

Hannover Messe 2024, Hall 9, Booth 53

Siemens Xcelerator for Digital Drivetrain: Comprehensive digitalization offering along the drivetrain value chain for greater efficiency and sustainability

- **Siemens presents innovations in Drivetrain Design and Drivetrain Health at Hannover Messe**
- **DriveSim Engineer for efficient selection, validation, virtual commissioning, and optimization of drivetrain systems**
- **Intelligent condition monitoring for a healthy drivetrain with Drivetrain Analyzer Cloud and Drivetrain Analyzer X tools**

At this year's Hannover Messe, Siemens is presenting *Siemens Xcelerator for Digital Drivetrain*, its comprehensive and integrated digitalization offering along the drivetrain value chain comprised of two areas: Drivetrain Design (dimensioning and simulation) and Drivetrain Health (connectivity and optimization).

Drivetrain Design includes engineering and simulation tools for the efficient dimensioning, validation, testing, virtual commissioning, and optimization of drivetrains in the design phase of a machine or system.

Drivetrain Health offers hardware- and software-based sensor and connectivity solutions for data acquisition as well as coordinated analysis software tools. These tools provide insights into the behavior of the drivetrain and enable powerful condition monitoring. Siemens is thus demonstrating how customers can combine the real and digital worlds of drive technology to achieve efficiency and sustainability along the entire drivetrain value chain.

DriveSim Engineer for efficient selection, validation, virtual commissioning, and optimization of drive systems

In the area of simulation and virtual commissioning, Siemens is launching DriveSim Engineer, the successor to DriveSim Advanced. DriveSim Engineer makes it possible to create a digital twin of the drive in a virtual environment with all the parameters and configurations that correspond to the real drive. In addition to the new SINAMICS S210 series, the new SINAMICS G220 frequency converters are now also available in the tool. The digital twin technology and intuitive user interface allow users to simulate, commission, and optimize the behavior of drive systems in a virtual environment before installing them in the real world. This significantly increases efficiency and productivity in the engineering of drive systems and machines. Thanks to its integration in TIA Portal (Startdrive), DriveSim Engineer is a seamless part of (virtual) commissioning and makes training in additional tools superfluous. Users benefit from shorter commissioning times, more accuracy in detecting and resolving potential problems with drive systems, and real-time insights and analyses for improving the overall performance of drive systems.

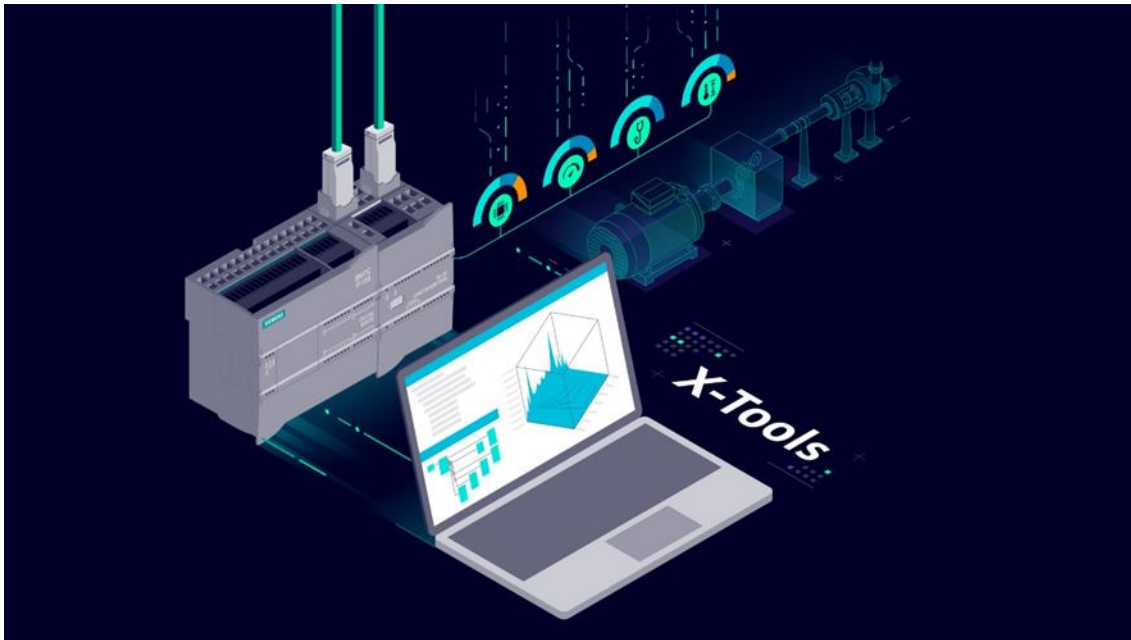
Intelligent condition monitoring for a healthy drivetrain

Siemens is presenting two intelligent solution packages for high-performance condition monitoring: a cloud-based solution and a PC-based solution. The two complement each other and can be used according to requirements. With Drivetrain Analyzer Cloud, Siemens combines the two applications Analyze MyDrives and Sidrive IQ Fleet into one innovative app. In addition to a new user interface, Drivetrain Analyzer Cloud offers users the option of connecting various drive components such as frequency inverters, motors, or other rotating machines to a drivetrain and monitoring the drivetrain's status. Another new product is the Connection Module IOT (CM IOT), which can be installed and put into operation in just a few minutes. Highlights include the improved, additional sensor technology, the new alternative energy concept via an external 24 V connection, and a housing and component update. The module measures raw data and automatically transfers it to the cloud. Drivetrain Analyzer Cloud provides immediate information about anomalies and specific error patterns such as bearing damage, imbalances, or misalignments, thereby helping to prevent unplanned downtime. The cost-efficient solution combines condition monitoring with decarbonization by supplying the user with important additional data and recommendations for action regarding CO₂ emissions, energy consumption, and

energy costs. Another new feature is pump analytics, which Drivetrain Analyzer Cloud can use to calculate and analyze system efficiency and specific pump parameters.

In addition to the cloud solution, Siemens is also presenting another new product, a PC-based condition monitoring solution consisting of three components: the new VIB (Vibration) and FPP (Fast Process Parameters) (CM FPP) connection modules, the Drivetrain Analyzer X-Tools software, and the corresponding sensors and sensor cables. The CM VIB and CM FPP connectivity modules record vibration and analog signals at a sampling rate of 96 kHz. All sensor information can be recorded and transmitted synchronously. Now users can also analyze high-speed, intermittent machines such as automotive presses, cranes, or machine tools with two synchronous axes. Drivetrain Analyzer X-Tools is an expert tool for highly dynamic data acquisition up to 192 kHz as well as for manual data analysis. Because X-Tools can connect to almost any data source, users can ideally use X-Tools as an analytics toolbox to link their own analytics with elements of a preconfigured library. For example, the software can be used to monitor bearing temperature, housing vibrations, and oil lubrication, meaning pressure and flow, in heavy machinery equipped with plain bearings. In this way, Drivetrain Analyzer X-Tools and the new connectivity modules contribute to higher machine availability, better performance, and a longer system service life.

With *Siemens Xcelerator for Digital Drivetrain*, Siemens is introducing a comprehensive range of IoT-capable hardware and software for the entire drivetrain from the Siemens Xcelerator portfolio – for the first time at the Hannover Messe.



A new PC-based condition monitoring solution consisting of three components: the new VIB (Vibration) and FPP (Fast Process Parameters) (CM FPP) connection modules, the Drivetrain Analyzer X-Tools software, and the corresponding sensors and sensor cables.

This press release and press pictures are available at <https://sie.ag/3myjao>

Further information on Siemens at Hannover Messe 2023 at www.siemens.com/press/hm24 and www.siemens.com/hannover-messe

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Siemens Digital Industries (DI) is an innovation leader in automation and digitalization. Closely collaborating with partners and customers, DI drives the digital transformation in the process and discrete industries. With its Digital Enterprise portfolio, DI provides companies of all sizes with an end-to-end set of products, solutions, and services to integrate and digitalize the entire value chain. Optimized for the specific needs of each industry, DI's unique portfolio supports customers to achieve greater productivity and flexibility. DI is constantly adding innovations to its portfolio to integrate cutting-edge future technologies. Siemens Digital Industries has its global headquarters in Nuremberg, Germany, and has employed around 72,000 people internationally.

Siemens AG (Berlin and Munich) is a leading technology company focused on industry, infrastructure, transport, and healthcare. From more resource-efficient factories, resilient supply chains, and smarter buildings and grids, to cleaner and more comfortable transportation as well as advanced healthcare, the company creates technology with purpose adding real value for customers. By combining the real and the digital worlds, Siemens empowers its customers to transform their industries and markets, helping them to transform the everyday for billions of people. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a globally leading medical technology provider shaping the future of healthcare.

In fiscal 2023, which ended on September 30, 2023, the Siemens Group generated revenue of €77.8 billion and net income of €8.5 billion. As of September 30, 2023, the company employed around 320,000 people worldwide. Further information is available on the Internet at www.siemens.com.