

Press release

Control 2019: quality assurance for large production volumes

Kistler showcases its expanded offering for test automation and process monitoring

Winterthur, 21 March 2019

Kistler, the global leader in dynamic measurement technology, will present its high-quality test automation and process monitoring systems at the Control 2019 trade fair in Stuttgart (Germany) from 7 to 10 May. Stand 6409 in hall 6 will feature Kistler's portfolio, including test automation equipment and optoelectronic sensors added to the offering since the Group's acquisition of Vester Elektronik GmbH in August 2017. Application areas for Kistler's extensive range include punching and turning processes as well as mass production in the automotive industry and the medical technology sector.

Kistler's test automation offering features a varied choice of systems for fast and accurate 100% inspection of series parts. Systems in the **KVC 121 series** focus on continuous testing of individual parts. These automatic testing and sorting systems feature high throughout rates, making them ideal for contact-free testing of turned, pressed and molded parts. For the feed system, users can choose from a conventional vibratory conveyor or solutions based on modern feed technology. Digital camera measurement technology is used to inspect the parts (such as contact pins) on a test rail, followed by mechanical sorting to ensure process reliability. The moving test objects pass the test stations at a defined angle to ensure reproducible detection of the smallest dimensional and forming errors, or surface defects measuring only a few hundredths of a millimeter. Various options are available to extend the basic configuration of this modular system: for example, up to four digital cameras with different resolutions can be added.

The **KVC 821 system type** is equipped with a rotary plate that makes it easy to carry out processes such as attributive surface testing and high-precision testing of individual parts. The feed system is either integrated or separate, depending on the size and weight of the objects for testing. Cutting-edge optical measurement technology with multiple imaging (Shape from Shading) ensures that even the most complex surface tests are carried out reliably. Depending on requirements, the testing station can be extended by adding up to eight digital cameras with different resolutions; additional test modules for functions such as hardness testing can also be included.

The **KVC 621 punched part test cell** is mainly used in galvanization, punching and injection molding processes. This modular system is chosen by many users to inspect continuous material

with constant infeed. The test cell is usually integrated directly into the line as a stand-alone solution, directly downstream of the production process concerned. The feed and the testing principle can also be tailored to individual customer requirements as necessary. Another advantage of the KVC 621: the image processing components can be adapted as required.

Test assignment setup is fast and easy thanks to the KiVision image processing software integrated in every test station. KiVision includes all the methods usually deployed for testing technology with image processing, as well as a wide range of tools and ready-to-use macros for demanding tasks such as measurements with extremely high precision and very complex surface inspections. The scope of this software goes far beyond the testing tasks as such: it also enables consistent acquisition of the data – an increasingly important function in view of stricter requirements for product traceability. Data transmission to external CAQ systems and integration into the company's own network provide a comfortable solution for central management and downstream processing of test programs and measurement values. Kistler has set up a dedicated competence center for KiVision in Karlsruhe (Germany). The focus here is on continuous development of the software so that it can handle even more customer-specific and application-specific processes in the future.

Process monitoring with sensors and robotics

Kistler's exhibits will also include optical sensors and inductive switches for applications such as feed, ejection and double-sheet control in punching and forming processes – reliable solutions that prevent costly tool breakages. Systems for light barriers of various types – single-beam, multi-beam, laser and infrared, to name only a few – ensure that punching and forming processes run without disruptions. Kistler's sensor technology is also an efficient way of monitoring wear on punching tools, thanks to strain sensors that perform indirect force measurements. Cycle times can be increased or decreased as required on the basis of data from the sensors.

Light barriers offer dependable solutions for measuring tasks

There is often a need for reliable measurements of the very smallest differences in the dimensions of objects moving at high speeds. This situation calls for precise measurements, with a clearly defined output pulse to trigger the acquisition of measurement data. To achieve this, Kistler makes use of a series of light barriers of different types. These devices are integrated into many of the all-round solutions we develop in response to complex challenges in diverse industrial sectors throughout the world.

The best way to learn more about high-caliber measurement solutions from Kistler: visit stand 6409 in hall 6 to see for yourself!

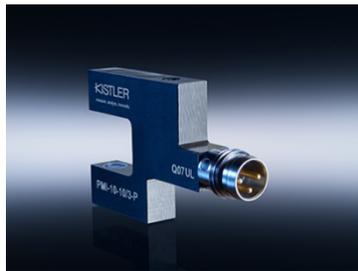
Image material (please name the Kistler Group as picture source)



KVC 821: rotary plate and trevista® reflected light dome illumination unit, for challenging dimensional and surface tests on mass-produced parts



100% inspection with maximum efficiency: KVC 621 punched part test cell, configured here with 5 cameras



Small, but critically important: light barriers such as this forked light barrier in the PMI series guarantee the success of high-precision measurements

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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 2018, it posted sales of CHF 475 million. About 8% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.