

Press release

Stays cool – even when the pressure and heat are on!

Miniature absolute pressure sensor for engine development – now with cooling adapter

Winterthur, April 2026

A new adapter, with integrated water cooling, is available now for use with Kistler's 4017A miniature absolute pressure sensor in engine development, and other high-temperature applications. This adapter can be ordered separately or as a ready-assembled set along with the sensor. Thanks to the adapter's high cooling capacity, the miniature sensor remains within its permitted temperature range, even at high temperatures, so it delivers excellent measurement results with a minimal space requirement.

Piezoresistive absolute pressure sensors are suitable for recording static and dynamic pressures. They have long been used in the automotive industry for engine and powertrain development, where high accuracy levels are required. To enable this degree of precision, at elevated temperatures, the sensor needs additional cooling.

New design offers maximum quality and cooling capacity

The new 4017A...W set from Kistler, comprising the water-cooled 7547A adapter and the 4017A – the world's smallest media-separated absolute pressure sensor – comes with an M8x0.75 threaded pressure connection. This means that the sensor (including the adapter) is 25 percent smaller than Kistler's tried-and-tested water-cooled 4049B sensors, so it is easier to adapt for measurements on engines with limited available space. Cooling is more efficient thanks to the adapter's low mass and innovative design, together with its optimised cooling channels - so sensor lifetime and reliability are increased. Due to the 7547A adapter's welded-on heat shield, the 4017A sensor remains within its specified temperature range even in high temperature environments. The new set's low weight makes it less susceptible to damage caused by engine vibrations.

Ideal for engine development

The modular structure of the 4017A...W set makes it easy to replace the sensor as well as the adapter. For cleaning purposes, the 4017A miniature absolute pressure sensor can simply be disconnected from the adapter and then refitted. The 4017A's oil-filled, media-separated measuring cell offers a very high level of media compatibility for gaseous media. This also results in very high

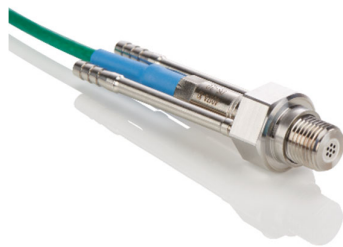
measurement accuracy and stability ($\leq 1\%$ FSO), achieved thanks to digital temperature compensation.

Water cooling plus integrated digital temperature compensation

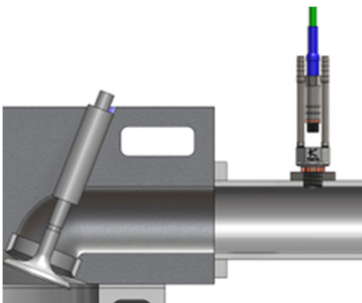
Along with PiezoSmart technology from Kistler, the miniature absolute pressure sensor is automatically recognized by DS-compatible Kistler amplifiers, thus eliminating the risks of incorrect setup and configuration. The digital temperature compensation uses a specific model-based compensation process to correct the output signal according to the sensor temperature, without a delay and with maximum accuracy. In addition, digital temperature compensation provides monitoring of the sensor temperature.

To complete the measuring chain, various piezoresistive amplifiers are available from Kistler: examples include the 4665B 2-channel amplifier (SCP, KiBox1), the 4667A 1-channel PRAQ (KiBox2), and the 4624A 1-channel amplifier (standalone). The new 4017A...W set can be supplied in various measuring ranges for pressures up to a maximum of 50 bar.

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



The new 4017A...W sensor set from Kistler features a compact cooling adapter for highly precise measurement results (even in hot working environments) and the tried-and-tested 4017A miniature absolute pressure sensor.



Due to the heat shield and water cooling in the 7547A adapter, Kistler's new 4017A...W pressure sensor set is ideal for exhaust pressure measurements.

Media contact

Angelica Zeolla
Marketing Campaign Manager
Phone: +41 52 2241 606
Email: angelica.zeolla@kistler.com

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.