

Automatic Gas Porosimeter Model RCHP-200



The RCHP-200 is an automatic and highly accurate system for determining rock properties such as pore volume, porosity and grain volume at overburden pressure. The system uses an unsteady state pulse decay technique for the permeability measurement. This system is composed of a core holder, pressure sensors, accurate flow meters, a pressure reducer, pulse decay system and an automatic pump for confining pressure. A computer latest configuration with software and ST electronic cards ensures data acquisition and full automation of the instrument. This set is also delivered with data treatment software. A second core holder and/or a grain chamber can

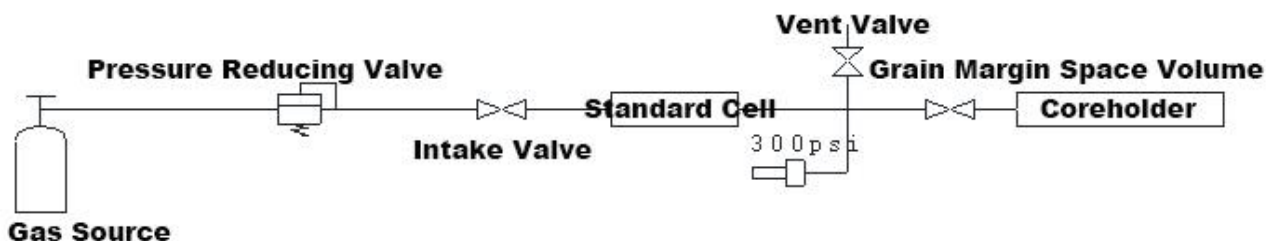
be adjusted on the existing system upon customer request.

The measurement of porosity is conducted using the gas expansion method, employing the principle of helium expansion (Boyle's law) to measure porosity. The medium used can be either nitrogen or helium. The principle is based on Boyle's law: gas from a standard volume at a set initial pressure is allowed to expand isothermally into a core chamber at atmospheric pressure, causing the gas to diffuse into the core's pores. Using the change in pressure and the known volume, the particle volume of the core sample can be determined using the ideal gas equation. From this, the pore volume and porosity of the core sample can be calculated.

- **Pore Volume = Total Volume - Particle Volume**
- **Porosity = Pore Volume / Total Volume**

The porosity measurement range is 0.1%-100%. The instrument can be used in conjunction with existing core holders to measure porosity under confining pressure.

Workflow Diagram



The Porosimeter is a cost-effective advanced system for performing automated porosity tests at confining pressures up to 9950 psi over a wide permeability range. The Porosimeter uses a pressure decay technique to determine Klinkenberg-corrected permeabilities, slip and turbulence correction factors.

FEATURES:

- Direct pore volume of core sample
- Porosity (if bulk volume is known)
- Compact design for easy maintenance
- No unnecessary, complicated moving parts that require constant adjustment. The sample loading and unloading is simple and takes only a few minutes
- Fast porosity and permeability measurements for high-production laboratories
- 458 computer interface
- Cost is a fraction of what the competition's carousel-based, auto-load system costs

SPECIFICATIONS:

- Pore pressure during permeability measurements: up to 200 psi
- Porosity Range: 0.1% to >60%
- Core Sample Size: Length: 0.75 to 4.0 inch Diameter: 1.5 inch, 1.0 inch and 30 mm
- Confining Pressure range: 400 to 10,000 psi
- Easy-loading hydrostatic coreholder

Warranty and Returns

Warranty

Rigchina Group Company warrants its products to be free from defects in material and workmanship for a period of 24 months from the time of shipment. If repair or adjustment is necessary, and has not been the result of abuse or misuse within the twelve-month period, please return, freight prepaid, and correction of the defect will be made without charge.

Out of warranty products will be repaired for a nominal charge. Please refer to the accompanying warranty statement enclosed with the product.

Our shipping address is:

RIGCHINA GROUP COMPANY



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