

Press release

Accelerometers for modal analysis now more robust and accurate

Kistler presents new sensor series 8740A and 8788A with the lowest noise thresholds on the market

Winterthur, March 2024

With its new accelerometer series 8740A and 8788A, Kistler presents improved and more robust high-sensitivity sensors for modal analysis in various fields such as automotive, aviation and space testing. The IEPE accelerometers are the only ones on the market that combine extremely low weight and small size with minimal noise for more accurate vibration measurements. They come in ranges of 5g, 10g and 50g and feature wide frequency responses.

The single axis accelerometers of series 8740A and triaxial accelerometers of series 8788A replace the types 8640A and 8688A series in the Kistler portfolio. While the housing design and the low mass stays the same, the series 8740A and 8788A differ from their predecessors in one significant feature: the new accelerometers reach their high accuracy and low noise threshold through a ceramic shear element instead of P-Beam technology. "This proven technology makes the sensors much more robust than the previous models," says Joshua Kasprzyk, Product Manager Acceleration at Kistler. "Their accuracy was improved even further by lowering the noise thresholds of the various g-ranges by up to 133 percent compared to their predecessors." With regards to their respective g-ranges and technical specifications, the new accelerometers reach the lowest noise thresholds on the market.

Designed for a broad spectrum of modal analysis

The 8740A and 8788A series were specially designed both for multiple channel modal analysis on small components and the testing of a wide range of larger structures, primarily in aviation, space technology and in automotive measuring scenarios such as NVH (noise, vibration, harshness) testing. For the sensors of the new series, an IP68 integral waterproof cable is optionally available to enable underwater maritime testing at 16 bar for up to 48 hours. Alternatively, users can also choose TEDS capabilities for an easier set-up.

Thanks to threaded holes on each sensor, the sensors can be freely installed on test objects and – in the case of the triaxial 8788A series – be calibrated on all three axes. This allows engineers to make use of each mounting side of the cube design while ensuring reliable mounting for the

calibration of each axis. Improvements in the production processes have additionally resulted in shorter lead times and improved availability for the sensors which are usually used in higher quantity.

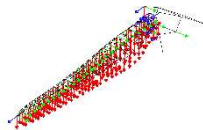
Image material (please name the Kistler Group as picture source)



The single axis accelerometers of series 8740A feature wide frequency responses and the lowest noise thresholds on the market.



The triaxial accelerometers of series 8788A are the only ones on the market that combine extremely low weight and small size with minimal noise.



The new accelerometers are specially designed for modal analysis in various fields such as automotive, aviation and space testing.

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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 2,000 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 2022, it posted sales of CHF 434 million. About 8% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.