

Media release

Kistler at Control 2018:

Good testing is half the battle

Winterthur, 6 March 2018 – Kistler will be present at Control, the world's leading quality assurance trade fair from 24 to 27 April 2018 in Stuttgart. The Group will be showcasing its portfolio of industrial testing and inspection systems with the spotlight on the very latest additions. Alongside automated testing and sorting systems from Vester, featured application areas will include force and torque sensors as well as fastening technology. Yet another highlight: the world's first digital charge amplifier.

Industrial production has to meet ever-increasing requirements for performance capacity and compliance with standards – so quality assurance is becoming more important as time goes on. Test and inspection systems from Kistler play a critical part in product quality as well as cost and resource efficiency, paving the way towards a zero-defect culture. As clear evidence of its enormous potential in this field, the Kistler Group will be represented with two stands at this trade show. Customers and interested visitors can witness demonstrations of ways to optimize their production processes so as to secure competitive edge.

Automated testing for punched, bent and turned parts

Vester Elektronik GmbH, which has recently joined the Kistler Group, will have a separate stand (hall 6, stand 413) featuring three automatic testing and sorting machines for use in punching and forming processes and also for testing individual series parts. High-performance image processing systems enable users to perform fully automated dimensional and surface tests with gaging and hardness tests as additional options. The digital camera technology deployed for this purpose ensures 100% testing of mass-produced parts with very high throughput rates. Vester will also showcase the Smart Ray 3D laser triangulation sensor used in the testing process for an automated glass plate plant. This innovation makes it possible to measure height profiles as well as geometric and positional tolerances on the test object (such as flatness) that could not be visualized until now.

Frank Kirgis, Head of Division Industrial Process Control (IPC) at Kistler, notes: "Thanks to Vester, industrial image processing has now been added to the Kistler Group's wide-ranging stock of know-how. We are taking advantage of this opportunity to set up a *Vision Center* in Karlsruhe that will continue developing the related technologies."

Universal fastener inspection – on the spot

Kistler's mobile inspection systems fulfill the requirements for efficient, standard-compliant quality assurance of threaded joints as well as fastening tools and systems. INSPECTpro, the portable measurement and evaluation instrument, offers a convenient way to test torque and rotation angle on threaded joints. This system provides graphic analyses of assembly processes to ensure that fastener assemblies meet optimum quality standards. Customers always need testing to be faster and more effective, so new custom software modules are constantly being developed to ensure easier handling and more transparent test processes.

combiTEST is a mobile inspection system that features dual capabilities: it combines calibration of manual torque wrenches with testing of automated fastening systems. The benefits: all the tools on an assembly line can be tested directly in situ – so their process capability is guaranteed.

Integrated process monitoring generates added value

Thanks to their rugged design, piezoelectric sensors from Kistler keep precise track of quasi-static and highly dynamic force processes, even when production conditions are difficult. They offer many advantages over other technologies: proportionality, low measuring deflections and long service lifetimes. Another plus: they can also measure very small forces. At the Control trade show, Kistler will present a comprehensive portfolio of sensors including miniaturized versions that can be used when installation space is confined.

Last but not least, a groundbreaking innovation will be unveiled in Stuttgart: The world's first digital charge amplifier makes it possible to connect any desired piezoelectric sensors to the control directly via Ethernet (using Profinet, EtherCAT or Ethernet-IP). With analog disturbance variables excluded, users benefit from enhanced data consistency and transparency – in line with the requirements for Industry 4.0. As well as these advantages, the digital charge amplifier offers numerous measuring functions on four individually controllable channels. With up to 10,000 bus cycles per second and 50,000 measured values per channel and second, this innovation is the ideal choice for high-precision, time-critical control applications.

Experience a vast range of testing technology in action!

Experience the wide-ranging quality assurance solutions offered by the Kistler Group at two stands in Stuttgart from 24 to 27 April 2018: Vester Elektronik GmbH – A Kistler Group Company (hall 6, stand 413); and the Kistler Group (hall 7, stand 313).



Illustration 1



Illustration 2



Illustration 3



Illustration 4



Illustration 5



Illustration 6, a



Illustration 6, b



Illustration 7

Captions

Illustration 1: The entire concept for Vester Elektronik GmbH's modular test cells is geared to modern manufacturing requirements. These test cells can be flexibly adapted to different parts, and they ensure high throughput rates, safety and reliability in the testing and sorting functions – with processing speeds that are often impressive.

Illustration 2: Vester Elektronik GmbH of Straubenhardt, Germany, joined the Kistler Group in August 2017. The Vester company offers numerous advantages that will benefit Kistler's customers: innovative measurement technology, complete test and sorting systems for quality assurance aided by image processing software – and a wide-ranging stock of technological expertise.

Illustration 3: Rugged sensors for punching, forming and automation technology

Illustration 4: INSPECTpro, the portable measuring instrument from Schatz, opens up new possibilities for random sample testing during assembly – in terms of hardware as well as software.

Illustration 5: For the first time, the combiTEST mobile test center from Schatz enables accurate, on-the-spot testing of all tools used in assembly, in compliance with the standards.

Illustrations 6, a and b: Kistler's digital industrial charge amplifier (Type 5074A) is the world's only amplifier for quasi-static measurement processes with piezoelectric sensors on real time-capable industrial Ethernet. It allows integration of any desired sensors with charge signals, and settings on the measurement amplifier can be made directly via the machine control.

Illustration 7: Kistler's new Type 5074A charge amplifier allows up to four sensors per unit to be connected. Each measurement channel can be individually configured and controlled. What's more, this unit covers the main Ethernet standards – EtherCAT, Ethernet/IP and ProfiNet. This means that all parameters and measurement data can be set and called up directly via the machine control.

About the Kistler Group

Kistler is the global 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 1 860 employees at 61 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 2017, it posted sales of CHF 422 million. About 8% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.

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