

HPGP-101-C

High Pressure Gas Probe

The Particle Measuring Systems High Pressure Gas Probe System, HPGP-101-C, monitors contaminants in process gases at line pressure. This system includes the sensor probe along with a PDS-PA data system, which collects and reports data.



BENEFITS

Reduced Costs

- Speed qualification of process gas distribution systems
- Detect particles in gases before they impact yield
- Compatible with oxygen, hydrogen, and most non-toxic gases

Improved Process Control

- Verify specifications
- Detect process upsets
- Quantify impact of system changes
- Accurate particle sizing
- Facility Net data management for comprehensive data storage, management, reports and alarms

Reliable

- Passive cavity design requires infrequent maintenance
- Unlike other systems, the HPGP requires no fluids for monitoring
- Inert gas purge ensures safety
- Leakage of sample gas to vessel discontinues power to electronics

FEATURES

- 0.1 micron sensitivity at 0.1 SCFM
- Eight particle channels
- Line pressures from 40 to 150 psig
- Passive laser cavity
- Parallel processing array detector system
- Safety containment vessel
- Simultaneous dual probe operations
- Oxygen and hydrogen compatibility

APPLICATIONS

- Qualification of gas distribution systems
- Process gas monitoring
- Reactive gas monitoring

Without measurement, there is no control.



**PARTICLE
MEASURING
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HPGP-101-C

Size range:	0.1 - 5.0 microns
Flow rate:	0.1 SCFM (2.8 LPM)
Sample volume:	0.1 SCFM (2.8 LPM)
Counting efficiency*:	>50% at 0.14 microns
Zero count level:	<2/ft ³ or <0.2/minute
Maximum concentration**:	3000/ft ³
Optical design:	Passive cavity with parallel processing array detector
Optical system:	Wide angle 90° scattering collecting optics with greater than 2π steradians solid angle
Laser type:	HeNe
Data system:	PDS-PA
Sizing thresholds:	8 channels with thresholds at: 0.1, 0.2, 0.3, 0.5, 1.0, 2.0, 3.0, 5.0 microns
Calibration:	Calibration materials used are traceable to the USA National Institute for Standards and Technology (NIST) and to one or more of the following procedures: ASTM F-328, ASTM F-649, ASTM F-658.
Dimensions (l, w, h):	26 x 8 x 9 inches (65 x 20 x 22 cm)
Weight:	45 lbs. (20.4 kg.)
Power:	100, 115, 220 or 240 V; 50 - 60 Hz, 3 amps
Environment:	Temperature: 0 - 40° C. Humidity: 0 - 95% noncondensing. Altitude: 0 to 20,000 ft. (6,098 m)

PDS-PA Data System

Number of sensors:	2
Sampling interval:	1 second to 99:59:59 (hh:mm:ss); programmable or manual
Sampling mode:	Single, continuous, or manual
Delay time:	5 seconds to 99:59:59 (hh:mm:ss); programmable
Data management and analysis:	Facility Net
Computer interface:	RS-232C, bi-directional
Power:	100, 115, 220, or 240 volts; 50 - 60 Hz; 3 amps
Environment:	Temperature: 0 - 40° C. Humidity: 0 - 95% noncondensing. Altitude: 0 to 20,000 ft. (6,098 m)
Dimensions (l, w, h):	19 x 14 x 7 inches (48 x 36 x 18 cm)
Weight:	29 lbs. (13 kg.)

* Allow ±5% for variations in sample flow.

** Greater than 90% accuracy (less than 10% coincidence loss) at maximum recommendation ambient concentration.

Patents apply: U. S. - 4,798,465, 4,893,928, and 4,594,715. Japan- 2,786,187, and 2,554,614.

Germany- 3,712,665C2, 3,930,642, and 3,485,749.4. Canada- 1,228,148. UK- EP142815.

Particle Measuring Systems, Inc. reserves the right to change specifications without notice.

AUTHORIZED REPRESENTATIVE



Registration applies to the Boulder, Colorado facility



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