

Press release

Kistler presents injection molding process monitoring and optical quality inspection systems at Fakuma 2024

Solutions for future plastics processing can be combined to create a customized overall package

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Be it suitable sensors, new process monitoring systems and analysis software, optical quality inspection systems or comprehensive training programs: At Fakuma 2024 (October 15th to 19th, Friedrichshafen, Germany), [Kistler](#) will demonstrate at booth A3-3007 in hall A3 how the right measurement technology supports users at every step towards even more efficient and digital plastics processing. Highlights from the broad sensor range, the latest version of the ComoNeo process monitoring system, and the KVC 821 quality inspection system will be on show. Kistler will also be providing information on suitable training courses at the certified Kistler Academy.

Numerous complex parameters influence product quality in injection molding production. Manufacturers need to maintain control, especially with increasing proportions of recycled material and the associated, constantly changing material properties. The ongoing digitalization of production processes provides significant support in this regard. However, precise monitoring and control of injection molding processes requires not only the right hardware for data collection, but also powerful software that controls the processes optimally and quickly. Potential defects are then detected by a high-precision optical quality inspection of each individual injection molded component. To ensure that users can use the technology effectively and set it up correctly, Kistler offers needs-based training courses at the Kistler Academy.

Diverse sensors for complex injection molding applications

A selection from Kistler's extensive range of sensors will be on display at the booth, including sensors suitable for a wide range of demanding and complex injection molding applications. For example, Kistler will be presenting the world's smallest cavity pressure sensor, which has a diameter of just one millimeter. The 6183D is easy to install, even on complex mold parts, and takes measurements within a range of 0 to 2000 bar at a maximum melt temperature of 450 degrees Celsius. Also on display is the 9239B miniature longitudinal measuring pin, which can be installed two to four millimeters behind the cavity wall, where it measures the pressure-induced expansion of the mold,

i.e. the cavity pressure - without contact. This means that the sensor is protected from direct contact with the melt and does not leave an imprint on sensitive plastic parts such as medical lenses or automobile interiors.

The 6184A cavity pressure sensor with lateral cable outlet will also be presented. Thanks to its diameter of 3 mm, it can be installed particularly well in high-cavity molds and small inserts. Also featured is the 1720A conductive spacer sleeve, which makes it easier to install and maintain wireless cavity pressure sensors in insert molds, such as those used in medical applications.

New version of the ComoNeo process monitoring system with Multiflow update

At Fakuma 2024, Kistler will be presenting the ComoNeo 7.0 process monitoring system with the Multiflow 2.0 feature update. The self-learning control algorithm for temperature-controlled hot runner balancing ensures consistent temperature control in multi-cavity molds, thus optimizing the injection molding process. The fully automatic adjustment assures a consistently high level of quality over a large number of cycles, reduces scrap and minimizes the need for rework. Multiflow 2.0 also stabilizes the production process, even during batch fluctuations, and can be seamlessly integrated into existing systems. This brings ComoNeo 7.0 users closer to zero-defect production.

AkvisIO IME simplifies data analysis and process optimization

With the data analysis software AkvisIO IME (Injection Molding Edition), which was voted Product of the Year by Kunststoff MAGAZIN, Kistler offers a glimpse into the future of complete solutions for process monitoring. Using either traditional statistical methods or data-driven artificial intelligence, the software enables users to analyze process and machine data with a focus on quality. Thanks to the easy integration of Kistler devices such as ComoNeo and ComoScout, as well as common communication standards such as the Ethernet-based Euromap 77, the machine itself becomes the data source and AkvisIO the Single Source of Truth for reliable production data - making it easier to optimize the process.

KVC 821: Optical quality inspection system for injection molding

Optical quality inspection using camera-based systems enables 100% inspection of complex plastic components and also supports the automation of sampling inspection. With the KVC 821 and KVC 121 standard quality inspection systems, users can measure and inspect the surface and dimensional accuracy of up to 750 parts per minute using up to 8 cameras in 2D, 2.5D or 3D. Automated Vision solutions from Kistler are customized, robot-integrated solutions that also fully automate manual sampling. They make a decisive contribution to inspection reliability and cost reduction in quality assurance. At Fakuma 2024, Kistler will be giving a live demonstration of how the KVC 821 optical quality inspection system inspects injection molded parts for surface defects and dimensional accuracy using variable camera systems, a variety of inspection methods and AI-based anomaly

detection. Kistler is thus able to offer complete process and quality assurance from a single source, even for the most demanding applications in plastics processing.

Kistler Academy offers in-depth training for process-optimized applications

The Kistler Academy completes Kistler's offering. At the DIN ISO 21001-certified training center, manufacturers in the injection molding industry can have their employees trained by qualified instructors in the handling and use of products and technologies, as well as in process optimization. The courses are divided into basic, advanced and expert levels, and enable participants to use solutions and systems correctly and to optimize their processes with data support. At the Fakuma 2024, interested parties will receive advice on the most suitable training program and be able to book the suitable courses directly at the booth.

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

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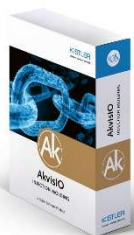
<https://app.kistler.celum.hosting/pinaccess/showpin.do?pinCode=eV6VYb6L5GKE>



Kistler will present a wide range of sensors for complex injection molding applications at Fakuma 2024.



With the new version of the ComoNeo process control system, users will be able to homogenize their injection molding process by using the new multi-flow function.



Thanks to intelligent analysis and easy integration, AkvisIO IME from Kistler enables quality-oriented data analysis during the injection molding process.



The KVC 821 optical quality inspection system for injection molding provides accurate 100% inspection of plastic parts using variable camera systems and AI-based anomaly detection.

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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.