

## Media Release

Ref: KIL 7401

Date: 28.08.2020

### **Measuring vibrations at up to 1000 degrees Celsius**

**A new single axis accelerometer for vibration monitoring from Kistler delivers reliable results at temperatures up to 700 degrees Celsius over the long term and up to 1000 degrees for short periods of time. The 8211A sensor is certified to ATEX and IECEx for use in explosion protection making it suitable not only for monitoring purposes, but also for use under extreme conditions in a wide variety of applications.**

Measuring vibrations inside the combustion chambers of gas turbines, rocket or aircraft engines ambient temperatures are often in the high three-digit range. Under extreme conditions, these measurements must provide exact data as the basis for further developments, for example on instabilities in the combustion process. However, only a few sensors are able to withstand the extreme heat and temperature fluctuations and still deliver reliable measurement data. The new 8211A sensor from Kistler has been designed specifically for such conditions in order to measure vibrations in various extreme industrial environments.

### **Maximum accuracy even at extreme temperatures**

The sensor owes its heat resistance primarily to the PiezoStar crystal at the heart of the accelerometer, which is especially suitable for these applications. Kistler grow the artificial crystal in its own laboratories to eliminate quality fluctuations and supply bottlenecks which are common with natural materials such as tourmaline. Kistler's artificial crystal is produced to a consistent quality standard and is not subject to variable availability. The robust hardline cable used with the sensor is insulated with magnesium oxide and is equally resistant to heat:

Enduring temperatures of up to 1000 degrees Celsius is not a problem for the new sensor or cable.

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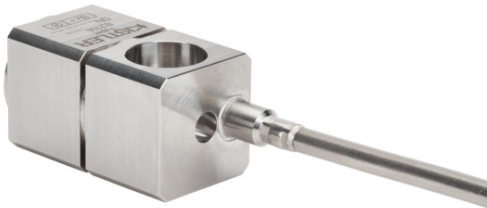
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## Differential measurement chain ensures reliable results

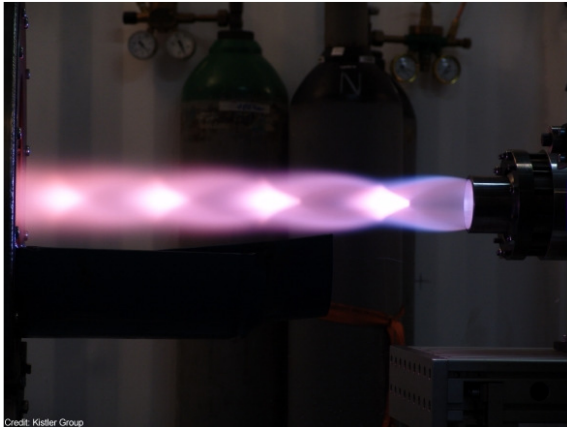
The core technology of the 8211A accelerometer is based on the piezoelectric effect: the accelerometer generates an electrical charge that is proportional to the acceleration. In combination with a differential charge amplifier this provides a complete and stable differential measurement chain that is not influenced by environmental factors such as electromagnetic interference.

## ENDS

Enduring temperatures of up to 1000 degrees Celsius is not a problem for the new accelerometer or cable from Kistler.

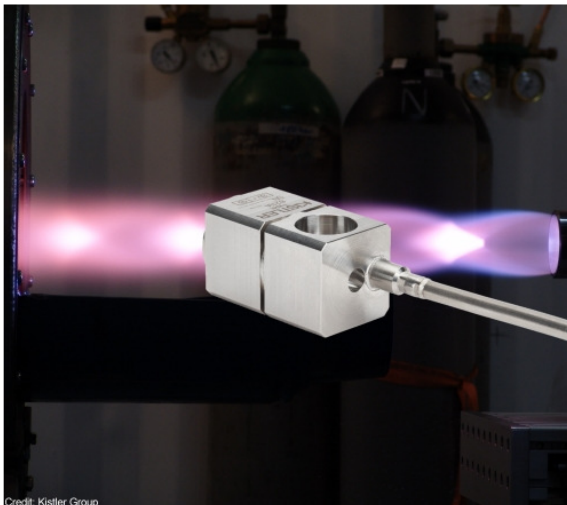


Credit: Kistler Group



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The 8211A sensor is suitable for many applications with extremely high ambient temperatures, such as testing rocket engines.



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## More Information

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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 an 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, automated and connected driving, emission reduction and Industry 4.0.

Some 2,200 employees at more than 60 locations worldwide are dedicated to developing new solutions and offering a customized service for individual applications. Since its founding in 1959, the Kistler Group has grown along with its customers, generating sales of CHF 466 million in 2019. Approximately 8% of this went back into research and technology and thus into achieving better results for all our customers.