



THE PMI
ADVANCED
MERCURY PYCNOMETER
DAB-100-1

*Single Chamber
Density Analyzer*

Not just products...solutions!

Description

PMI's Mercury Pycnometer provides the user with a measurement of bulk density. The Mercury Pycnometer is easy-to-use, provides accurate results in less than 10 minutes, and accommodates a wide range of samples.

Principle

Mercury does not wet many of the materials and requires pressure to enter the pores of the material. At atmospheric pressure, mercury cannot enter pores that are smaller than about 15 microns. Therefore, the weight of mercury in a sample chamber of known volume, containing a sample of known weight, is used to compute bulk density of the sample.

Instrument

The instrument consists of a glass sample chamber, a glass mercury reservoir and four valves. The sample cell has a wide mouth for introducing samples, a vacuum-tight lid and a narrow stem that is connected to the instrument through an O-ring seal. Two valves are used to evacuate the cell, one is used to fill the cell with mercury and the fourth valve is used to drain the cell.

Operation

Sample cell is weighed. Cell with sample is weighed and placed in the instrument. An external vacuum pump is used to evacuate the cell. After sufficient vacuum is attained, mercury is allowed to surround the sample in the cell. The cell containing the sample and mercury is weighed. The bulk density is computed from the known weights, known volume of cell and the density of mercury. The volume of the cell is computed by a calibration experiment in which the sample is not used.

Features

- Test Substance (Mercury)
- Length of test approximately 10 minutes
- Wide range of acceptable sample sizes and types
- Minimal maintenance required
- Pore Structure Characteristics:
 - Bulk Density

Specifications

- Pore Size Range: 0 - 15 microns
- Sample Size: 1.5 inch H x 1 inch D
- Maximum Pressure: Vacuum - 1 Atm
- Reproducibility: Better than 0.5%
- Power Requirements: 110/220VAC, 50/60 Hz

Applications

- Battery/Fuel Cells Industry
- Automotive Industry
- Ceramic Industry
- Chemical Industry
- Filtration Industry
- Geotextiles/Textiles Industry
- Nonwovens Industry
- Paper Industry
- Pharmaceutical/Medical Industry
- Powder Metallurgy Industry
- And many more

Sales & Services



We at Porous Materials Inc., have dedicated sales team helping thousand's of our customers identify the right solution for their scientific problems. We are also proud to offer customized instruments for your unique needs. Our service and applications team is committed to effective support with short response times, we offer comprehensive range of solutions from new and customized systems, calibration and maintenance to testing services.

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