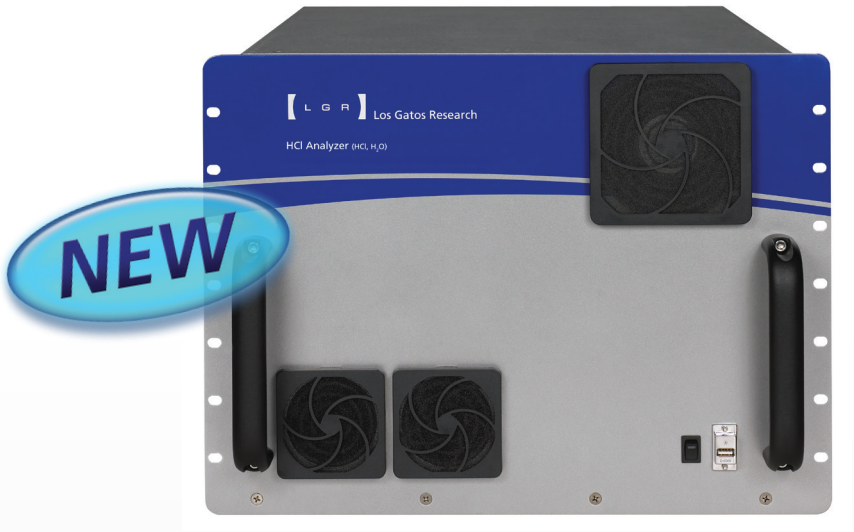
Fast HCl measurements.

Anywhere.



Hydrogen Chloride Analyzer (HCl, H_2O)

Features and Benefits

- Fastest response: 1-Hz continuous measurements allow observation of transient and time varying flows
- Measures a wide range of concentrations
- High-resolution absorption spectra always viewable
- Low power: ideal for field applications
- New Enhanced Performance model provides ultra-low drift and unsurpassed precision

LGR's Hydrogen Chloride Analyzer (HCl Analyzer) continuously measures HCl in ambient air or in industrial process flows with extremely high precision and sensitivity. No longer do you have to spend a lot of money or wait a long time to measure hydrogen chloride gas with high sensitivity – LGR's Hydrogen Chloride Analyzer provides measurements every second with ppb-level precision. In addition, the analyzer can report measurements quickly over a very wide range of HCl mole fractions.

LGR's HCl Analyzer is available in two packaging options to allow users to select the configuration most suitable for their needs. LGR's standard rackmount package fits in a 19" wide instrumentation rack and requires an external keyboard, mouse, and video monitor. For highest performance, the HCl Analyzer is now available in LGR's "Enhanced Performance" (or EP) package. The EP package incorporates proprietary internal thermal control for ultra-stable measurements with unsurpassed precision, accuracy and drift.

The HCl Analyzer uses LGR's patented Off-axis ICOS technology, a fourth-generation cavity enhanced absorption technique. Off-axis ICOS has many advantages over conventional cavity ringdown spectroscopy (CRDS) techniques such as being alignment insensitive, having a much shorter measurement time, and not requiring expensive and power consuming auxiliary components.

As with all LGR instruments, the HCl Analyzer includes an internal computer (Linux OS) that can store data practically indefinitely on its internal hard drive (for unattended long-term operation), and that can send real-time data to a data logger through its analog, digital (RS232) and Ethernet outputs.

Furthermore, the HCl Analyzer may be controlled remotely via the Internet. This capability allows the user to operate the analyzer using a web browser anywhere.

Hydrogen Chloride Analyzer (HCl, H_2O)

Performance Specifications

Precision (1σ, 1 sec / 10 sec / 100 sec):
HCl: 0.4 ppb / 0.2 ppb / 0.1 ppb

Maximum Drift (Exhanced Performance model)
(1σ, 15 min average, at STP, over 24 hrs):
HCl: 1 ppb

Measurement Range (meets specs):
HCl: 0.3 – 2000 ppb
H_2O: 1000 – 50000 ppm

Operational Range
(external calibration may be required):
HCl: 0 – 10 ppm
H_2O: 0 – 50000 ppm

Measurement Rates (user selectable):
0.01 – 1 Hz
(external pump required for < 10 second flow response)

Response Times (10%-90%, 90%-10%):
60 seconds (continuous measurements reported at user-selected intervals up to one per second)

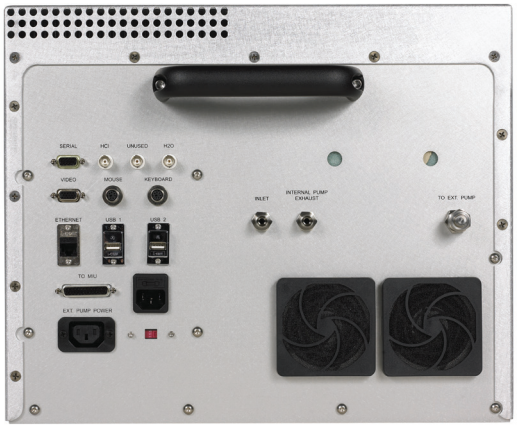
Sampling Conditions:
Sample Temperature: 0 – 50 °C
Operating Temperature: 0 – 45 °C
Ambient Humidity: 0-100% RH non-condensing

Outputs:
Digital (RS232), analog, Ethernet, USB

Power Requirements:
115/230 VAC, 50/60 Hz or 12 VDC
Standard model: 100 watts
Enhanced Performance model: 150 watts (steady state)

Dimensions:
Standard model: 8.75" × 19" × 24"
Enhanced Performance model: 15.75" × 19" × 24"

Weight:
29 kg (Standard model)
40 kg (Enhanced Performance model)



Ordering Information

907-0037: Standard rackmount model

911-0037: Enhanced Performance rackmount model

Accessories

908-0003-9001: Multiport Inlet Unit –
Automated control of up to 16 inlet ports

908-0003-9002: Multiport Inlet Unit –
Automated control of up to 8 inlet ports

908-0001-9011: N920 Pump –
Flow-through time = 1.2 seconds (note that the standard internal pump provides < 8 seconds 1/e flow response time)

904-0002: Data Logging System – multi-channel data logging system records and synchronizes serial (RS-232) outputs from multiple LGR analyzers and other devices (GPS, anemometers)