

Press release

Planetary gear unit and motor in one

With PxG® integrated, SEW-Eurodrive combines its PxG® precision planetary gear unit with a servomotor to form a compact unit

Bruchsal/Hanover 2025 – The new PxG® integrated precision planetary gearmotor can be seen at the HANNOVER MESSE in an interactive tripod model. The very short, compact and low-inertia drive is ideal for this highly dynamic application. However, the application is just one of many possible applications. Wherever only planetary right-angle gear units were used for tight spaces and high dynamic requirements, PxG® integrated now brings real advantages and new opportunities to machine builders and users.

The PxG® integrated series combines PxG® planetary gear units and CM3G.. to a unit. Compared to conventional planetary servo gearmotors, the compact drive is up to 40 percent shorter at comparable peak torque. This extremely short length reduces inertia and enables very high dynamics. The extremely compact design also saves a lot of space and allows the gearmotors to be flexibly adapted to many system layouts.

Precision planetary gearmotors of the PxG® integrated series are also powerful, efficient and can increase productivity by up to 34 percent in short-cycle applications. The PxG® integrated performs movements precisely and dynamically in the tightest of spaces, making it ideal for use in packaging machines, food production, metal processing and handling.

In wire and tube bending machines, the new compact gearmotors improve bending accuracy and help increase throughput. The space available in a chain magazine or tool changer is particularly tight. The advantage of the short length is particularly important here. High overload capacity and power density are important characteristics here, for example, for achieving synchronized and precise positioning. High-speed handling and limited space are the typical features of a delta robot. This is where the high dynamics and precision of the PxG® integrated series come to bear. Well over 200 picks per minute are no problem for these gearmotors.

“The entire PxG® modular gear unit system also ensures a high degree of flexibility for the customer, enabling a wide range of combinations,” stresses Dr. Petr Osipov, system engineer at SEW-Eurodrive. “For example, output designs such as flange block or solid shaft are also optionally available in stainless steel. All lubricants contained in the PxG® modular system can also be used.”

Image

PxG® integrated

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The use of the latest winding and magnet technologies in the synchronous servomotor integrated in the PxG® is also to be highlighted. In combination with the high-performance materials used, a high efficiency with reduced heat generation is achieved despite the compact design. The components have also been optimized in terms of acoustics. Together with the highly precise helical-gearing planetary gear units of the PxG® series, this ensures low-noise operation.

Flexible motor – prepared for modern requirements

PxG® integrated also offers numerous options for different application requirements on the motor side. A wide range of encoder systems are available that enable precise position feedback and flexible system integration. For additional safety requirements, the gearmotor can optionally be equipped with a holding brake.

In addition, the series is future-proof: Further sizes are already in preparation, as is the integration of 48 V technology – ideal for applications with limited energy requirements or specific grid conditions. Single-cable technology is also provided for simplified wiring and space-saving installation. This means that PxG® integrated offers maximum flexibility for modern mechanical engineering, not only mechanically but also electrically.

About SEW-EURODRIVE

Founded in 1931, SEW-EURODRIVE GmbH & Co KG is a family business headquartered in Bruchsal, near Karlsruhe, in the Baden-Württemberg region of Germany. Today, SEW-EURODRIVE is one of the world's leading specialists in drive and automation technology, with more than 22 000 employees, 17 production plants, and 92 Drive Technology Centers in 57 countries.

As a market leader in its field, SEW-EURODRIVE keeps applications, processes, systems, and machinery moving in countless sectors – from airport logistics to industrial processes. With around 800 employees working in research and development, the company is making an innovative contribution to shaping the future of drive technology.

Proximity to customers is one of SEW-EURODRIVE's top priorities. An extensive sales and service network provides professional advice on site and ensures the rapid availability of spare parts and repairs – anywhere in the world.

Alongside its headquarters and production facilities in Bruchsal and its plant in Graben-Neudorf, the company operates 30 other sites across Germany. SEW-EURODRIVE has also had a presence in Canada, the partner country for HANNOVER MESSE 2025, for over 50 years. Its headquarters there are in Toronto.