

Power utilities and independent power producers are increasingly concerned with upfront capital expenditures and subsequent on-site engineering and installation costs. They also require accurate, real-time monitoring information so that unit efficiency and generator performance can be maximized — and downtime minimized. The E/One Gas Station addresses each of these concerns and allows plant operators, together with E/One, to configure targeted solutions for original equipment supply and retrofit applications.

The E/One Gas Station is a modular approach that combines monitoring and control systems into a single integrated platform, customized to meet specific site requirements and budget parameters. Gas Station modules include:

- Main gas supply manifold and associated controls
- Gas purity monitoring
- Overheat monitoring
- Dew point monitoring
- Gas drying
- Partial discharge monitoring
- Seal oil system monitoring and control
- Customized annunciator panels



Typical Gas Station configuration – main gas supply and control, purity and overheat monitoring, and gas drying.

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## Gas Station Modules



### Generator Auxiliary System (GAS)

Used in conjunction with E/One's main gas supply manifold, provides local display of critical gas supply parameters, including supply pressures, case, and differential pressure. Maybe supplied with digital displays in place of gages.

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### Generator Gas Analyzer (GGA)

Provides continuous monitoring of hydrogen and purge gases for efficiency and safety.

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### Generator Condition Monitor (GCM-X)

Provides early warning of generator hotspots, which can lead to catastrophic failure.

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### Generator Gas Dryer (GGD)

Removes moisture and contaminants from cooling gas, reducing threats of corrosion and windage losses.

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### Auxiliary Systems (AUX)

Customized to meet specific requirements and often include seal oil system monitoring and site-specific annunciator displays.

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### GGA and GCM-X Dual-Module Gas Station

The popular two-module GGA/GCM-X Gas Station combines continuous gas purity monitoring throughout all phases of operation, with early warning of overheat monitoring. An ideal retrofit configuration in support of generator life extension.

## Features and Benefits

- Flexible, cost-efficient approach to gas monitoring and control systems
- Modularity couples best of technology with reduced installation and on-site engineering costs
- Customized to meet specific needs and budgets
- Hazardous area designs — compliance with national and international requirements

## Specifications Gas Station

	GGA	GCM-X
<b>CHARACTERISTICS</b>		
Operating Principle	Thermoconductivity	Ionization Chamber
Gas Flow Rate	100-700 cc/min (500 cc nominal)	Adjustable
Measurement	H2 in Air H2 in CO2 Air in CO2	Thermal Particulation
Display	Alphanumeric LED's LCD	Bar Graph LED's LCD
<b>ELECTRICAL CHARACTERISTICS</b>		
Power Output Relays	115/230VAC, 50/60Hz Warning, Alarm, Trouble	115/230VAC, 50/60Hz Warning, Verified Alarm, Trouble
Output Signals (All output signals 4-20mA)	Purity	Ionization Chamber Flow
<b>MECHANICAL CHARACTERISTICS</b>		
Module Dimensions Temperature Relative Humidity Gas Connections Gas Pressure	23"(H) x 25"(W) x 12.25"(D) 32-125 F (0-52 C) 0-95% As required 100 psi maximum	23"(H) x 25"(W) x 10.25"(D) 32-125 F (0-52 C) 0-95% As required 150 psi maximum
Area Classification	Class I, Division I, Group B ATEX, Zone 1, Ex, H2	Class I, Division I, Group B ATEX, Zone 1, Ex, H2

	GAS	GGD
<b>CHARACTERISTICS</b>		
Operating Principle Gas Flow Rate Measurement	N/A	Adsorption (Molecular Sieve) Generator dependent  Dew Point
Display	Alphanumeric (optional) Analog gauge(s) LED's (optional) LCD (optional)	Alphanumeric Analog gauge(s) LED's (optional) LCD (optional)
<b>ELECTRICAL CHARACTERISTICS</b>		
Power Output Relays	115/230VAC, 50/60Hz Supply Pressure, Case Pressure Trouble (optional)	460/60/3 Phase High Temperature, High Dew Point (optional) Trouble
Output Signals (All output signals 4-20mA) Case Pressure	Supply Pressures (optional)	Dew Point
<b>MECHANICAL CHARACTERISTICS</b>		
Module Dimensions Temperature Relative Humidity Gas Connections Gas Pressure	23"(H) x 25"(W) x 7.5"(D) 32 to 125 F/0 to 52 C 0-95% As required 150 psi maximum	23"(H) x 25"(W) x 7.5"(D) 32 to 125 F/0 to 52 C 0-95% 3/4", 150# RF Flange 10/75 psi min/max
Area Classification	Class I, Division I, Group B ATEX, Zone 1, Ex, H2	ATEX, Zone 1, Ex, H2
2-Module Gas Station 78"(H) x 30"(W) x 36"(D)		
4-Module Gas Station 78"(H) x 59"(W) x 54"(D)		
6-Module Gas Station 84"(H) x 84"(W) x 60"(D)		

*Environment One Utility Systems  
is an ISO 9001 registered firm.*

Notes: GAS Modules may be configured to meet customer requirements.  
Contact E/One for detailed specifications of Gas Station configurations.

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