

Press release

Kistler cylinder pressure sensors for hydrogen combustion engines

Kistler successfully tests cylinder pressure sensors in hydrogen combustion engines.

Winterthur, March 2024

Kistler's existing range of cylinder pressure sensors has been successfully tested for resilience when used in hydrogen internal combustion engines. As of now, customers undertaking research and development work in this field of technology can put their trust in the proven precision and reliability of sensor technology from Kistler.

The quality and precision of Kistler's sensors have earned an industry-wide reputation for research and development in the combustion analysis segment. Cylinder pressure sensors used in hydrogen-powered combustion engines must withstand the exceptional conditions to which they are exposed in the hydrogen-air mix. Hydrogen can cause materials to become brittle, with potentially negative effects on measurement results and sensor durability. Kistler has conducted numerous series of tests to verify that its product portfolio is suitable for hydrogen applications. The results proved to be positive – so as of now, Kistler's cylinder pressure sensors are appropriate and optimal for use in hydrogen internal combustion engine research and development.

H2 engines – the low-emission combustion technology

The technology of the hydrogen internal combustion engine is not new, but it has taken a long time for research in this area to reach its current state. For future vehicle powertrains, different technical approaches will coexist or are combined – and the hydrogen internal combustion engine will find its place in this context. To undertake their work, engine development engineers rely on trustworthy measurement results – which Kistler's renowned piezoelectric cylinder pressure sensors are proven to deliver.

A proven and tested hydrogen-resistant portfolio

Engineers and scientists engaged in research and development work on hydrogen internal combustion engines can now take advantage of this familiar and extensive range of sensors for cylinder pressure measurements. As always with Kistler, the focus here too is on precision, reliability,

efficiency and durability. By helping to ensure the success of this technology, Kistler is also playing a key part in achieving climate neutrality.

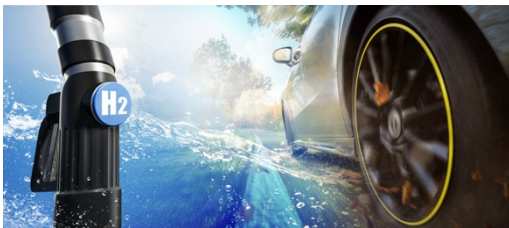
Available products

Visit our homepage: [Combustion measurement analysis technology | Kistler](#)

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Researchers and developers working on hydrogen internal combustion engines can now rely on sensors from Kistler.



Hydrogen internal combustion engines offer a highly promising approach to decarbonization, depending on the areas where they are used.



Cylinder pressure sensors from Kistler offer convincing advantages: outstanding measurement characteristics, highly robust design, and long service lifetimes.

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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 2021, it posted sales of mCHF 411. About 7% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.