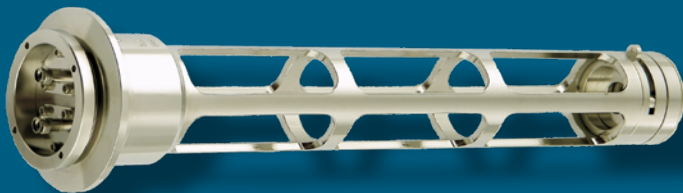


PRODUCT DATASHEET

G-SST™ Vapor Process Probe

Compatible with Hydrogen
Peroxide Vapor (HPV) Analyzer



Real-time

Direct

Measurement

- Real-time HPV sterilant gas monitoring
- Proven technology works in vacuum and atmospheric
- H₂O₂ and H₂O concentration by direct optical NIR
- Vital for resistometers and HPV cycle development
- Independent reference for HPV load production
- Optical RH and relative saturations measurements

G-SST Vapor Process Probe Next Generation Design for Easy Servicing and Repairs

For hydrogen peroxide or other vapor applications, the 50 cm G-SST™ Vapor Probe provides an efficient, simple, and easy interface between the vapor chamber and the GUIDED WAVE Hydrogen Peroxide Vapor (HPV) analyzer. The optical path is folded, providing 50 cm of interaction with the gas in a compact 25 cm probe body. This means more accuracy and stability for low vapor concentrations. This proven technology works in vacuum (10^{-5} Torr) or up to 2 atm absolute.

A Simple, Serviceable Design

The G-SST Vapor Probe is a convenient, compact, rugged sample interface that is easy to install and even easier to service. Key elements of the design include simple, serviceable o-ring seals, sapphire windows, and o-ring sealed optics to prevent ambient moisture infiltration. The probe clamps into a standard 2-inch Tri-Clover® sanitary fitting and can be mounted in the vapor chamber, feed line, or return line. Alternatively, a flangeless version of the G-SST Vapor Probe is available for mounting inside the chamber, with a fiber feedthrough sanitary cap. Since both source and return fibers are on the same end of the probe, and external to the process, there are no fiber cables to seal.

Process-Resistant Construction

The G-SST Vapor Probe is designed to withstand harsh process conditions. It is constructed from 316L stainless steel. It can also be made from other materials depending upon specific application requirements, such as Hastelloy C-276. These materials are unaffected by most hydrocarbons and polymers. Additionally, our special construction techniques also make the probe insensitive to most process chamber vibrations.

Dual Seal for Added Safety

Perhaps the most crucial aspect of any online sample interface design is the sealing approach. Since process gas streams will be under pressure and the composition is often hazardous, leaks are unacceptable. Additionally, moisture infiltration from the external environment adversely affects performance too. Our brand utilizes multiple o-ring seals that effectively address both issues. This protects the expensive internal optics.

Exceptional Light Transmission

Like all our sample interfaces, the G-SST Vapor Probe provides exceptional optical performance. Internal optics result in a collimated light beam for consistently accurate measurements. Typically, peak transmission exceeds 50%. That means more signal, less noise, and lower detection limits for the measurement. The optics on the G-SST Vapor Probe are permanently aligned at the factory. As a result, there is no need for any optical adjustments in the field. Additionally, there is no chance for optical misalignment to occur under normal processing conditions or during servicing.

Pathlengths and Operating Range

The G-SST Vapor Probe is available in a 50 cm; double pass 25 cm pathlength for VIS-NIR. It operates over the following temperature and pressure ranges:

- Temperature: 0 °C to 90 °C
- Pressure: 1×10^{-5} Torr to 1520 Torr (2 atm)

The Smart Choice for Reliable HPV Measurement

The G-SST Vapor Probe along with the HPV analyzer system delivers accurate, real-time H₂O₂ and H₂O measurement results. Its long-term stability and no maintenance requirements make it a cost-effective, smart choice to help optimize production and ensure product quality ultimately enhancing profitability.

One of the primary advantages of UV-VIS and NIR process spectroscopy is the utilization of intrinsically safe fiber optic cables to remotely locate the analyzer relative to the sample interface (probe or flow cell) installed in the process. Get the full power of this technology and choose the G-SST Vapor Probe along with an optically matched HPV analyzer and process grade fiber optic cables – *for control you can measure!*



Specifications

Probe Length	11.61 inches (29.49 cm), Insertion length 11.01 inches (27.96 cm)
Optical Pathlength	50 cm; double pass 25 cm
Spectral Range	VIS-NIR (450 - 2100 nm)
Fiber Connector	SMA 905
Optical Efficiency	≥ 50% (900 nm – 1650 nm)
Temperature Range	0 °C to 90 °C
Pressure Range	1 x 10 ⁻⁵ Torr to 1520 Torr (2 atm)
Body Material	SS316 standard, electropolished or anodized aluminum
Window Seal	Viton sanitary flange gasket, Viton o-rings
Probe Diameter Flange	2.52 inches, probe body 1.5 inches (3.81 cm), max diameter 1.91 inches (4.85 cm)
Flow Cell Body Length	n/a
Flange Mount	2 inches (50.8 mm) Tri-clover or no flange
Optics	Glass is gold-coated mirror

Large Variety of Configurable Designs

Process Insights offers a large variety of probes, flow cells, and process grade fiber optic cables that meet the harsh demands of the process environment. Several have auxiliary features. All the sample interfaces (probes and flow cells) can be optimized for the UV-VIS and NIR spectral regions or supplied with custom fiber diameters and connectors to match the optical requirements. Many include optional accessories for easy adaptation to different process installation configurations.

GAIN REAL-TIME INSIGHT INTO YOUR PROCESS

Process Insights manufactures and delivers premium sensors, monitors, detectors, analyzers, instrumentation, and software that are mission-critical to keep your operations, personnel, and the environment safe – every day across the globe.

Get the most reliable, precision analytical technologies available on the market today. We will work to match your needs and budget, and provide the optimal, and most stable process analysis solution for your application.

CENTERS OF EXCELLENCE | PROVIDING PROVEN SOLUTIONS

Process Insights is committed to solving our customers' most complex analytical, process, and measurement challenges everyday.

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For a complete range of products, applications, systems, and service options, please contact us at: info@process-insights.com

For a complete list of sales & manufacturing sites, please visit: <https://www.process-insights.com/about-us/locations/>

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REVOLUTIONIZING MEASUREMENT

EVERYWHERE