

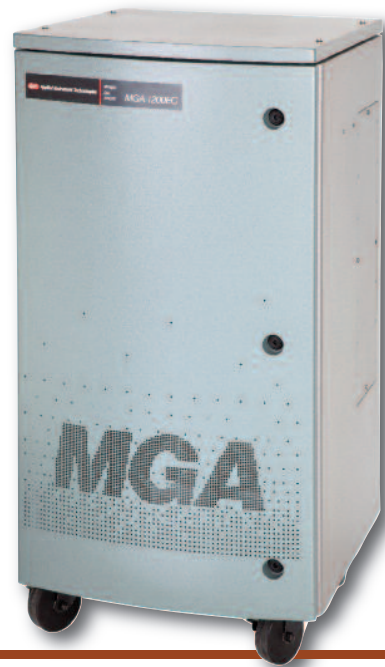
## Process Mass Spectrometer

The MGA™1200EC™ process mass spectrometer is a fixed magnetic sector analyzer that provides rapid, accurate and stable real-time analysis of up to 16 gas components in multiple gas streams. It's the fastest Process mass spec on the market

- It is hardware configurable to provide both continuous and instantaneous readings of gas concentrations; less than 1 second response time for all components.
- Windows® based Prime™ software allows operator access and control of a variety of operating parameters.



- Provides mid-ppm to 100% level analysis of components.
- Long-life turbomolecular pumping system allows rapid vacuum pump-down in less than 2 minutes.
- Unmatched stability provides best-in-industry drift specification and longest intervals for calibration.
- Ability to interface to process streams with capability of driving both rotary and solenoid manifolds.
- Optional validation assistance program for 21 CFR Part 11 compliance.
- Available for general purpose and hazardous area operation.



### M G A A P P L I C A T I O N S

#### Ammonia/Urea

H<sub>2</sub>/N<sub>2</sub> Converter Efficiency  
Reactor Efficiency  
Separation

#### Biotech/Pharmaceuticals

Microbial Fermentation  
Mammalian Cell Culture  
Reactor Feed Gas

#### Ethylene Oxide

Reactor Inlet  
Reactor Outlet  
Pilot Plant

#### Fuel Cell Analysis

#### Leak Detection

Hydrogen Leaks  
Hazardous Gases

#### Petroleum Refining

Hydrogen Plants  
Hydrogen Reforming  
Coal Gasification  
Ethanol Plants  
Flame Stack Monitoring

#### Steel Processing

Blast Furnace Top Gas  
BOF Top Gas  
Coke Oven Gas

#### Turbine Feed Gas Analysis

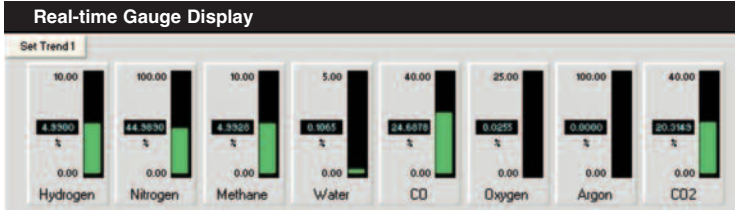
### MGA Advantage

- Continuous and instantaneous analysis
- Analyze up to 128 streams, including both process and calibration gases, in user-defined order
- Standard communications
  - RS-232 Serial
  - Modbus® RTU & TCP/IP
- Optional communications
  - Analog (0-10 Vdc, 4-20 mA)
  - OPC®
  - Profibus
- Scalable sampling systems and calibration manifolds available

# Prime™ Software Power Drives the Process



Prime software is used by the MGA™ 1200EC analyzer for process monitoring of multi-component gas streams. A Windows® based graphical interface provides the user with capabilities such as real-time analysis, automatic calibration, trending, sample system control and DCS communications. The Prime software is delivered with a data station.



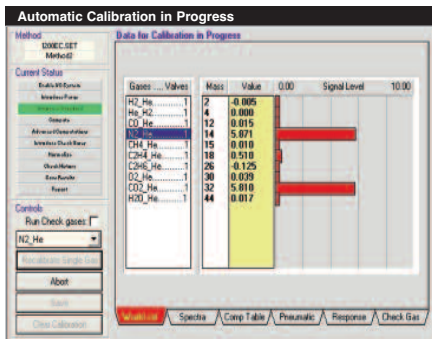
### Real-time displays

Formats include gauge, tabular or multi-stream trending. Up to 96 user-defined elements can be displayed in real-time on six pages.

- MGA electrometer outputs
- MGA compositional analysis
- User-defined calculations and alarms
- User-supplied analog and digital inputs



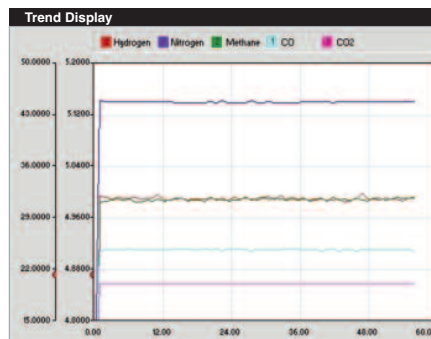
Custom Sample Conditioning System



### Calibration

Calibration is fully automatic with a Prime-controlled sampling system for calibration standards. Calibration can be initiated manually or initiated automatically based on:

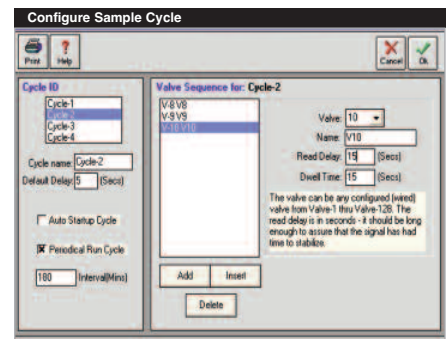
- Elapsed time
- Run time
- Ethernet/Modbus RTU Signal



### Trending

Up to 36 user-defined elements can be trended in real-time. Features include:

- Adjustable time X-axis
- User specified colors
- Two adjustable Y-axes



### Sample System Control

Prime software can control rotary valve or solenoid valve based systems with user-definable sequences:

- Auto-starting sequence
- Auto-starting periodic cycle
- Up to 128 valves

AIT can design and build a variety of turnkey accessories to optimize your system.