

Boreas[®] Gas Analyzer Product Data Sheet

Description

The Boreas[®] gas analyzer is a pre-calibrated full-spectrum infrared based optimized for quality control of specialty gases (mono- and polyblends).

It includes an e-Cell gas measurement modules with pathlengths ranging from 1.2 to 4.0 meters and improved transfer optics for lower LoD's.

The entire assembly is available either in 19" rack form factor for easy integration in an existing cabinet, or as a bench top analyzer for laboratory use.

Benefits

Specifically designed for integration with an EPIR spectrometer, this product allows improved analytical performance for EPIR gas phase analysis by means of sample physical conditioning and temperature and pressure monitoring.

The resulting integrated product can easily be placed in a standard 19" rack cabinet for ready use.

Features

Sample Conditioning

- ▶ 3 gas input ports (zero, span and sample).
- ▶ Sample temperature stabilization optimized for measurement at 60°C.
- ▶ Computer controlled 3-way valves for operation in positive pressure conditions.

Gas Cell

- ▶ Temperature Controlled Gas Cell (pathlengths 1.2; 2.0; 3.2; and 4.0 m) with built-in transfer optics and IR source.

Temperature and Pressure

- ▶ Temperature and Pressure sensors.

Data I/O

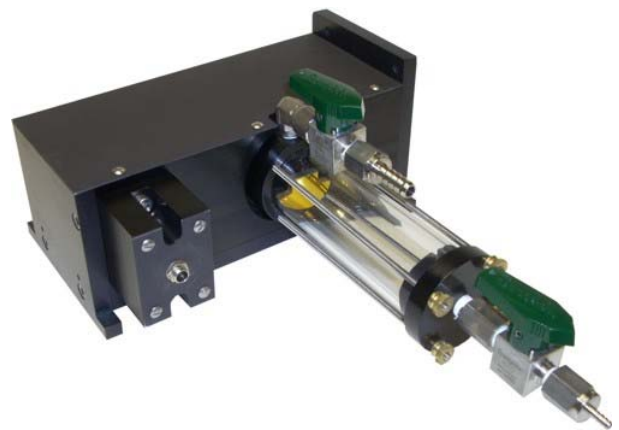
- ▶ Built-in 10-bit computer to control all sub-assemblies
- ▶ Single ethernet I/O for all controls and data acquisition to an external computer.

Software

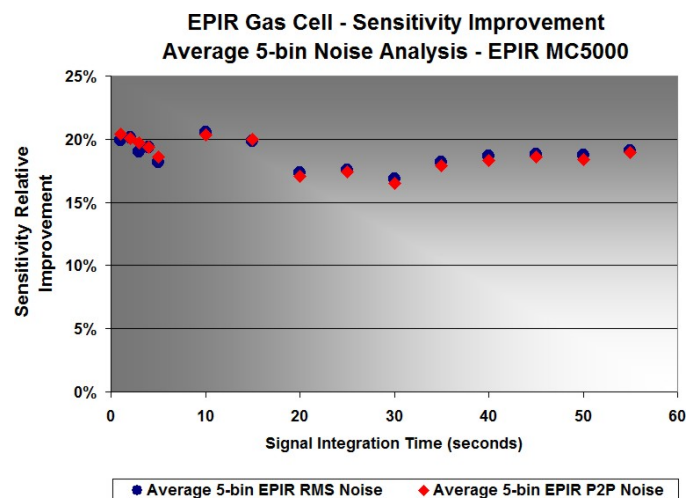
- ▶ Valve and pump control; sample compartment temperature setting and regulation
- ▶ Pre-loaded calibrations + upgrades to custom calibrations available
- ▶ Real-time push button HMI for immediate operation.



Boreas[®] Gas Analyzer - 19" Rack Form Factor



Improved e-Cell[®] - available in pathlengths from 1.2 to 4.0 m



New Transfer Optics - Energy Throughput Improvement

Boreas[®] Technical Specifications

Dimensions (W x H x D)

- ▶ 19.00 x 10.30 x 25.25 inches
- ▶ 48.3 x 26.2 x 64.1 cm

Weight

- ▶ 60 Lbs (27.3 kg)

Gas Ports

- ▶ Port 1: Sample
- ▶ Port 2: Zero
- ▶ Port 3: Span
- ▶ Port 4: Purge
- ▶ Port 5: Exhaust
- ▶ 1/8" Swagelok bulkhead connectors

Valves

- ▶ 3 electrovalves.
- ▶ Valve setting control: manual from front panel or SW-controlled.

Computer (optional)

- ▶ CPU : Intel Atom 1.5 GHz (minimum)

- ▶ RAM: 512 Mb SDDR2 (minimum)
- ▶ Operating system: Windows XP / Windows Vista 32-bit (requiring administrator privileges)

Gas Cell

- ▶ Operating Pressure: ambient
- ▶ Internal volume: 100 mL
- ▶ Pathlengths available: 1.2; 2.0; 3.2; and 4.0 meters

Recommended Flow Rates:

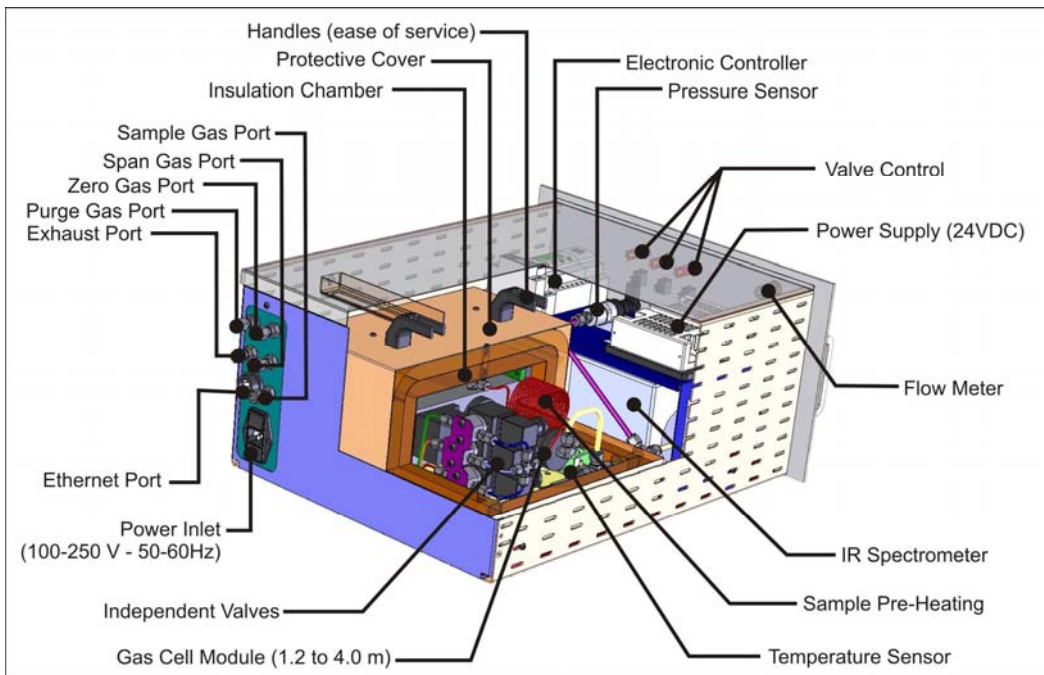
- ▶ Zero, Span, Sample: 1,000 CCM
- ▶ Purge: 500 CCM
- ▶ Positive pressure feed for all gases

Temperature Control:

- ▶ Default: 60°C
- ▶ Sample conditioning unit optimized to accept input gases at temperatures from 0 to 60°C.

Power Supply

- ▶ 100-250 VAC 50-60Hz
- ▶ Power Consumption: 300 W



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Polarmetrics Corporation

3510 Parmenter St. #110
Middleton, WI 53562

Ph.: 1-608-831-2360
Fax: 1-888-355-5078

www.polarmetrics-corp.com

sales@polarmetrics-corp.com



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Greater Efficiency