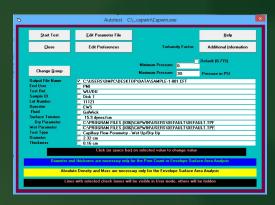**THE PMI**
QUALITY CONTROL POROMETER
CFP-1100A-QC

Not just products...solutions!

Principles of Operation

A fully wetted sample is placed in the sample chamber. The chamber is sealed, and a nonreacting gas is allowed to flow into the chamber to a value of pressure sufficient to overcome the capillary action of the fluid in the pore of the largest diameter, empty the pore, and initiate gas flow through the sample. This is the Bubble Point Pressure. The pressure is further increased in small increments, resulting in flow that is measured until the pores are empty of fluid. Such flow and pressure data are generated using a dry sample. The results are used to compute pore parameters and pore distribution. Pressure required to remove a wetting liquid is related to pore diameter.
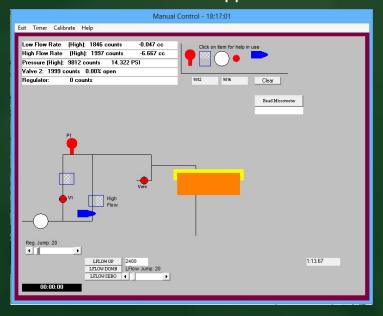
$$D = 4\gamma \cos \theta / p$$

p = Differential gas pressure on the sample
γ = Surface tension of wetting liquid
θ = Contact angle of wetting liquid
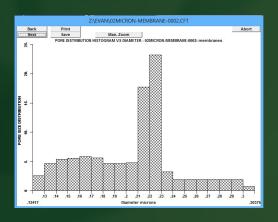D = Pore diameter

Applications

The unique features of the instrument, especially its ability to generate highly reproducible data quickly, makes it highly suitable for quality control and process control operations. The instrument is used in these applications in a wide variety of industries.
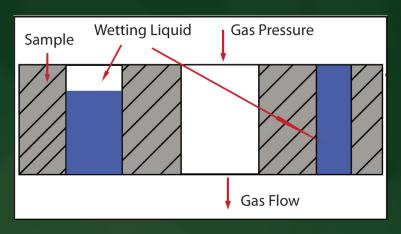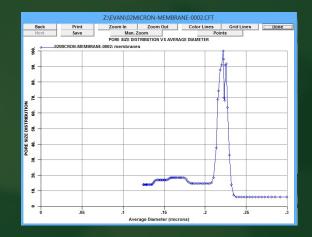
Operation

The sample is tested both in wetted and non-wetted conditions. In the non-wetted condition, air is able to pass through all pores.In the wetted condition, air pressure is slowly increased and the start of the first bubble is detected very accurately by looking at the rate of pressure rise. After the detection of bubble point, rate of flow at different pressures is measured and the ratio of wet to the dry flow gives the amount of pores of the size determined by the pressure. A set ot points so created gives the pore distribution.
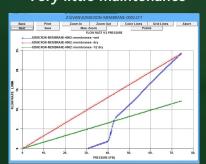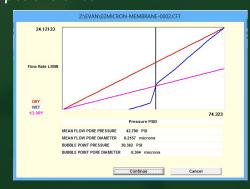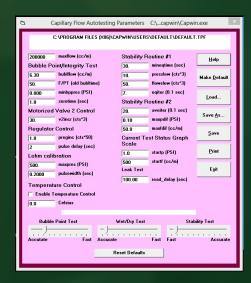

Features

- *Fully automated and user friendly*
- *Only a few minutes per test*
- *Preset test parameters*
- *Very little operator time and involvement*
- *Ideal for quick generation of highly reproducible data*
- *Uses a variety of sample shapes and sizes*
- *Very little maintenance*

Specification

- **Pressure Accuracy:** *0.15% of reading*
- **Pressure:** *100 psi*
- **Pressure & Flow Resolution:** *1/60,000 of full scale (1 part in 60,000)*
- **Maximum Pore Size Detectable:** *500 mm*
- **Minimum Pore Size Detectable:** *Varies with intrusion liquid*
- **Flow Rates:** *Up to 200 SLPM (liters per minute)*
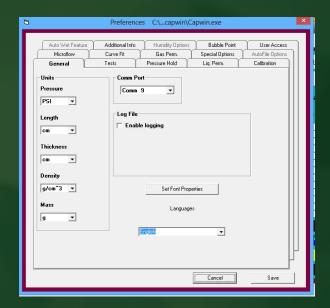- **Sample Sizes:** *Standard: 0.25" - 2.5" diameter (up to 1.5" thick)*
  Standard: 5 mm - 60 mm diameter (up to 40 mm thick)
  Others available
- **Sample Geometry:** *Sheets, Rods, Tubes, Hollow Fibers, Cartridges, Powders*

* Other specifications for this machine are available. Specifications are subject to change without notice.

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 oller a comprehensive range of services.

Customize your machine today!

The most advanced, accurate, easy to use and reproducable porometers in the world.

Celebrating

35

years

of solutions