

HY-ALERTA™ 500

Handheld Hydrogen Leak Detector

The hydrogen-specific HY-ALERTA™ 500 is ideal for rapidly detecting and locating hydrogen leaks from **15 ppm to 100%** in air or inert gases. The leak detector uses an easy-to-see LED array on the probe to help quickly and confidently identify the source of a leak. An LCD on the controller provides the numeric value or range of the amount of hydrogen detected. A flexible cable lets the user move the sensor probe to virtually any potential leak source.



How it Works A thin film palladium-nickel alloy absorbs and desorbs hydrogen as it comes in contact with the sensor. The palladium catalyzes the hydrogen molecule into atomic hydrogen, which gets absorbed into the metal lattice and changes the bulk resistivity or charge density. This change is calculated very accurately and reported in real time. The sensor is hydrogen specific because even though palladium can catalyze several elements, only hydrogen can penetrate the lattice structure of the sensor at a rate that is meaningful to the measurement. As a result it is unaffected by most other gases. Since it is a solid state device, the sensor does not degrade over time.

Ease of Use With no moving parts, the leak detector is extremely reliable and easy to use. It typically only requires a quick periodic bump test every three months, with a full factory calibration recommended annually. A verification kit is available from H2scan. No other maintenance is necessary.

Performance and Safety The model 500 handheld leak detector is intended for use in an air, oxygen, or inert gas environment where hydrogen is only occasionally present for short periods, as may occur if there a leak is suspected. The model 500 is UL and CE approved for safe operation.

HY-ALERTA 500 Specifications

Performance

Hydrogen Sensitivity: 15 ppm to 100% by volume
Initial Response Time: Seconds
Calibration Background Gas: Air
Calibration Period: Factory calibration every 12 months

Power

Battery Type: Rechargeable Li-Ion
Operating Time: Up to 10 hours
Charge Time: 4 hours with included charger

Physical

Weight: 2.2 lbs (1 kg) **Shipping Weight:** 7 lbs (3.2 kg)
Dimensions (Body): 6.8 in (L) x 3.4 in (W) x 1.4 in (D)
 17.3 cm (L) x 8.6 cm (W) x 3.6 cm (D)
Dimensions (Probe): 7.8 in (L) x 1.2 in (Dia)
 19.8 cm (L) x 3.0 cm (Dia)
Cord Length (Coiled): 26 in (66 cm)
Cord Length (Extended): 72 in (183 cm)

Environmental

Operating Temperature: 32 to 113 °F (0 to 45°C)
Storage Temperature: -4 to 113 °F (-20 to 45°C)
Relative Humidity: 0 to 95%, non-condensing

Included Accessories

Plastic storage case
 Battery charger with plug adapter (100-240 VAC, 50-60 Hz)
 Verification cup assembly
 Shoulder strap and carrying case

Optional Accessories

Calibration-Verification Kit (p/n 61000157-AM), contains bottles with 1% H₂ and 2% H₂ in air for bump testing

Safety Certifications

