

Media release

Kistler unveils new products at Space Tech Expo Europe

Measurement technologies for challenging space applications

Winterthur, 27. September 2017 – Space Tech Expo Europe, the main meeting-place for representatives of the European space industry, will open its doors from 24 to 26 October in Bremen, Germany. This international exposition is also a fixed event on Kistler's trade fair program: our experts will be on hand at stand A51 in hall 5 to show visitors measurement technology capabilities and solutions for challenging space applications.

Sensors play a key role in Space Payload, Propulsion and subsystem testing and provide valuable measurements to support quality, safety and reliability of space systems and subsystems. In this sector, products have to meet very demanding requirements due to extreme conditions that include wide temperature ranges, pressure fluctuations, high shock and vibration levels. At the same time, the measurement equipment often has to be light-weight as well as rugged and durable. Kistler offers the right force, vibration and pressure sensors for virtually every application.

Manuel Blattner, Head of Kistler's Strategic Business Field Test & Measurement, explains: "As the highlight of our presence at Space Tech Expo Europe, we shall be presenting product solutions for selected space applications to the show visitors. At our fair stand, attendees can see exhibits such as a rocket engine test bench with built-in pressure, force and acceleration sensors, as well as the new piezoelectric 6-component force/torque link, Type 9306A."

Direct, accurate measurements – in every direction

Entire satellites and their subsystems could sustain severe damage due to overloads during vibration tests. Force Limited Vibration Testing is used to prevent this from happening. This testing uses 3-component force sensors at the shaker to payload interface to monitor the introduced forces. Kistler will exhibit the ideal solution for this application at the Space Tech Expo: preloaded 3-component piezoelectric force sensors connected to cutting edge signal conditioning and data acquisition systems. Installed between two mounting flanges, these preloaded sensors can measure compression and tensile forces in every direction. Accurate results are insured thanks to very high rigidity allowing for a high natural frequency as well as a very low crosstalk.

Signals are measured and conditioned with the LabAmp 5167A, Kistler's first multi-channel quasistatic and dynamic charge amplifier with analog output and integrated data acquisition. The benefit: a scalable and configurable high performance signal conditioner and data acquisition system offering channel synchronizations, signal filtering, virtual channels and convenient evaluation of individual force signals. Integrated data acquisition simplifies the measuring chain and provides added flexibility.

Optimal results – even under extreme stress

Rockets are exposed to very high stresses, especially during launch. To prevent malfunctions during operation, rocket components – and especially rocket engines – undergo extensive testing and inspection during the testing phase. Kistler is also showcasing the Type 6021A high-temperature pressure sensor at the Space Tech Expo Europe. This uncooled

pressure sensor is suitable for application temperatures of up to 700°C and provides high resolution pressure measurements to understand the combustion processes and related instabilities. For this purpose, the pressure sensor is ground-isolated and is connected to a differential charge amplifier providing low noise and EMI immunity to support accurate measurements. Tradeshow visitors will also have the chance to appreciate the benefits of Kistler's Type 5181A differential charge amplifier for high temperature test requirements.

Reliable measurements of small torques and forces

Yet another highlight to be unveiled by Kistler at the Space Tech Expo Europe is the first piezoelectric 6-component force/torque link, Type 9306A. This sensor can deliver precise and direct measurements of three forces and three torques without calculation: an excellent choice for measurements in wind tunnels. Kistler charge amplifiers provide users with the ability of adjusting the torque and force measuring ranges independently for each axis. Thanks to the piezoelectric measurement principle and 9306A performance very small torques and forces can be easily measured with high resolution.

For more information about Kistler's exhibit at the Space Tech Expo Europe, go to: www.kistler.com/de/de/ueber-uns/veranstaltungen-messen/detail/event/spacetech/.



Kistler will present measurement technologies for challenging aerospace applications to visitors at stand A51 in hall 5 (source: ESA).

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About the Kistler Group

Kistler is the global leader in dynamic measurement technology for measuring pressure, force, torque and acceleration. Cutting-edge technologies provide the basis for Kistler's modular solutions.

Customers in industry and science benefit from Kistler's experience as a development partner, enabling them to optimize their products and processes so as to secure a sustainable competitive edge. The owner-managed Swiss company's unique sensor technology plays a key role in the evolution of automobile development and industrial automation, as well as in numerous emerging sectors. With a broad knowledge of applications and its absolute commitment to quality, Kistler is making an important contribution to the further development of current megatrends. This includes topics such as electrified drive technology, autonomous driving, emission reduction and Industry 4.0.

Some 1800 employees at 58 locations worldwide are dedicated to developing new solutions and offer customized service for individual applications. Since its founding in 1959, Kistler Group has grown along with its customers, generating sales of CHF 358 million in 2016. Approximately 10 % of this went back into research and technology – and thus into achieving better results for all our customers.

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