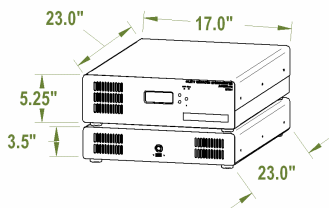




Picarro G1102-*i* Features

- Continuously measures isotopic ratios in H₂O with a measurement time < 30 seconds
- Superior accuracy and precision
- Insensitive to changes in ambient temperature
- Exceptional stability
- Minimal calibration gases and human interaction
- Unsurpassed reliability

Dimensional Drawing



The Picarro G1102-*i* isotopic water vapor analyzer is a field-deployable, real time, ambient gas monitor capable of measuring isotopic ratios of oxygen and hydrogen in water vapor with high precision and accuracy. This analyzer will measure the isotopic oxygen ratio of water vapor with better than 0.2‰ precision and the isotopic hydrogen ratio to better than 0.5‰ precision in a measurement time of less than 30 seconds. The high accuracy, exceptionally low drift, and excellent precision of the Picarro G1102-*i* make it ideally suited to address the demanding requirements of field-based and laboratory measurements. A patented high precision wavelength monitor makes certain that only the spectral absorption feature of interest is being monitored, greatly reducing the analyzer's sensitivity to interfering gas species. As a result, the analyzer maintains high linearity, precision, and accuracy over changing environmental conditions with minimal calibration. The automated control systems designed into the Picarro G1102-*i* ensure accurate measurements over long periods of time with minimal use of calibration standards.

Easily transportable from site to site, the Picarro G1102-*i* can be set up and running within minutes, and requires little or no sample preparation. The gas concentration is displayed in real-time with little or no post processing required. Designed to operate in harsh environments, the Picarro G1102-*i* can operate for long periods of time without user interaction. The analyzer can be configured to automatically send out measurement data at regular intervals via the Ethernet or with the built-in modem. The Picarro G1102-*i* can also use its modem or Ethernet connection to synchronize with an atomic clock time service.

Performance Specifications

Target Isotopic Gas Species	Precision (per mil in a <30 second measurement, 1-s, @25°C)
H ₂ ¹⁸ O / H ₂ ¹⁶ O (δ ¹⁸ O)	<0.2‰ (max)
HD ¹⁶ O / H ₂ ¹⁶ O (dD)	<1.0‰ (max)

System Specifications

Measurement Technique	Cavity Ringdown Spectroscopy
Gases Measurable	Water (H ₂ O)
Range	20 to 95 RH% (non-condensing)
Measurement Interval	<30 seconds
Sample Flow	< 0.4 l / min at STP
Sample Temperature	+ 15°C to + 35°C
Sample Pressure	400 hPa to 1300 hPa
Fittings	¼" Swagelok ®
Dimensions	Ca. 43cm * 25cm * 58cm
Installation	Benchttop or rack mount
Weight	30 kg
Power Dissipation	< 350 Watts

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