

# Indi-GASS™ Modular Gas Analysis Sampling System

The power of Nafion® sample drying  
in a cost-effective, turn-key package!

New

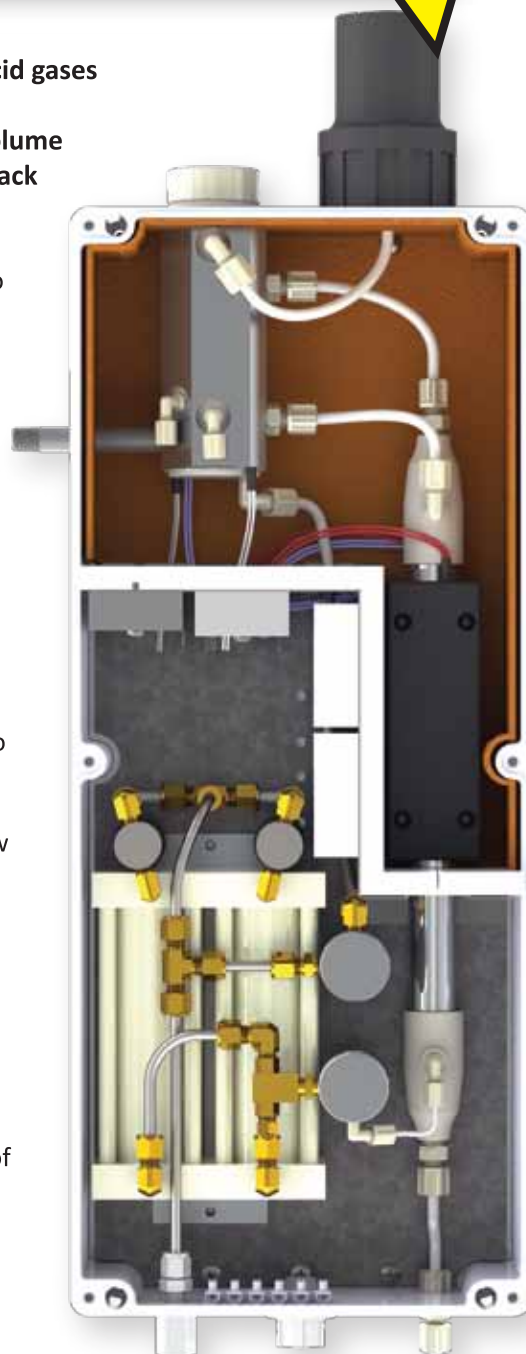
- Removes only water vapor and particulate
- Preserves NOx, SO2, CO, CO2, O2, HCl, HF and acid gases
- Sample flow from 1 lpm to 5 lpm
- Sample flow moisture 10-30% water vapor by volume
- Nema 4X enclosure for direct mounting at the stack
- Heatless dryer for purge air designed in!

Perma Pure has completely redesigned the GASS™ Module to improve performance and reduce cost. The new Indi-GASS™ removes water vapor, particulates and coalescible liquids from gas samples while retaining, water-soluble acid gases such as SO<sub>2</sub>, NO<sub>2</sub> and HCl for accurate measurement. The Indi-GASS™ is a plug-and-play system designed for everyday CEMS applications with 1-5 lpm flow rates and moderate moisture in the 10-20% range. Higher moisture applications (up to 30%) will work at lower flow rates (>2 lpm).

### Principle of Operation

The Indi-GASS™ has two temperature zones. The coalescing filter removes particulate and sulphuric acid mists from high sulfur fuel sources and is heated to 90°C – above the water dewpoint. The first half of the Nafion® dryer is also heated to remove maximum water vapor. The bottom half of the chamber operates at ambient temperature. The portion of the Nafion® dryer at ambient acts as a polisher to achieve low dew point for the exiting sample gas – even in high temperature climates. Simple controls for temperature and flow are located in the ambient chamber and are factory set for ideal performance.

The Indi-GASS™ is built in a Nema 4X fiberglass enclosure for direct mounting outside on the stack, next to the sample probe. This eliminates the need for expensive long heated sample lines, reducing total CEMS cost. The heatless dryer is designed into the ambient chamber for continuous delivery of dry purge air from a compressed air source. The Indi-GASS™ has few moving parts and requires minimal maintenance - periodic cleaning of the filter, which is easily removed from the top of the enclosure. The PD Nafion dryer is easily removed for occasional maintenance.



### Utility Requirements

#### Compressed Air:

- 60-100 PSIG, 3 SCFM Max
- Non-condensing, oil-free
- 1/4" NPT female connection

#### Electrical Power:

- 110/220 VAC, 2A/1A, 50/60HZ
- Hard wired to terminal block
- ½" Threaded conduit hub

Uses Nafion dryer # PD-200t-12MKA or # PD-100t-12MKA

**PERMA PURE LLC**

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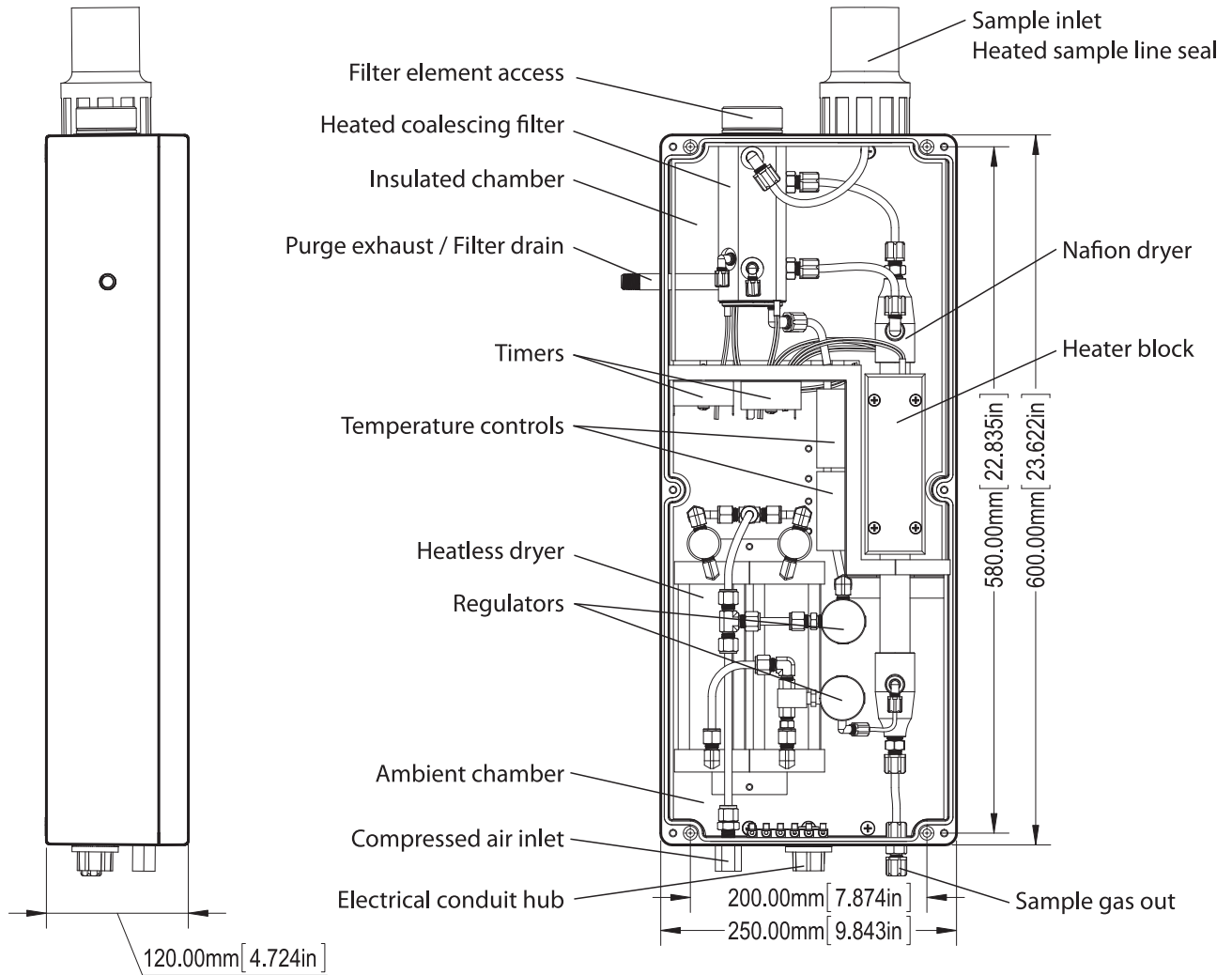
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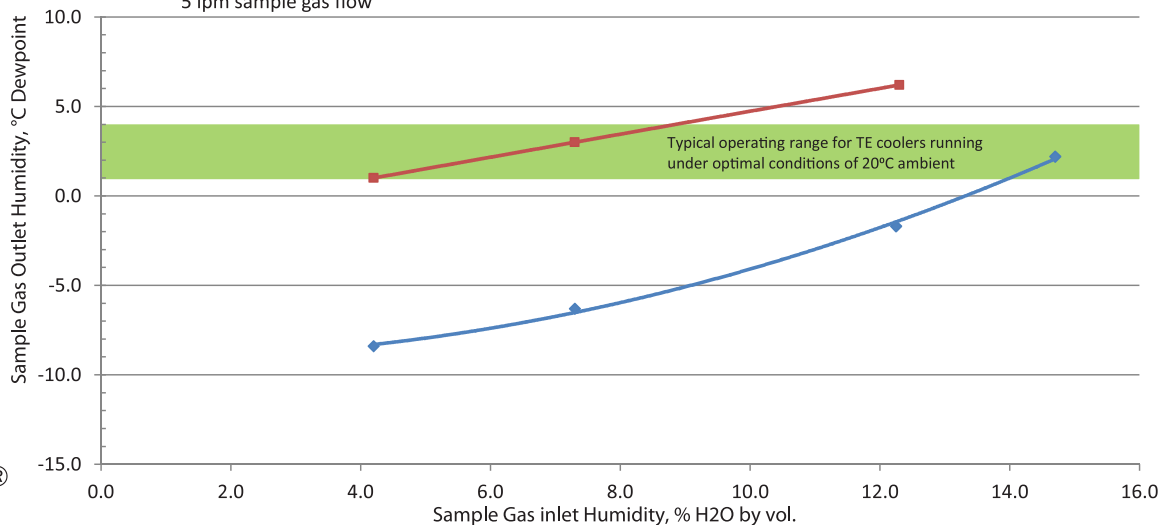
# Indi-GASS™ Modular Gas Analysis Sampling System



## Indi-GASS™ drying performance with a 200 tube Nafion® dryer.

Test Conditions :  
30 lpm purge air flow  
120°C sample inlet temperature  
5 lpm sample gas flow

■ 40°C Ambient conditions  
◆ 25°C Ambient conditions



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