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Press release

Kistler at SPS 2019:

Resource efficiency thanks to intelligent process control – robots included!

Winterthur, November 2019

Kistler will showcase highlights from its portfolio at the SPS 2019 in Nuremberg from 26 to 28 November. Visitors to stand 203 in hall 8 can learn how electromechanical systems implement precise control of joining processes with maximum resource efficiency. An automated test station will also demonstrate the interactions between sensor technology and robotics – with state-of-the-art digital connectivity thanks to the OPC UA-compatible maXYmos 1.7 monitoring system.

As new challenges emerge in response to concerns about our environment and climate, conserving resources has become a key requirement of our modern era. Kistler is standing by with technological solutions that make industry more efficient and cost-effective – solutions that also exploit the potential of digitalization to deliver benefits such as process transparency and traceability of individual production steps.

High-precision, traceable production that conserves resources

To reduce industrial CO_2 emissions and conserve resources, Kistler offers a complete portfolio of electromechanical joining systems for use in automobile manufacturing, medical technology, electronics production and many other sectors. Because they offer different force and displacement ranges, these solutions cover a variety of applications – and as compared to hydraulic or pneumatic systems, they deliver up to 90% more efficiency. Another benefit: electronic control for precise regulation and accurate monitoring. In conjunction with the maXYmos NC process monitoring system from Kistler, each individual production step is documented to ensure the required traceability.

Visitors to Kistler's stand at the SPS fair can witness a live demo of three joining modules – NCFT, NCFR and NCFE – so they can make their own comparisons. Three applications – spring testing, interlocking and blocking force – will be demonstrated as examples to show how electromechanical systems function, and to highlight their benefits. The spotlight here is not only on the assembly process as such, but also on the gains in transparency and control thanks to constant data availability.

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Medtech test station with the world's smallest 6-axis robot

Robots are taking over growing numbers of production tasks – and there are also many more situations where robots and people work together, so human and mechanical strengths are combined. To reflect this trend, Kistler's stand at the SPS features an automated test station with the world's smallest six-axis robot, especially suitable for medtech applications. Its work area is controlled with a series PGI-L laser light barrier from Kistler.

The station is used to test the functionality of an inhaler: in combination with the maXYmos TL monitoring system, a sensor from Kistler continuously tracks the force that the robot exerts on the manufactured product. Specially designed for the medtech sector, the new version of the maXYmos TL process monitoring system offers a host of application-specific benefits:

- Ideal for small measurement ranges
- User management compliant with FDA regulations
- Audit trail: all changes are recorded with time and user indices

The newly developed 1900A23A cable from Kistler is used for the connection between the control and the force sensor fixed on the robot's arm: this highly robust, low-noise, high-insulation coaxial cable was specifically developed for use with piezoelectric sensors in dynamic environments – in applications with drag-chains, for example. As proven in intensive laboratory testing, this cable is extremely resistant to abrasion and it can withstand at least 10 million bending cycles.

Intelligent process control and digital connectivity

With the new 1.7 software version, process monitoring systems in the maXYmos NC series (joining systems) as well as the maXYmos TL series (force-displacement monitoring, torque sensor technology, etc.) now have OPC UA capability. This makes it easier to connect them to machine controls, and also facilitates communication with higher-level control and management systems. Another new addition to maXYmos NC is the "jogging mode" to enable even more precise positioning; this feature also allows the system to switch over from the internal to the external displacement sensor at any time.

Kistler has passed yet another milestone on the journey towards digitalization of the entire measuring chain with the launch of its digital charge amplifier 5074A: diCA (digital Charge Amplifier) is Ethernet-compatible, and it features a very wide measuring range from 20 to 1,000,000 pC. Thanks to a data transmission rate of 50 kSps per channel, diCA enables real-time control of production processes; protection class IP67 also ensures that it can be used in harsh environments. As with other Kistler products, customers who choose diCA retain full control of their production data at all times – no measurement values are stored on the device itself.

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Visit Kistler at the SPS 2019!

The Swiss measurement technology experts are looking forward to welcoming you in Nuremberg between 26 and 28 November: visit stand 203 in hall 8 to learn how you can use technologies from Kistler to maximize the resource-efficiency, reliability and transparency of your assembly and production processes.

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

Electromechanical joining modules from Kistler support high-precision, transparent and resource-efficient production – helping to reduce industry's ecological footprint.

Version 1.7 of the maXYmos process monitoring system now supports OPC UA – offering extended connectivity for networking with the production environment.

The new 1900A23A cable from Kistler is compatible with drag-chains and can withstand highly dynamic, free-ranging and extensive movements for over 10 million bending cycles.

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The digital charge amplifier (5074A) from Kistler is the world's only amplifier that offers real-time capability for measurements with piezoelectric sensors, including data transfer via Industrial Ethernet (IE).

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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.