<u>Semi-Automated Unsteady-</u> <u>State Gas Permeameter</u> (<u>Pulse-Decay</u>)







SEMI-AUTO PD GAS PERMEAMETER Description:

The ideal permeability measurement method for low to ultra-low permeable core plugs is the unsteady-state (Pulse-decay) technique. Thermal stability is an essential factor in the implementation of this technique. It also requires a complicated calculation. The confining pressure can be applied using a hand-operated hydraulic pump. The developed software can show the status of the unit, as well as the actuators. In the pulse-decay technique, the system first increases its pressure up to 200 psi, and a pressure pulse will form at the upstream reservoir. The interpretation of transient pressure data leads to the determination of the gas permeability of the core plug. A high-speed data logging system is included in this apparatus.

Specifications:

- Core holder diameter: 1.0 or 1.5 inches
- Core holder length: up to 4.0 inches
- Maximum pore pressure: up to 250 psi
- Confining pressure: up to 10,000 psi
- Gas type: Nitrogen or Helium
- Permeability range: 10 nD to 0.1 mD
- Accurate pressure measurement with 0.1% FS
- Power supply: 110-220 V/50-60 Hz, 300 W
- Core holder material: stainless steel
- Three digital pressure displays for DP, outlet pressure, and confining pressure
- Two separate core holders



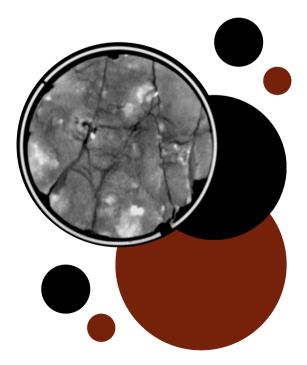
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Benefits:

- ◆ Faster permeability measurement
- Semi-automated system can help the end user run the permeability measurement easily
- Low dead volume system for more accurate measurements
- Adjustable core holder size

Possible Upgrades:

- Core holder length and diameter can be increased to 12 inches and 4 inches, respectively
- Another gas entry can be added to the system for helium or other types of gas
- An automated confining pressure system can be added to the unit to make the apparatus fully automated



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