



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 :

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

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