

▶ Agilent Harsh Environment Probe for Helium Leak Detection



Power generation facilities, chemical plants and similar facilities require a leak detector to sample gas that is primarily water vapor (steam) and/or contains chemicals that would damage the detector. To prevent this damage from happening, Agilent has developed a specialized probe and leak detector configuration tailored to the demanding requirements of these applications.

The VS Harsh Environment (HE) Probe is designed to withstand the wet environment and high temperatures inside condenser piping without the need for dryers, chillers, a secondary vacuum pump, or throttling valves. The probe can either be held or installed in the exhaust of a pump on the condenser system, or can be flange-mounted directly into the piping of the system under test. The probe is connected to the flange via an adjustable compression fitting so the probe tip can be positioned in the center of the pipe. This guarantees the probe tip is in the maximum helium flow for the best sensitivity.

Equipment damage due to corrosion or water in the leak detector or roughing pump is eliminated. The Agilent HE Probe is able to withstand water, amines (ammonia derivatives), and operate at temperatures up to 95 °C (200 °F). The probe is connected directly to a VS Leak Detector with no additional water trapping or auxiliary pumping required. The probe consists of a corrosion resistant 316L stainless steel tube with a composite permeable membrane at its tip. The membrane readily permeates helium tracer gas while protecting the leak detector from water vapor and chemicals that would destroy the pumps, valves, and spectrometer. When the HE Probe is used in conjunction with an Agilent VS Leak Detector equipped with a wireless remote, the manpower needed for a leak test can be cut in half. A single operator can spray helium remotely from the location where the detector is sampling gas, yet can still monitor the instrument's response.

Applications

- Power generation
- Chemical plants
- Process gas piping

LEAK DETECTION

Features

- Permeable membrane technology
- Can be inserted directly into the center of the pipe
- Extremely durable
- Easy to use
- Economical

Benefits

- Prevents water and chemicals from contaminating and damaging the leak detector
- Faster response time and better sensitivity
- Withstands hot, wet, corrosive environments
- Simple system connection. No maintenance or adjustments
- Less expensive than dryers and repeated purchases of sacrificial pumps

Technical Specifications

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|--------------------------------------|--|
| Operating temperature range | +10 °C (+50 °F) to +95 °C (+200 °F) |
| Storage temperature range | -18 °C (0 °F) to +65 °C (+150 °F) |
| Operating vacuum pressure | Atmospheric pressure to low vacuum 1μ Hg, <1 ⁻³ mbar/Torr, 1 ⁻¹ Pa |
| Maximum internal overpressure | 1 Bar, (14.7 PSI), (105 Pa) |
| Probe length | 450 mm (17.7") Hose High density polyethylene, 5 meters (16.4') long |
| Weight of probe assembly | 0.5 kilogram (1 pound) |
| Hose fitting size | ½" (12.7 mm) Swagelok™ compression or equivalent |
| Vacuum flanges | ISO KF25 |
| Adaptor flange o-ring | Butyl rubber, Parker B2-016 or equivalent |
| Chemical resistance | Probe resists virtually all chemicals except complex halogenated compounds |

Ordering Information

| Description | Shipping Weight kg (lbs) | Part Number |
|------------------------------|---------------------------------|--------------------|
| Harsh Environment (HE) Probe | 2.0 (5.0) | G8600-68002 |