

Press Release

Schaeffler at Hannover Messe 2022, hall 6, booth C48

Sensor-Based Precision Strain Wave Gears – Considerable Potential for the Cobot Market

SCHWEINFURT, 2022-04-06.

- Integrated torque sensor technology – requires no additional installation space
- Overall system rigidity remains unaffected by the sensor system
- Inexpensive alternative to 6-axis force torque sensors

Schaeffler RT precision strain wave gears have been developed for demanding and particularly dynamic applications featuring a high level of torque. The precision strain wave gears are now available with the added option of a fully integrated torque sensor system, which delivers high-precision torque signals without the need for additional installation space or any resulting loss of rigidity in the overall mechanical system. A durable sensor solution suitable for volume application has been unavailable in the market to date – a gap which Schaeffler has now succeeded in closing with its sensor-based precision strain wave gears. Unlike other solutions available on the market, the torque sensor structure in sensor-based strain wave gears is applied to the flexspline on a permanent basis using thin-layer technology. The sensor system not only supports safety functions but also provides precise, sensitive position and process control. The torque signals can also be used in the development of an active vibration compensation system, with the aim of achieving shorter transient response times for highly dynamic motion profiles.

Schaeffler Group – We pioneer motion The Schaeffler Group has been driving forward groundbreaking inventions and developments in the field of motion technology for over 75 years. With innovative technologies, products, and services for electric mobility, CO₂-efficient drives, chassis solutions, Industry 4.0, digitalization, and renewable energies, the company is a reliable partner for making motion more efficient, intelligent, and sustainable – over the entire life cycle. The motion technology company manufactures high-precision components and systems for drive train and chassis applications as well as rolling and plain bearing solutions for a large number of industrial applications. The Schaeffler Group generated sales of EUR 15.8 billion in 2022. With around 84,000 employees, the Schaeffler Group is one of the world's largest family-owned companies. With more than 1,250 patent applications in 2022, Schaeffler is Germany's fourth most innovative company according to the DPMA (German Patent and Trademark Office).

New precision strain wave gear from Schaeffler with integrated torque sensor system

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