

PHI

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Semi-Automatic Density and Porosity Meter



Mecanum's semi-automatic porosity and density meter is designed to measure the open porosity and the bulk density of acoustic materials following the pressure/mass method (*Journal of Applied Physics* 101 (2007)). It can be used for acoustic material characterization and quality control.

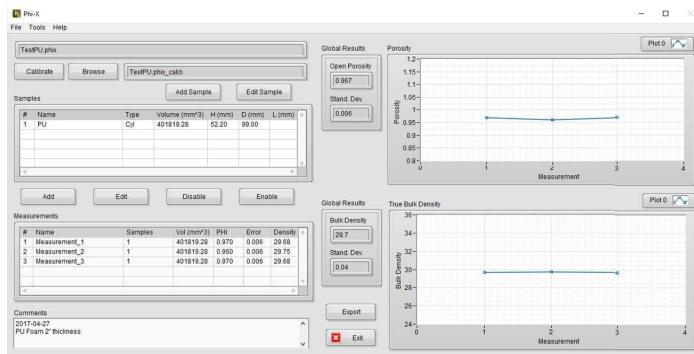
SPECIFICATIONS

Test Bench

- Test chamber
- DAQ system
- Integrated vacuum pump
- 10 mg precision digital balance
- Class 1 calibration mass (2 kg)
- Certified verification sample
- Works with cylindrical-shaped samples (default) and accepts other shapes

PHI-X Software

- Automatically controls and guides the user during measurements
- Calculates the open porosity and the bulk density using the pressure/mass method
- Calculates measurement uncertainties and statistics
- Integrated atmospheric temperature measurement
- Reports generation



OPTIONAL ACCESSORIES

- Circular cutter (available in 29, 44.44 and 100 mm diameter)
- Porous material slicer (available in 29, 44.44 and 100 mm diameter)
- Air compressor

TECHNICAL DATA

Test Bench

- Dimensions: 432 (L) x 368 (W) x 134 (H) mm
- Power supply: 100-240 VAC / 50-60 Hz / 60 W
- Operating temperature: 10°C to 30°C
- Test chamber internal dim.: 111 (Ø) x 120 (H) mm
- Maximum sample mass: 2 kg
- Material: CNC machined aluminum, black anodized
- Measuring pressure: 95 psi (655 kPa)
- Communication: USB 2.0 type A

MEASURING RANGE

- Open porosity: 0 to 99.9 % (*)
- Bulk density: from 0.1 kg/m³

(*) The accuracy depends on the type of gas used, as well as the available volume of material. See full scientific article for detail: *Salissou and Panneton: Pressure/mass method to measure open porosity of porous solids, J. Appl. Phys. 101 (2007)*

SPECIAL REQUIREMENTS

- The PHI system must be supplied with argon or clean and dry compressed air at a pressure of 105 psi (724 KPa).
- Argon increases measurement accuracy.
- A pressured gas line with pressure regulator must be provided by the customer.

WARRANTY & SUPPORT

All Mecanum characterization systems are covered by a one-year limited warranty and technical support. Valid only on manufacturing defects and does not cover damage due to abuse or improper use of the equipment.

Please note that the technical aspects of our equipment may be subject to change without notice