

# Gas Porosity



## Description

This apparatus is designed to measure the porosity of the reservoir core plugs by helium/nitrogen gas. The measurement is based on Boyle's law. Grain density of the samples could be measured by the setup, and by estimating bulk volume of the plug knowing its dimensions, the porosity of the sample is then calculated. This apparatus could be used in industrial laboratories to measure the porosity of reservoir core samples. Also, this setup could be used in educational laboratories of reservoir rock properties.

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## Specifications

- Porosity measurement range: 1-40%;
- Porosity measurement accuracy:  $\pm 1\%$ ;
- Maximum plug length: 4”;
- Maximum plug diameter: 1.5”;
- Working temperature: ambient;
- Maximum working pressure: 200 psi;
- Equipped with a pressure transmitter to measure the pressure of reference and matrix cells;
- Pressure measurement accuracy: 0.25% F.S.;
- Equipped with a digital pressure indicator;
- Equipped with a pressure regulator to set the inlet pressure and reference cell;
- Equipped with two pressure gauges to measure the inlet pressure and reference cell;
- Equipped with 5 billets with different lengths to calibrate the setup with suitable carry case;
- Matrix cell material: Stainless Steel (SS-316);
- Stainless Steel (SS-316) valves, line and connections.