

## Improve Gas Detection Sensor Accuracy by Adding Humidity to Your Calibration Gases

Humidifying calibration gas has been shown to improve Gas Detector accuracy and reduce false alarms for many sensor and gas types. Perma Pure's BE Series of Moisture Exchangers has been tested and characterized for users and installers of Gas Detection Systems to make it easy to humidify their calibration gas during the system calibration and set up procedure. A range of lengths is available for the most common flow requirements.



### Features and Benefits

**Simple Installation** — Place the BE moisture exchanger in line with the calibration gas before the sensor with the outside of the moisture exchanger fully exposed to the surrounding atmosphere.

The moisture exchanger will extract moisture from the surrounding ambient environment, automatically humidifying your calibration gas to the required level.

**Continuously Regenerating** — The Moisture exchanger continuously regenerates, providing consistent performance over time.

**Low Service Costs and Long Service Life** — Product does not “wear out” or lose performance with repeated use.

**Corrosion Resistant Construction**— The moisture exchanger materials are chemically resistant to most gases being detected.

### Performance Graphs - RH v Calibration Gas Flow Rate

Performance data is shown in two ways:

- Figure 1 and 2 show the resultant outlet humidity's at various flow rates for two controlled environments—one at 20 °C with a 15 °C dew point (a standard mild climate) and one at 35 °C with a 27 °C dew point (a typical hot and humid tropical climate)
- Figure 3 shows the outlet RH vs. inlet RH at the common flow rate of 1 LPM for a range of lengths.

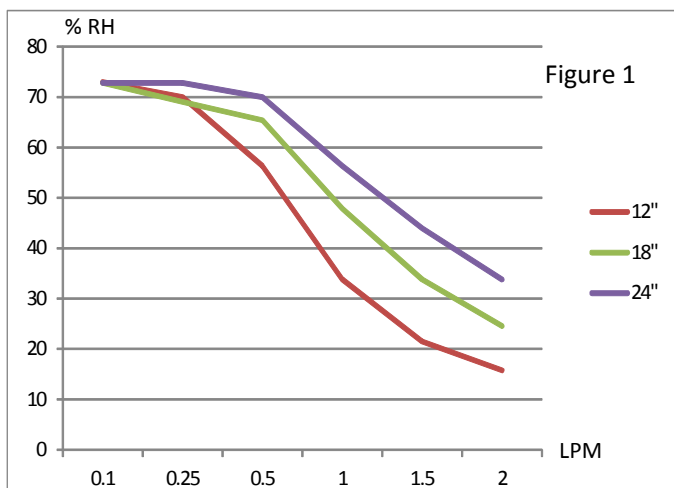


Fig. 1 - Ambient conditions of 20 °C w/ 15 °C Dew Point (73% RH)

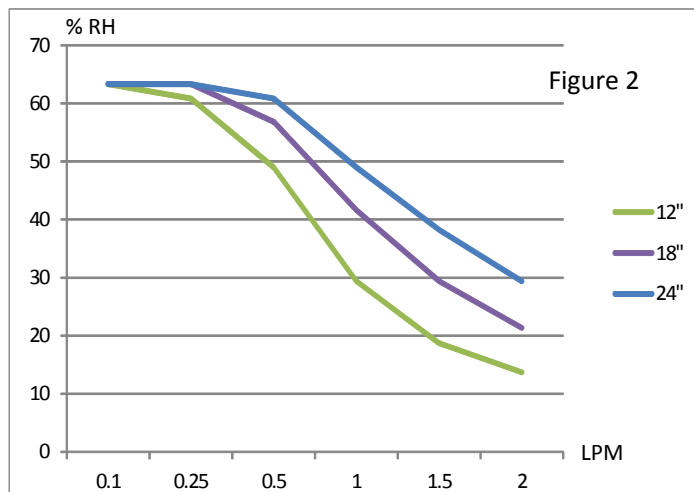
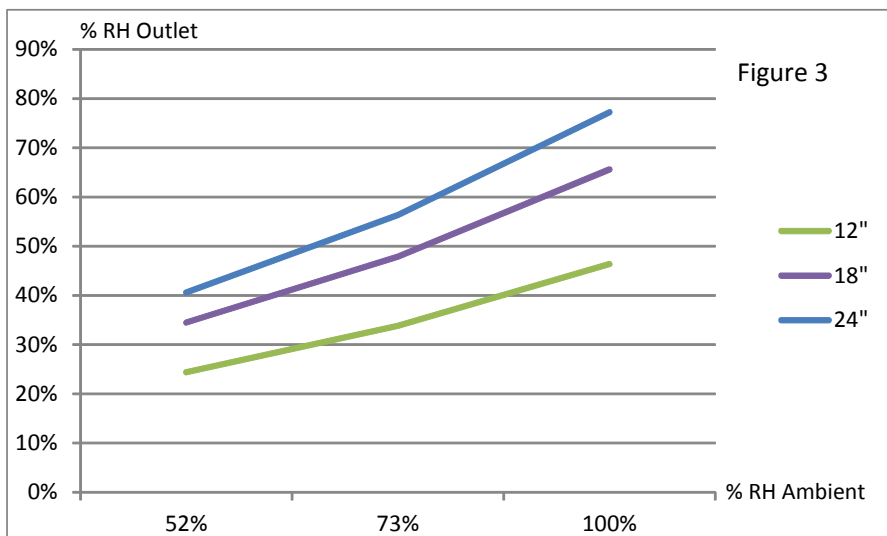


Fig. 2 - Ambient conditions of 35 °C w/ 27 °C Dew Point (63% RH)

**Performance Graphs - Resultant RH v Ambient RH**

Figure 3: Flow Rate of 1 LPM, 3 lengths (12, 18 and 24"), 20 °C Ambient Conditions, RHs from 50-100%



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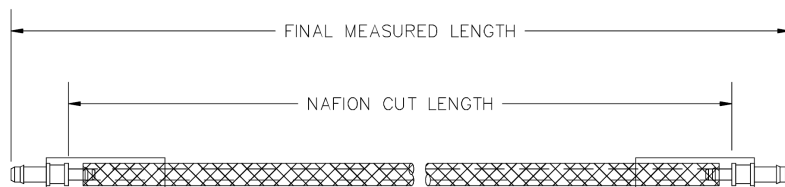
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**Operating Specifications**

Temperature	0-80°C
Pressure	Maximum 90 psi (6 bar)
Humidity (Ambient)	0-100% RH
Tubing Material	Nafion
Braided Material	Polypropylene Line
Connector Material	Molded Polypropylene

Size Selection	Flow Rate	Recommended Active Length
	0—0.5 lpm	12"(15cm)
0.5-1 lpm	18"(30cm)	
1-2 lpm	24"(60cm)	
2-4 lpm	48"(90cm)	

**Dimensions**


Dryer Active Length	12" (30 cm)	18" (45 cm)	24" (60 cm)	48" (120 cm)
Total Length ('L')	13.1" (33.3 cm)	19.1" (48.6 cm)	25.1" (63.8 cm)	49.1" (124.8 cm)

**Intelligent Product Numbering System**

**BE - 110 - 24 BB**

1. Series      2. Tubing Size      3. Length      4. Connection

1. Series	
Braided Moisture Exchanger	BE
2. Tubing Size	
0.110" Nafion® Tubing	110
3. Dryer Active Length	
6" (15 cm)	6
12" (30 cm)	12
18" (45 cm)	18
24" (60 cm)	24
48" (120 cm)	48
4. Connection Ends	
1/4" molded headers for compression fittings	COMP4
1/8" Barbed fittings	BB