



Taha Kimia Tajhiz Co.



Core Lab

Return Permeability Test Apparatus RPTA-200 Datasheet

Drilling & Stimulation Properties



Return Permeability Test Apparatus RPTA-200

Return Permeability Test Apparatus is a high pressure, high temperature development of the 100 series designed specifically for the evaluation of drilling mud and mud additives and their affect on reservoir rock samples. A re-designed layout improves operator access to the core holder, accumulators allowing for increased efficiency of operation.



The system allows a number of tests to be conducted including liquid permeability, return permeability; mud lift-off, leak-off rates and the evaluation mud additives at reservoir temperature and pressure. A custom reciprocating mud pump allows mud to be re-circulated across the upper end face of the core sample, at a controlled shear rate, to simulate filtrate build up and to allow the evaluation of leak off rates. Differential pressure transducers measure the pressure drop across the core material allowing investigation of the depth of invasion of the filtrate and a PC linked digital balance monitors the leak-off rate. The core holder is encapsulated in a custom designed heating jacket and all inlet lines are fitted with block heaters allowing the accumulators to be kept at ambient conditions. Allowing easy cleaning and loading of the accumulators to maximize the number of fluids evaluated daily.

With the addition of extra fluid accumulators the system can be used to evaluate non-acid clean-up treatments. Whilst with the optional construction of wetted parts in Monel allows the evaluation of non-inhibited acids.

Scope of Supply:

- **Fluid delivery system:** HPLC Pump System is capable of 10cc/min to a maximum pressure of 6,000 psig. To obtain higher flow rates up to 25



cc/min requires an additional, interchangeable head, which lowers the maximum pressure to 2,500 psig.

- Four Accumulators Capacity 1,000 cc, Pressure Rating 10,000psi
- Core Holder PPCH400 see below – 1.5-inch diameter.
- Two Temperature Controllers



- Two Back Pressure Regulators
- Pressure Measurement System consisting of: Two High Accuracy Transducers 0-7,500 psi, $\pm 0.05\%$ full scale accuracy and Three Differential Pressure Transducers 0-25, 0-100 and 0-500 psid, $\pm 0.2\%$ full scale accuracy
- Flow rate measurement system consisting of (1) Electronic Balance 0-2100 grams, 0.001 gm accuracy.
- Computer with Minimal Configuration: Core Duo, 500 GB Hard Drive, 2 GB RAM, 40x CDROM, 21" LCD Monitor with Windows Professional Operating System
- RPTA-200 Operating Software with real time display, data acquisition and safety monitoring system.
- Operating and Maintenance Manual
- Toolkit