

Press Release

GPS-supported tracking in large size bearings logistics – Schaeffler expands smart box system

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- GPS trackers collect location and environmental data for optimized logistics processes
- Large bearings in the wind power sector can be traced more precisely
- Around 300 GPS trackers already in use at Schaeffler

Schaeffler is now focusing on digital traceability in the logistics of large size bearings. The focus is on expanding the existing smart box system to include GPS-based positioning technology. The new function will be used as part of a proof-of-concept in the field of large bearing applications for wind power with the aim of being able to trace products more precisely and to use resources along the supply chain more transparently.

"Thanks to GPS tracking, the smart box becomes an intelligent information carrier. The real-time transparency makes it possible to monitor warehouses seamlessly during transport. This enables us to make logistics processes even more efficient, sustainable, and safer," emphasizes Slawomir Maiczek, who is responsible for the project at Schaeffler's Bearings & Industrial Solutions Division.

Reusable transport boxes for large size bearings

Schaeffler introduced the smart box system back in 2021. The so-called smart boxes are modular reusable transport containers designed for the shipment of rolling bearings with a large outer diameter. They replace disposable boxes and support the resource cycle thanks to their reusability. The boxes are based on the dimensions of a Euro pallet and can be stacked. The uniform design enables simplified warehousing and reduces the complexity of packaging and return transport.

GPS tracking for optimized logistics

Adding GPS trackers to the system has several advantages. The focus is on tracking the physical location of the boxes, especially with regard to turnaround times, downtimes and return processes. The information obtained from the trackers allows data-supported control of delivery and return logistics.

In addition to positioning, the trackers also record other physical variables such as temperature, humidity and acceleration. This data provides information about

environmental conditions and possible effects during handling and transport. This can be used to derive how the product is handled along the supply chain.

A total of around 300 GPS trackers are currently in use at Schaeffler. The focus is on the transport of main bearing applications in the wind power sector. The asset tracking solution comes from the German provider SmartMakers. The GPS trackers enable precise positioning and regularly send data to an IoT platform.

The tracking system has been extensively tested and continuously optimized at Schaeffler during ongoing operations for two years. The combination of modular packaging solution and IoT tracking offers a scalable approach to process optimization in industrial freight transport.

Schaeffler Group – We pioneer motion: The Schaeffler Group has been driving forward groundbreaking inventions and developments in the field of motion technology for 80 years. With innovative technologies, products, and services for electric mobility, CO₂-efficient drives, chassis solutions and renewable energies, the company is a reliable partner for making motion more efficient, intelligent, and sustainable – over the entire life cycle. Schaeffler describes its comprehensive range of products and services by means of eight product families: From bearing solutions and all types of linear guidance systems through to repair and monitoring services. Schaeffler is with around 110,000 employees and more than 250 locations in 55 countries, one of the world's largest family-owned companies and one of Germany's most innovative companies.

Schaeffler introduced the smart box system back in 2021. The so-called smart boxes – now expanded to include GPS trackers – are modular reusable transport boxes designed for shipping rolling bearings with a large outer diameter. Image: Schaeffler

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The asset tracking solution comes from the German provider SmartMakers. The GPS trackers enable precise positioning and regularly send data to an IoT platform. Image: Smart Makers

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