

Press release

Kistler presents Real-Time Release Testing at Fakuma 2026

MedRelease Suite provides the foundation for seamless, auditable release of medtech components

Winterthur, September 2026

At this year's Fakuma, Kistler sends a clear signal for the next evolutionary stage in quality assurance for medical technology: moving from sample-based release toward complete, auditable quality evidence for every single component. The Kistler MedRelease Suite is at the center of the trade show presentation. The suite includes precision mold cavity pressure sensors, the ComoNeo process monitoring system, model-based quality predictions, and the AkvisIO data management platform. These components work together to provide the foundation for complete, auditable quality documentation at component level. Kistler will showcase the MedRelease Suite in hall A3, booth A3-3210.

Statistical process control poses a structural and economic risk for Original Equipment Manufacturers (OEMs) and Contract Manufacturing Organizations (CMOs) in the medical technology sector. Discrepancies in individual components may go unnoticed, while requirements for traceability, data integrity, and complete release decisions are rising. The Kistler MedRelease Suite helps OEMs and CMOs reduce these blind spots step by step and establish a solid quality data foundation for every component produced.

Measuring quality where it originates

Conventional, integrated process monitoring systems primarily evaluate the injection molding process based on machine parameters such as injection pressure or screw position. While these values describe machine behavior, they do not directly reflect what is happening within each cavity.

Kistler measures pressure inside the cavity, which is the place where component quality actually originates. The cavity pressure profile reflects the combined effects of the key process parameters and provides a meaningful basis for assessing component quality. By continuously capturing and storing measurement data and analyzing it with a quality model, each component produced can be linked to its individual quality.

With the 6183D, Kistler offers the world's smallest cavity pressure sensor, measuring just one millimeter in diameter. It delivers precise measurements even under the most demanding process conditions.

From process data to auditable quality evidence for batch release

The new generation of the ComoNeo process monitoring and control system, featuring a 21-inch display, processes the captured cavity pressure data in real time and evaluates each production cycle based on defined quality criteria. The specially developed ComoNeoPREDICT software application uses this data to predict the relevant quality characteristics of each injection-molded component based on models.

In regulated production environments, it is essential to demonstrate that quality models operate reliably within their defined scope. The OPTIMIZE software therefore supports the systematic development, evaluation, and validation of the models. The centralized fleet management system AkvisIO then consolidates process and quality data in a central location, creating a consistent, traceable data foundation for batch release, audits, and deviation analyses with user-based access control and an audit trail.

This way, the MedRelease Suite combines process monitoring, quality prediction, validation, and documentation into one comprehensive approach. Depending on the specific application and its regulatory requirements, manufacturers can gradually reduce conventional testing and statistical sampling after successful validation.

Temperature as an additional control variable in the injection molding process

Kistler's control algorithms can now use temperature signals from the mold, in addition to pressure signals. On this basis, hot-runner molds can be filled more evenly with ComoNeoMULTIFLOW, while also determining the optimal point for switching from the injection phase to the holding pressure phase. This gives users greater flexibility in their choice of sensors and control strategy. The temperature-based switchover function is now also available with the 5159A machine-integrated charge amplifier.

Beyond injection molding: Ensuring quality in downstream assembly processes

In addition to the MedRelease Suite, Kistler also showcases solutions for downstream assembly and inspection in plastics processing at Fakuma. The NCFQ 2166A high-speed joining system, in combination with piezoelectric force measurement technology and maXYmos NC, enables precise control, monitoring, and documentation of demanding assembly processes. For optical final inspection, the KVC 821 inspection and sorting system checks defined dimensional and surface

characteristics at speeds of up to 750 parts per minute. These solutions enable Kistler to support end-to-end quality assurance, from injection molding to assembly and final inspection.

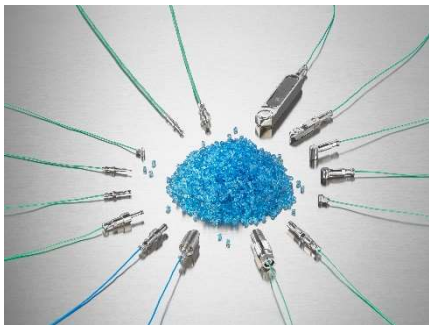
From measurement directly in the cavity to documented joining force during assembly, Kistler creates the data foundation for reliable and traceable release decisions in medical technology. "Real-time release testing cannot be implemented with a single product. It requires precise process data, complete documentation, and reliable integration into existing production and quality processes," explains Dr. Oliver Schnerr, Head of the Plastics Business Unit at Kistler. "We understand our customers' regulatory requirements and support OEMs and CMOs every step of the way during implementation. At Fakuma, we demonstrate how our combination of measurement technology, software, and application expertise provides the foundation for traceable, robust release decisions."

Visitors can see these solutions in hall A3, booth A3-3210.

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



A single sample still often determines the release of an entire batch. At Fakuma 2026 (hall A3, booth A3-3210), Kistler demonstrates the path to Real-Time Release Testing for every individual component.



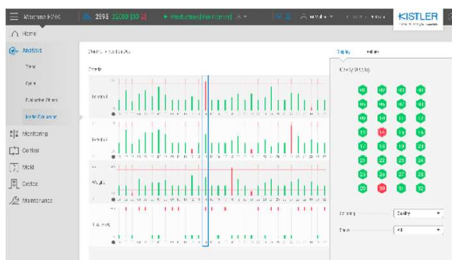
The right sensor for every application: Kistler's portfolio enables precise cavity pressure measurement even under demanding medical technology conditions.



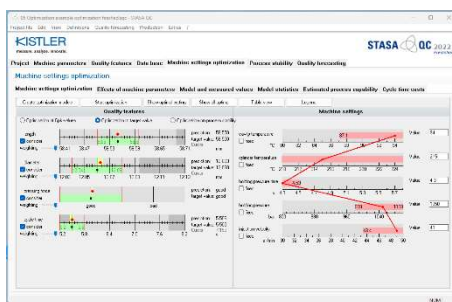
The second generation of ComoNeo processes data using its built-in, high-performance processor in the 21-inch display. This lays the foundation for Real-Time Release Testing in the medical technology industry.



AkvisIO consolidates process and quality data from injection molding, providing the end-to-end traceability that OEMs and CMOs need for audits and batch releases.



ComoNeoPREDICT uses artificial intelligence to determine the quality of every injection-molded component without the need for manual sampling.



With the OPTIMIZE software, Kistler designs robust process models to meet regulatory requirements – a prerequisite for using AI-based quality determination in medical technology.



Real-Time Release Testing does not end at the injection mold. With the NCFQ 2166A high-speed joining system, Kistler also ensures precise quality control during the assembly of sensitive medical devices, such as autoinjectors and insulin pens.

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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 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 2025, it posted sales of 424 million Swiss francs. About 9 percent of this figure is reinvested in research and technology – with the aim of delivering innovative solutions for every customer.