

## Press release

### **SPS 2023: Individual paths to efficient automation**

Kistler shows user-friendly measurement technology for resource-efficient manufacturing processes

Winterthur, October 2023

**Putting users first: The [Kistler Group](#) will be presenting its extensive portfolio of production measurement technology and joining systems for industrial automation at SPS Messe 2023 in Nuremberg from November 14 to 16. The focus at booth 410 in hall 7A will be on the quality of sensitive production steps, comprehensive and configurable data collection and analysis, along with seamless process monitoring.**

When developing their factories to become smart, companies must consider various factors such as the degree of digitization and standardization of their production, but also resource efficiency. Complex industrial production processes, regulatory requirements and budget pressure demand tightly meshed and reliable quality controls that can be implemented efficiently. User-friendly solutions simplify the monitoring of manufacturing processes and contribute to consistently high process efficiency and product quality. At the trade show, Kistler will be showcasing its wide-ranging portfolio of customizable solutions, from individual sensors and software for measurement data analysis to complete solutions, as well as personalized advice and service.

### **New 9172CD piezoelectric load cell offers more safety for demanding applications**

Collecting relevant and precise data along the entire production chain is an essential part of quality monitoring and process optimization. By evaluating the collected data, weak points can be eliminated at an early stage and processes can be designed more efficiently. Kistler's new 9172CD piezoelectric load cell offers users many advantages. The measuring device is already preloaded, so it is easy to install, has a wide measuring range and is therefore suitable for a variety of applications. The sensor measures forces of up to 1,000 Newton, so that it does not overload even with high acting forces. Additionally, thanks to a piezoelectric crystal developed by Kistler, it is nine times more sensitive than conventional piezoelectric sensors and reliably measures even the smallest tensile and compressive forces. In addition to the extended measuring range, the new sensor's compact, robust design and high stiffness provide users with enhanced reliability for complex and demanding applications such as semiconductor production or medical manufacturing.

### **Handheld family for convenient and timesaving on site measurements**

Resource-efficient, user-friendly, and deployable on site – the new handheld family for measuring forces will be exhibited at SPS. With the new 5811A00 and 5811A01 mobile devices, each with an integrated charge amplifier, users can compare and verify the data generated by the sensors used directly on the machine without the need for time-consuming removal of the sensor. The two devices record the measured values and visualize the measurement curve on the integrated touchscreen. In conjunction with a traceable calibration according to ISO 17025, both devices can be used as reference measuring instruments. In addition to its function as a measurement amplifier, the 5811A00 model is also suitable for insulation tests to verify sensor and cable quality. The 5811A01 handheld device, on the other hand, is equipped with three channels – including voltage input and IO-Link technology – and is designed for industrial multi-channel measurements.

### **Flexible monitoring with the 5073B measuring amplifier for robust production**

Due to the individually configurable data acquisition options, along with the internal summing and weighting of multiple sensor signals, the 5073B charge amplifier provides users with a high degree of flexibility. Additionally, it allows threshold value monitoring and the observation of process values during production. As a result, maintenance and repairs can be carried out early and precisely targeted before downtimes occur. Users can intervene quickly and avoid unnecessary inspections and repairs. With its wide measuring range starting at 20 picocoulombs, the 5073B amplifier is ideal for highly sensitive processes in the fields of micromechanics, medical technology and the semiconductor industry.

### **Secure real-time process monitoring with the maXYmos system**

The maXYmos process monitoring system handles the monitoring of testing and assembly processes. With it, users can easily and reliably monitor individual process steps in real time and evaluate the quality parameters immediately. With the new version 1.8.6, users have extensive access to device and measurement data via the OPC UA interface. Additionally, the maXYmos system integrates easily into already existing MES systems. This allows users to manage relevant production data centrally and transparently. Moreover, the extended audit trail functionality protects against manipulation attempts, as the system documents all changes to settings.

### **Adjustable joining applications with comfortable handling**

The NCFE 2/5 electromechanical joining module can be adapted to specific user needs. Like the NCFT and NCFR joining systems – also on show – the compact NCFE 2/5 module is characterized by simple and convenient handling. Pre-tested and calibrated by Kistler, all joining systems enable rapid setup and commissioning and thus provide a high level of quality assurance for the joining process right from the start. Users can simulate their processes at Kistler's Joining Competence

Center and check which of the shortlisted electromechanical joining modules meet their needs. That way, assembly and joining processes can be optimized at the system planning stage to avoid problems during commissioning or ongoing operation. Kistler also develops individual joining solutions in addition to its standard systems: The portfolio ranges from joining modules for the smallest forces of 50 N in medical technology to strokes of 1000 mm for electromobility and large forces of 700 kN designed for truck transmissions.

### **A complete turnkey system with Kistler components at the core**

Kistler will also be exhibiting individually adaptable turnkey solutions in Nuremberg. Based on individual components or entire measuring chains from Kistler, the Smart Single Stations can be used both as a standalone system and as a fully integrable cell in existing production lines. Kistler's measurement experts support users in designing individual systems and will use the example of a joining application to demonstrate what a complete turnkey solution can look like at the trade show.

For the analysis of the collected data, Kistler's measurement data management system MaDaM and the analysis and visualization software jBEAM are reliable partners. They are not only suitable for managing and examining the company's own data: machine builders can also integrate them as analysis templates in the machines they manufacture. In collaboration with Kistler experts, individual templates can be developed and delivered with the machine. Kistler will demonstrate the process and options machine builders can choose from at the trade show, so that end customers can realize interactive analyses and benefit from automatic report generation.

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

**To download the images in a high resolution, please follow the link:**

<https://smartfile.kistler.com/link/h6LPwDMnfdA/>



The 9172CD piezoelectric load cell measures the smallest forces as well as large ones of up to 1000 N. It is ideally suited for demanding applications in semiconductor production or medical manufacturing.



Kistler's user-friendly handheld charge amplifiers enable sensor data to be checked and verified directly at the machine.



The wide measuring range of Kistler's 5073B charge amplifier supports users with precise and individually configurable data acquisition options in micromechanics, medical technology, and the semiconductor industry.



Steffen Schulz, Team Leader System Testing at Kistler in Lorch, holds the currently smallest NCFT joining module with telemetry and integrated force sensor in the plunger with a measuring range starting from 50 N and above. In the background the so far largest joining module NCFN with a measuring range of up to 700 kN is visible.



The Smart Single Station from Kistler provides users with a complete solution for all aspects of a component or measuring chain.



With the help of the MaDaM measurement data management system and the jBEAM analysis and visualization software, users can work with Kistler experts to develop individual analysis templates and deliver them with the machine. End customers can thus perform interactive analyses and benefit from automatic report generation.

## Media contact

Tina Dietrich  
Marketing Manager DACH  
Tel.: +49 7031 3090 248  
E-Mail: [tina.dietrich@kistler.com](mailto:tina.dietrich@kistler.com)

## 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 2,000 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 2022, it posted sales of CHF 434 million. About 8% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.