



**Porous Material Inc. (USA)**

## **Microflow Porometer**

### **Description :**

The PMI Microflow Porometer is a Capillary Flow Porometer but with the ability to measure permeability in nearly impermeable materials. This instrument is user-friendly and non-destructive. The Microflow Porometer is an asset to quality control and R&D environments.

### **Principles of operation :**

A fully wetted sample is placed in the sample chamber and the chamber is sealed. Gas is then allowed to flow into the chamber behind the sample, at increasing amounts of pressure. A special flow meter is located in front of the sample and is used to detect the flow (diffusive) through the sample prior to the first true pore being emptied of fluid. Thus, the integrity is determined.

When the pressure reaches a point that can overcome the capillary action of the fluid within the pore (largest pore), the bubble point has been found. After determination of the bubble point, the pressure is increased and the flow is measured until all pores are empty, and the sample is considered dry.

### **Applications / Features :**

The PMI Microflow Porometer is typically used to characterize membranes with very low permeability (gas separation membranes). Packaging, rubber and specialty gas manufacturing companies will find this instrument beneficial.

**Specifications :**

<b>Pore Size Range</b>	<b>0.013 - 500 microns</b>
<b>Permeability Range</b>	<b><math>1 \times 10^{-10}</math> - <math>1 \times 10^{-6}</math> (Microflow in cc/sec/m/torr)</b>
<b>Sample Size</b>	<b>0.5" - 2.5" diameter</b>
<b>Pressure Range</b>	<b>0 - 500 PSI</b>
<b>Pressurizing Gas</b>	<b>Clean, dry, compressed air or nonflammable, non-corrosive gas</b>
<b>Pressure Transducer Range</b>	<b>0 - 500 PSI</b>
<b>Resolution</b>	<b>1 in 20,000</b>
<b>Accuracy</b>	<b>0.15% of reading</b>
<b>Mass Flow Transducer Range</b>	<b>10 cc/minute - 500 L/minute</b>
<b>Power Requirements</b>	<b>110/220 VAC, 50/60 Hz</b>
<b>Dimensions</b>	<b>30" H x 19" W x 18.5" D</b>
<b>Weight</b>	<b>100 lbs</b>

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