload capacity and a large speed setting range of 1:24. The robust design, integrated spring-applied brakes for emergency stops and space-saving incremental encoders installed in the end shield underline the versatility of the motor.

Compact system: motor, gearbox and drive from a single source

The m650-F can be mounted directly on the motor terminal base with suitable gearboxes and the decentralized i550 and i650 motec frequency drives from Lenze.

The direct gearbox mounting with central thread reduces the installation space and enables flexible machine concepts.

The frequency drives are already set to the motor parameters at the factory, which simplifies commissioning and prevents incorrect parameterization.

As an option, the signals from the incremental encoder can be read directly into the drive and forwarded to the machine controller - for continuous, efficient signal processing. With all these features, the m650-F is predestined for demanding applications such as winders, shuttles, hoists, dynamic conveyor drives, in-feed/out-feed conveyors, format adjustment drives, palletizers or film wrappers.

"With the new m650-F, we are continuing our success story for compact, dynamic and energy-efficient drive solutions in machine automation. Our customers benefit from maximum flexibility and a significant reduction in the number of variants," concludes Thorben Steinmann, Head of Product Management Electromechanics.

About Lenze

Lenze is a leading drive specialist for machine and plant engineering. For more than 75 years, the company has been a pacemaker and strong partner at its customers' side. With the help of the triad of electromechanics, electronics and software, Lenze accompanies its customers and helps them to optimize production and logistics processes, cut costs and reduce their energy consumption.

The Lenze Group, based in Aerzen, employs more than 3,600 people worldwide and is represented in 45 countries. Group-wide, the company generated a turnover of 828 million euros in the 2023/2024 financial year.

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