

# THE PMI CLAMP-ON POROMETER



Not just products...*solutions!*

# Application

The PMI Clamp-On Porometer provides pore structure information quickly and accurately for your quality control, production control or R&D needs. The need for cutting samples from bulk material is eliminated.

# Principle

The pores in the part of the material to be tested are spontaneously filled with a wetting liquid. The test head is clamped on the material and gas pressure behind the sample is slowly increased to displace the liquid in the pore and increase gas flow. The flow rate of gas is measured as a function of gas pressure. The flow rate versus pressure data is also generated using a dry sample. Pressure is related to pore diameter.

$$D \equiv 4 \gamma \cos \theta / p$$

where D is the pore diameter,  $\gamma$ , is the surface tension of liquid,  $\theta$  is the contact angle of liquid, and p is the differential gas pressure. From these data the characteristics of the pore structure are calculated.

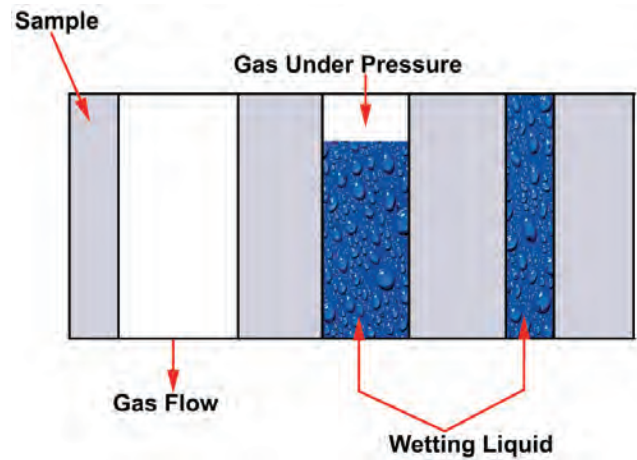


Figure 2

Principle for the Clamp-On Porometer

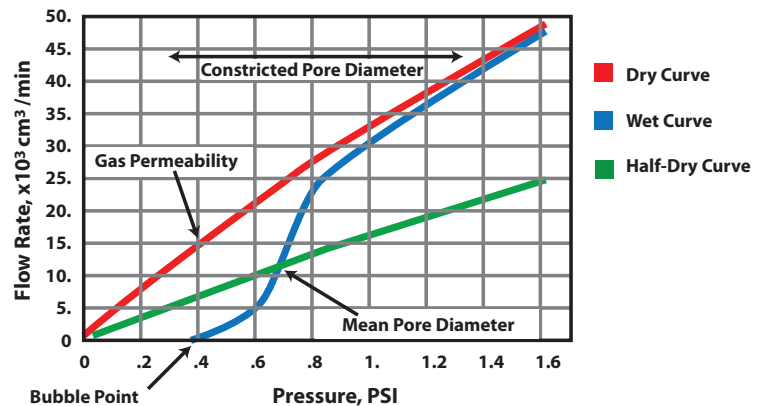


Figure 3

Flow rate over change in pressure

# Testing Capabilities

- Bubble Point
- Mean Flow Pore Diameter
- Gas Permeability
- Frazier Permeability
- Gurley Permeability
- Pressure Hold
- Pore Size Distribution

# Applications

Industries world-wide, ranging from the filtration industry to the battery industry, use the PMI Clamp-On Porometer for R&D and quality control. Materials often tested include: filter media, membranes, nonwovens, paper, powders, ceramics and battery separators.

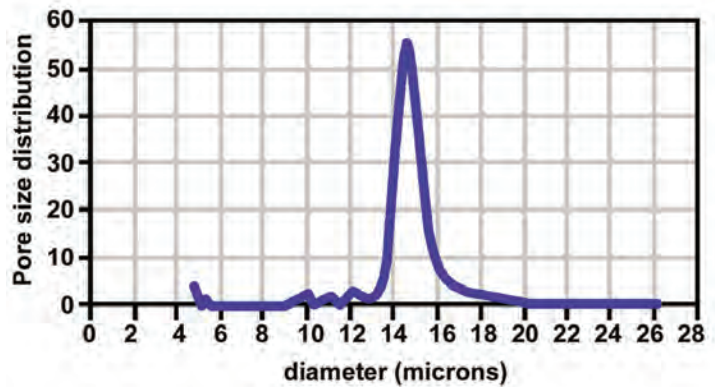


Figure 4

Pore size distribution chart

# Features

On-line sample testing possible

No need for cutting the sample and damaging the product

Fast testing

Fully Automated Operation

Windows Based

Determination of product uniformity by performing tests at multiple locations of the product without creating any damage

Highly Reproducible

Minimal Maintenance

# Sales & Services

Our sales team is dedicated to helping our customers find which machine is right for their situation. We also offer custom machines for customers with unique needs. To find out what we can do for you, contact us.

We are committed to customer support including specific service products, short response times & customer specific solutions. To quickly & flexibly meet our customer's requirement, we offer a comprehensive range of services.



*Customize your machine today!*



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and reproducible porometers in the world.



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