



PRESS RELEASE

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NEW CORROSION RESISTANT MEMS PIRANI VACUUM SENSOR INTRODUCES A PARADIGM SHIFT

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For decades, MEMS Pirani transducers have been used in many different vacuum applications for measurement and control of vacuum gas pressure. The MEMS Pirani technology has many advantages but until now the technology has had a limitation in use and applicable applications due to its exposed materials. Corrosive gases and aggressive etch processes commonly used in the semiconductor industry will damage a traditional MEMS Pirani sensor and therefore capacitance diaphragm gauges and convection Pirani gauges have been the preferred choice for semiconductor process exposure and other harsh environments.

Sens4 is now introducing a **new series of MEMS Pirani sensors with a conformal protective coating that acts as an efficient barrier against aggressive gases**. Depending on the application, the SmartPirani™ transducer series is now available with either an optional **ceramic or Parylene protective barrier** against corrosion or oxidation of sensor materials.

Ceramic is highly corrosion resistant and is a well proven material for vacuum sensor diaphragms in capacitance diaphragm gauges. The ceramic barrier option is designed for semiconductor etch and CVD applications.

Parylene is a unique polymer with highly corrosion resistant and hydrophobic properties. The Parylene barrier is designed for medical applications including but not limited to lyophilization and sterilization.

In some applications particulates can damage vacuum gauges and for these applications the SmartPirani transducers are offered with a protective baffle that acts as a barrier for macroscopic particles. In combination with the coating option, **the new SmartPirani™ transducers are set for tough vacuum environments**.

"It's evident that the MEMS SmartPirani™ sensor technology we introduced in 2019 is superior in performance and robustness compared to convection wire Pirani vacuum gauges" said Ole Wenzel, CEO of Sens4 A/S. Ole continues: "We have experienced in a variety of industries that customers wish to move away from the old-style convection wire pirani gauges to more advanced modern vacuum gauging and the protective coating is an enabler to expand the useable applications for our sensor technology"

Caspar Christiansen, CTO of Sens4 A/S, adds: "We have not only introduced the protective barrier option on the Pirani sensors, but also on the Piezo diaphragm that provides measurement independent of gas type and concentration." Caspar continues: "This strong corrosion resistant combination offers best-in-class measurement performance from 1E-6 to 1333 mbar with a precision measurement from 2 to 1333 mbar independent of gas type."

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About Sens4 A/S

Sens4 is a Danish technology company that develops, manufactures, markets, and distributes vacuum, pressure and temperature measuring equipment for industrial and scientific applications worldwide. It's our mission to provide compelling product solutions that fit our customers' needs and enable them to efficiently measure and control advanced processes around the world.

- Shaping the future of vacuum gauging -

