

ANALYZER SOLUTIONS FOR YOUR PROCESS!

## ProMaxion™ Process Mass Spectrometer

Online Gas Analysis for Weatherproof or Hazardous Area Locations

AMETEK's ProMaxion process mass spectrometer offers real-time gas analysis in a reliable easy-to-use package for a wide range of industrial applications. With more than 20 years' experience in mass spectrometer design and manufacture, and over six thousand quadrupole analyzers operating reliably worldwide, ProMaxion brings cost-effective, high-performance analysis to your process.

### MULTICOMPONENT ANALYSIS

Real-time process monitoring of up to 32 components is straightforward with ProMaxion's powerful, easy-to-use Process 2000 software. Complex overlapping spectra are handled automatically and data output directly in concentration units. Different calibration and analysis methods can be assigned to each sample port.

### REPLACES PROCESS GAS CHROMATOGRAPHS

Mass spectrometry is a very rapid analytical method allowing analysis of multiple sample streams in seconds and can directly replace gas chromatographs and other discrete analytical devices. This field-proven system, combined with AMETEK's more than 30 years' experience in the process analyzer business, means you can depend on ProMaxion for your critical process analysis and control applications.

### EASY TO USE, EASY TO MAINTAIN

The software provides easy set-up and operation and includes advanced alarm and automation capabilities. Autocalibration maintains the performance and accuracy of the system for quantitative analysis. Self-diagnostics and modular design ensure ease of maintenance by your own personnel on site, with modern support available for additional factory diagnosis and troubleshooting. There is no need for the expensive service contract typical of most process mass spectrometers.

### CUSTOM SAMPLE HANDLING

The ProMaxion can be custom-designed to monitor just about any type of gas or liquid stream, depending on sample pressures, hazardous area requirements, particulate levels and number of sample points. Automated sample switching allows unattended analysis of process and calibration gases. The multiport gas sample inlet system consists of up to 80 manifold-mounted valves and a capillary restriction in an enclosure heated to prevent condensation. A membrane inlet system is incorporated for liquid sampling applications.



*The ProMaxion with sub-atmospheric sampling system. Automatic valve switching provides rapid analysis for multiple inlets.*

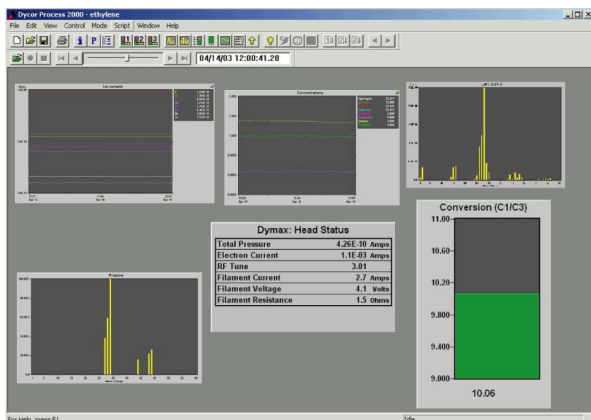
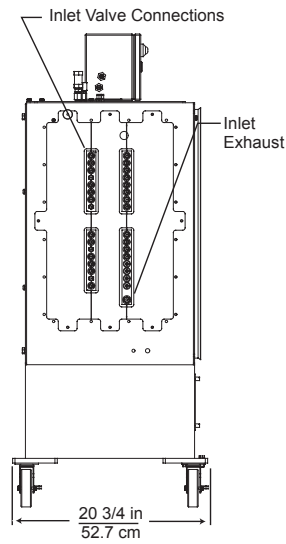


Figure 1. Select from standard display modes or design a custom layout.

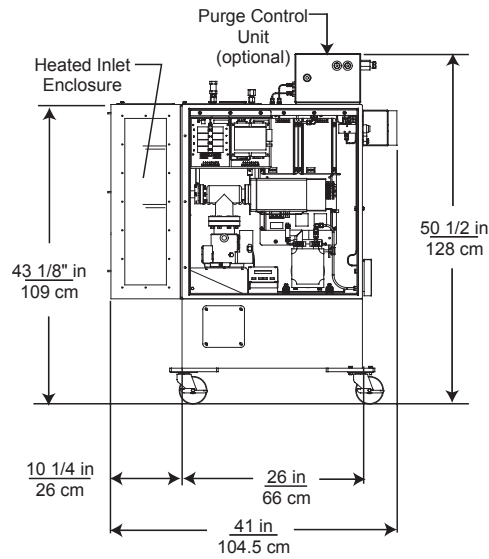
### APPLICATIONS

- Ammonia
- Ethylene
- Ethylene Oxide
- Polyethylene
- Reforming Furnaces
- Steel Manufacturing
- Vinyl Chloride
- Syn Gas Manufacturing
- Environmental - BTX, VOCs
- Acrylonitrile
- Methanol
- Fermentation
- Solvent Drying End-Point Detection

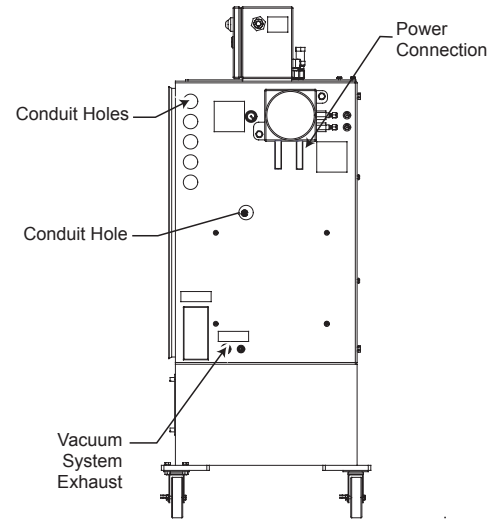
## DIMENSIONS



Left Side



Door Open



Right Side

## SPECIFICATIONS

Range: 1-100 AMU; optional 1-200 AMU, 1-300 AMU

Inlet: Up to 80 port sample selection manifold with electric or pneumatic valves. Membrane inlet system for liquid samples.

Inlet Pressure (gas): 50 PSIG (345 kPa) to 10 Torr absolute

Accuracy: Better than 0.1% of reading for argon in air (Faraday cup)

Outputs: RS-485, RS-232, optional 4-20mA

Detection Range: From 0.1 PPM to 100% with gas samples, Faraday cup. PPB levels with electron multiplier.

Power: 115/230 VAC, 50/60 Hz, 600 W

PC Requirements: Pentium® equivalent, 600MHz or better, Windows 98, ME, NT, 2000 or XP

Enclosure: NEMA 4X (IP65) stainless steel; ATEX and NEC purged versions available.

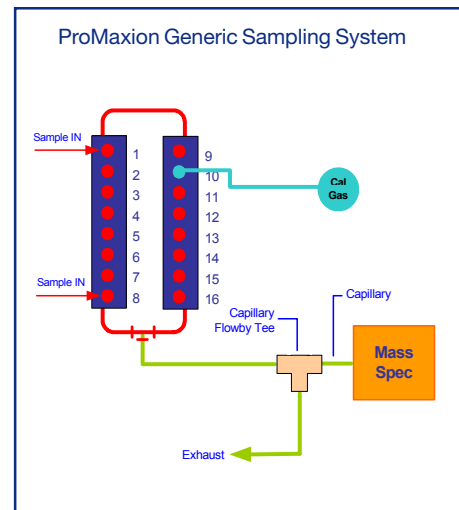


Figure 3. ProMaxion generic sampling system - 16 valve unit. Custom systems can be designed to suit the application.

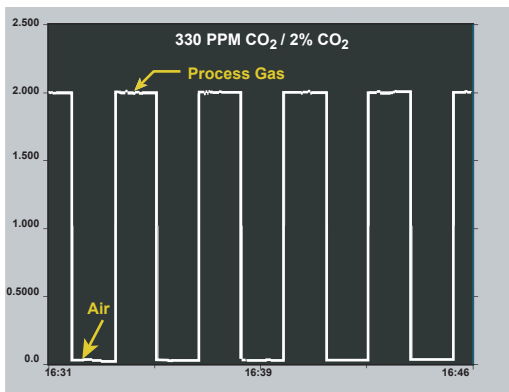


Figure 2. Step-change response in fermentation process.

## RAPID RESPONSE, WIDE DYNAMIC RANGE

The extremely fast response of the ProMaxion allows detection of rapid changes in gas composition and provides a continuous window into the process. Figure 2 illustrates the step-change response as gases are switched between air (0.03% CO<sub>2</sub>) and fermentation process (2% CO<sub>2</sub>). This also demonstrates the wide dynamic range of the ProMaxion mass spectrometer.

One of a family of innovative process analyzer solutions from AMETEK Process Instruments. Specifications subject to change without notice.

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**MANUFACTURING LOCATIONS**  
REGISTERED  
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MANAGEMENT SYSTEM

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ProMaxion (10/03)



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