

GASS™-Module

Modular Gas Analysis Sampling System

A Cost-Effective, Modular Approach to Sample Conditioning

- Dries continuously
- Removes only water vapor
- Accommodates all samples
- Achieves low dew points
- Complete sampling system
- No moving parts
- Excellent corrosion resistance
- Compact design

The Perma Pure GASS™-Module is a cost-effective approach to gas sample conditioning that removes water, particulates and coalescible liquids from gas samples while retaining analyte gases. The GASS-Module is a heated sampling system that brings maximum performance at minimal cost to systems integrators and OEM manufacturers of gas analysis systems by deferring all control to the central system, eliminating any electronics in the module and reducing the size and complexity of the device.

Principle of Operation

Perma Pure's GASS-Module selectively removes water directly from the vapor phase using patented Nafion® membrane dryers. The filter and dryer inlet are heated to prevent condensation; consequently, water-soluble analyte gases are not lost through dissolution in the condensate. Drying is a continuous, self-regenerating process. No routine maintenance is required.

The GASS-Module also eliminates acid mist problems with a heated coalescing filter and automatic drain to remove sulfuric acid droplets. The GASS-Module can be integrated inside environmental enclosures or indoors along with analyzers, as it occupies little space.

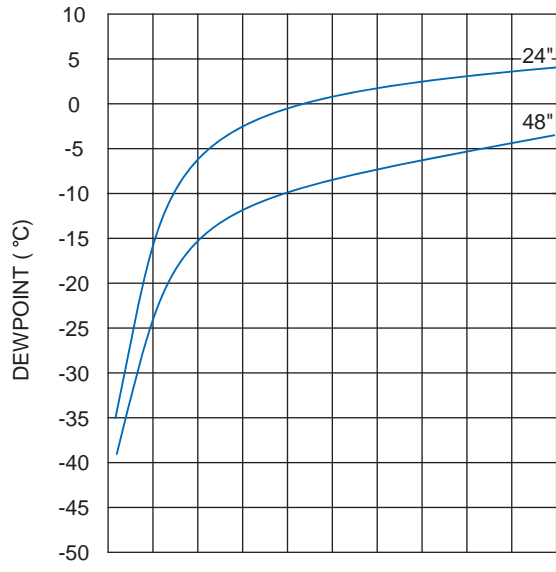
The GASS-Module accepts samples containing as much as 30% water by volume at flow rates up to 12 liters per minute and temperatures as high as 150°C. Particulates down to 1µm are removed, sulfuric acid mists are eliminated, and water content is reduced to dew points as low as -35°C, while oxides of carbon, nitrogen, and sulfur are quantitatively retained within the sample.



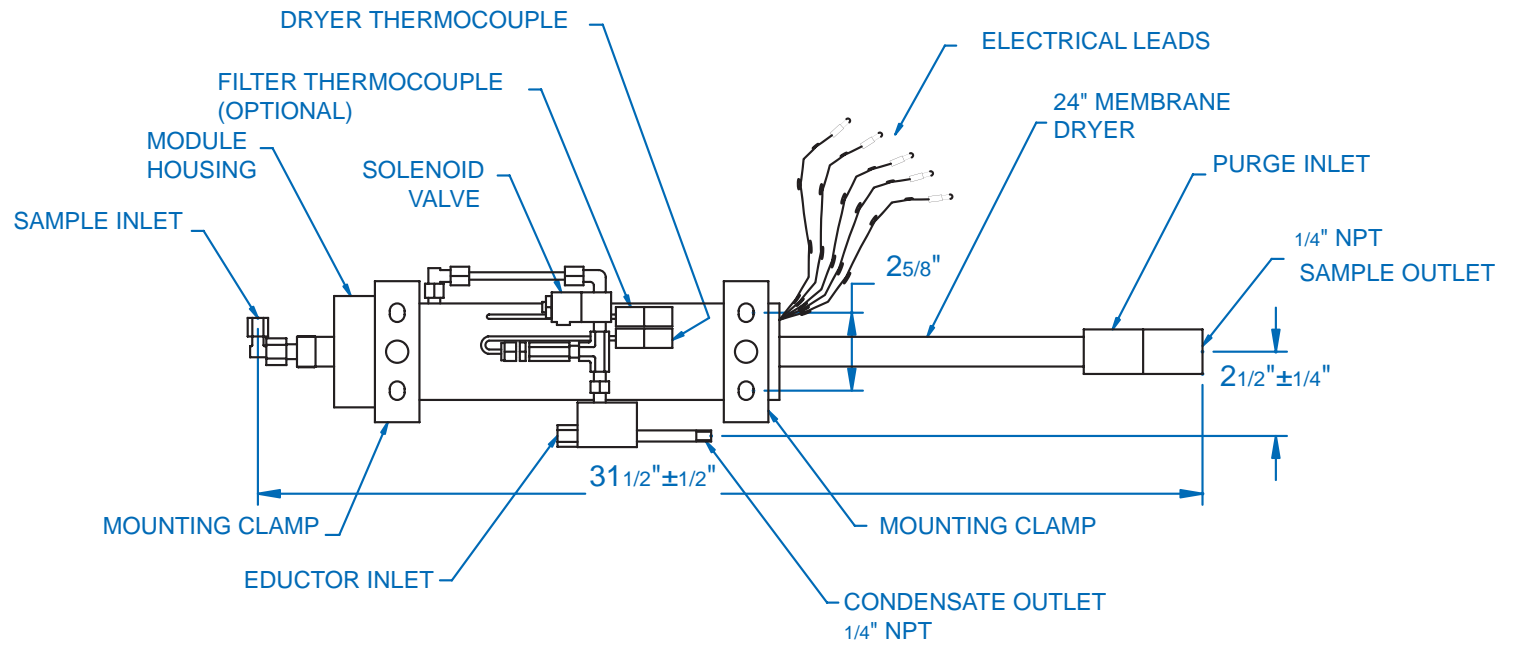
Model Number	GM-01-F1	GM-02-F1
Description	Base system	Includes drain on filter
Air requirement	Compressed air for eductor: 1-2 scfm @ 30 psig Instrument air: 1 scfm @ atm pressure	
Electrical	110 VAC, 50/60 Hz, 300 watts	
Dryer Options	PD-50T-24KA, PD-100T-24KA, PD-200T-24KA	
Dryer heater requires a temperature controller for operation		
Filter heater is thermostatically controlled at 90°C		



PERMA PURE



MODEL	0	1	2	3	4	5	6	7	8	9	10
PD-50T...	0	1	2	3	4	5	6	7	8	9	10
PD-100T...	0	2	4	6	8	10	12	14	16	18	20
PD-200T...	0	4	8	12	16	20	24	28	32	36	40



GASS™ is a Trademark of Perma Pure LLC, Nafion® is a Registered Trademark of E.I. DuPont.



ETA Associates

119 Foster Street, Bldg #6 • Peabody, MA 01960
 Tel: (978) 532-1330 • Fax: (978) 532 7325 • www.ETAassociates.com • eta@ETAAssociates.com