

## Press release

### **Production measurement technology with new functionalities for higher product quality – Kistler at the SPS 2024**

Efficient process monitoring for e-mobility and electrical engineering as a key focus

Winterthur, October 2024

**Visitors to the SPS 2024 (November 12 to 14 in Nuremberg, Germany) will have the chance to experience user-friendly production measurement technology for every process step: at the SPS 2024, Kistler will showcase its customizable solutions for process monitoring and quality assurance in demanding industrial production applications at booth 410 in hall 7A. On display will be a broad portfolio ranging from sensors and amplifiers to integrated mounting solutions. This includes innovations such as the KiTorq 4552A torque flange and extended versions of the maXYmos TL, NC and BL process monitoring systems.**

The Kistler solutions featured at the SPS 2024 allow users in the e-mobility and electrical engineering industries to design process monitoring systems, optimize manufacturing processes with a special focus on resource efficiency, and precisely test the performance of finished products.

#### **Simple and accurate torque and angle measurement with the new KiTorq torque measuring system**

The **new KiTorq 4552A measuring system** for development and EOL testbench applications analyzes the efficiency of electric drives or pumps by measuring not only the motor's torque, but also its speed and angle of rotation. It provides highly accurate torque measurements at up to 30,000 rpm and can determine the angle of rotation to within 0.01° – thanks to its integrated angle sensor, which saves valuable bench space. The KiTorq 4552A records data in two calibrated measurement ranges which can be defined individually. Users can transfer collected data via Ethernet and fieldbus interfaces, which also helps preventing external interference and data loss.

In addition, Kistler has increased the air gap between the rotor and stator to up to 5.0 millimeters and eliminated the interfering antenna ring, making it easier to access for maintenance purposes and to replace the rotor and stator. The torque measuring system can measure up to five rotors simultaneously. The rotors and stators are calibrated separately, but their parameters are swapped automatically. This means that users do not need to perform any further calibration and can quickly and easily continue their measurements.

### **Production measurement technology with flexible connectivity options for precise data acquisition**

At the event, Kistler will also highlight further solutions for simple and precise data acquisition in a wide range of production environments. The **ICAM-B 5073B charge amplifier** offers individually configurable channels, and calculates and weighs the input signals, allowing it to be adapted precisely and flexibly to the user's requirements. Machine monitoring based on process thresholds defined in the ICAM-B can help prevent unexpected failures, reduce downtime, and extend machine life. The **handheld charge amplifier family** includes the 5811A00 and 5811A01 mobile units – each with a built-in charge amplifier, integrated data acquisition and optional insulation testing. These two features make it possible to compare and verify data from sensors in the machines directly on the shopfloor, without the need for time-consuming disassembly. The measured values can not only be recorded and stored in the unit but can also be displayed directly as a graph on the integrated touchscreen. In turn, the **strain gauge amplifier 4709A** with IO-Link interface features a robust design for extreme environments and offers a low-pass filter, peak value memory, and sample-and-hold function, as well as advanced diagnostics and fault detection for accurate, reliable data acquisition with a sampling rate of 8 kS/s and ADC resolution of 24 bits.

### **Customized joining systems for demanding applications**

At the SPS 2024, Kistler will also present two examples of electromechanical joining systems that can be used as individual components or as complete systems integrated in a Smart Single Station. Like all electromechanical systems from Kistler, the **NCFE 2/5 joining module** is particularly energy-efficient, especially in comparison to pneumatic versions. Thanks to its integrated sequence control, it is also exceptionally user-friendly and allows quick and easy integration into the process environment. The NCFE 2/5 is, for example, ideal for fitting magnets and bearing presses for electric motors. The **NCFC joining module**, which will be demonstrated in a clinching application at the booth, features a compact and lightweight design allowing users to deploy it even in confined production environments or moving robotic arms.

### **Enhanced functionalities of the latest maXYmos process monitoring systems for even higher product quality**

Complex testing and assembly processes can be precisely monitored with the members of the maXYmos family, which can also be used to assess product quality.

The **maXYmos 1.9.2 TL / NC** version includes reset-measure-jump compensation for small force measurements, as well as separate taring for the sensors and an enhanced envelope curve function for steeper slopes. The system also offers an extended license package that doubles the number of evaluation windows available for even more accurate process monitoring. User-friendly multi-point

calibration with up to 31 calibration points increases the linearity of force measurement over the entire measurement range, allowing measurements to be more precisely matched to process requirements. Features such as the revised LDAP, OPC UA interface, audit trail and QualityWorX integration ensure centralized user management and easy integration into existing structures.

The **new maXYmos BL - 5867C process monitoring system** will join the maXYmos family in the first quarter of 2025, bringing significant improvements. The larger, capacitive display combines better readability with improved ease of use. The new USB port enables convenient transfer of backup/restore data and storage of recorded measurement data, while also supporting barcode readers. New are also licenses that allow the device functionality to be expanded into new areas: access protection with individual user groups (also via LDAP function), IIoT connectivity via OPC UA, as well as a sequencer mode, support integrated process control. The latest generation of the process monitoring system focuses on system integration via Industrial Ethernet.

### **Customized measurement data analysis solutions with MaDaM and jBEAM for machine manufacturers and end users**

Kistler's measurement data management software MaDaM and measurement data analysis and visualization software jBEAM are reliable partners for evaluating all collected data. Not only are they excellent choices for managing and evaluating manufacturers' own data; machine builders can also integrate them into their machines as analysis templates. Working together with Kistler's experts, customized templates can also be developed and delivered with the machine. The templates allow end users to perform interactive measurement data analyses, benefit from automatic report generation, and create guides to lead users through the analysis. The service is also available at SPS.

### **Image material (please name the Kistler Group as picture source)**

To download the images in a high resolution, please follow the link:  
<https://app.kistler.celum.hosting/pinaccess/showpin.do?pinCode=X3C8R6c3l6F0>



Production measurement technology for electric motors: The new KiTorq 4552A torque measuring system from Kistler enables precise torque and angle measurements at up to 30,000 rpm. Thanks to its integrated sensor, it saves space and can be used flexibly with up to five rotors.



On-site quality monitoring: Thanks to the handheld charge amplifiers / insulation testers 5811A00 and 5811A01, process parameters can be captured, compared, verified, stored, and conveniently displayed on the touchscreen directly at the machine.



Process monitoring system with new functionalities: Starting in the first quarter of 2025, the maXYmos BL - 5867C will offer improved readability and easier operation, USB data storage, and extended licensing options for an enhanced user experience.



The NC joining module NCFC 2163A with integrated strain gauge force sensor for nominal joining forces of 55 kN (size 1) and 80 kN (size 2) ensures maximum product quality in automated assembly and joining processes thanks to force-displacement monitoring. The weight-optimized joining module with minimal space requirements is designed for confined production environments and for optimal weight and center of gravity design on the robot arm.



Data-driven quality monitoring: Kistler's MaDaM measurement data management and jBEAM measurement data analysis software enable efficient data analysis and can be easily integrated into machines to create interactive analyses and automatic reports.

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#### About the Kistler Group

Kistler is the global market leader for dynamic pressure, force, torque and acceleration measurement technology. Cutting-edge technologies provide the basis for Kistler's modular solutions. Customers in industry and scientific research benefit from Kistler's experience as a development partner, enabling them to optimize their products and processes so as to secure

sustainable competitive edge. Unique sensor technology from this owner-managed Swiss corporation helps to shape future innovations not only in automotive development and industrial automation but also in many newly emerging sectors. Drawing on our extensive application expertise, and always with an absolute commitment to quality, Kistler plays a key part in the ongoing development of the latest megatrends. The focus is on issues such as electrified drive technology, autonomous driving, emission reduction and Industry 4.0. Some 2,200 employees at more than 60 facilities across the globe are dedicated to the development of new solutions, and they offer application-specific services at the local level. Ever since it was founded in 1959, the Kistler Group has grown hand-in-hand with its customers and in 2023, it posted sales of CHF 465 million. About 9% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.