

Press release

automatica 2023: on track for sustainable production processes – with Kistler

Kistler showcases new solutions for high-precision test and measurement results

Winterthur, May 2023

The [Kistler Group](#) will be showing visitors to this year's automatica how test and measurement data throughout the process chain can play a critical part in resource-efficient manufacturing. From 27 to 30 June in Munich (Germany), the Swiss measurement technology expert will showcase its diverse portfolio of joining, measurement and process monitoring systems at booth 205 in hall B5. Exhibits will include innovations such as the highly sensitive 9172CD piezoelectric load cell, the range of mobile handheld test devices, and the digitalized 5073B charge amplifier.

Increasingly efficient use of production resources contributes to sustainable manufacturing – and leverages potentials for saving. Manufacturers in diverse sectors of industry need to rely on precise process data as the key to identifying these potentials. To meet this need, Kistler is presenting solutions at this year's automatica that not only acquire and evaluate this data for every process step – but also show users the options for optimizing their production.

New 9172CD piezoelectric load cell can measure the very smallest forces

Data acquisition for consistent in-production quality monitoring paves the way to enhanced resource efficiency – and this begins with the very smallest forces. In response to this requirement, Kistler is premiering its 9172CD piezoelectric load cell at automatica. This preloaded cell can measure compression and tensile forces of up to 1,000 N directly after it has been installed. A new piezoelectric crystal developed by Kistler makes this load cell nine times more sensitive than conventional piezoelectric load cells. Because of its high sensitivity and compact design, the 9172CD is the solution of choice for use in demanding applications with small force ranges such as semiconductor production or the medtech sector – and thanks to three calibrated measuring ranges, users can rest assured that the measurement data they obtain is accurate.

New handheld family for simple function testing on the machine

To give users the ability to check their process parameters directly in situ, Kistler's presentation also includes two new mobile measuring instruments with integrated charge amplifiers. These handheld test devices enable users to compare and verify the data from the sensors they operate with no

need to waste time and resources on dismantling them. The devices record the measured values and visualize the measurement curve on their integrated touchscreen. Model 5811A00 is particularly suitable for insulation tests to verify sensor and cable quality, while model 5811A01 – designed for industrial applications – features three channels for voltage input and IO-Link technology (among others).

5073B measuring amplifier offers high performance and a wide measuring range

Another highlight at Kistler's booth: the new 5073B measuring amplifier for industrial production with a measuring range that starts at 20 picocoulombs. This charge amplifier allows internal summing and weighting of multiple sensor signals – enabling precise data acquisition that can be configured individually. Users of the 5073B can also monitor threshold values and keep track of peak values during production: as well as guaranteeing constant product and process quality, these functions make it possible to identify imminent overloading of plant components at an early stage so as to protect them from unnecessary wear.

Compact NCFE 2/5 joining module performs cost-sensitive processes

The NCFE 2/5 electromechanical joining module is another Kistler innovation that promotes resource efficiency. This compact module is designed for simple but cost-sensitive processes; its integrated process control ensures fast setup and accurate guidance of the joining processes. The module also measures nominal forces in the 2 kN and 5 kN ranges; its interface with the maXYmos NC monitoring system makes it simple to integrate into the machine's process environment, and it significantly reduces energy consumption as compared to pneumatic solutions.

Kistler's Joining Competence Center is on hand to assist with correct planning of these joining processes. The Center offers users the opportunity to have various processes performed and tested with electromechanical joining systems at a test workstation, even before they start planning their systems. Thanks to this service, they can optimize and validate assembly and joining processes to ensure that no problems related to design or overdimensioning will arise either during commissioning or in ongoing operation, and that no costs will be incurred due to conversion work. Kistler's experts are also standing by to support users with a comprehensive range of advisory support and services: regular inspections minimize downtimes and error rates ahead of time.

Modular Smart Single Station tests products and acquires process data

To round out its offering at automatica, Kistler is presenting its individually adaptable turnkey Smart Single Stations: as well as performing high-precision process steps and product tests, these assembly and test systems help customers to cut their production costs, enhance their product and process quality, and conserve resources. Software solutions from Kistler also provide support with achieving these goals: in the jBEAM analysis software, users can analyze and visualize huge

quantities of data; and the MaDaM data management solution enables storage of datasets so they can be searched and compared with one another. These solutions open the way to ongoing data-based optimization of production so that precious resources can be saved.

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

To download high-resolution images, please click on this link:

<https://smartfile.kistler.com/link/uemX53OONAU/>



The new 9172CD piezoelectric load cell measures tensile and compression forces of up to 1,000 N – making it nine times more sensitive than comparable sensors.



Thanks to its wide measuring range (starting from 20 picocoulombs), the new 5073B charge amplifier from Kistler is ideal for applications in micromechanics, the medtech sector or the semiconductor industry.



The new handheld charge amplifiers from Kistler are designed to check process parameters and verify processes in industrial and laboratory settings.



The newly expanded NCFE 2/5 joining module is designed specifically for simple joining processes, and it can also measure forces in the 2 kN and 5 kN ranges.



Smart Single Stations are turnkey modular assembly and test systems that open the way for users to cut production costs, boost quality and conserve resources.

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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 2,000 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.