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Formation Response Tester Model 6100 Datasheet

Reservoir Fluid Analysis



CHANDLER
ENGINEERING

Model 6100

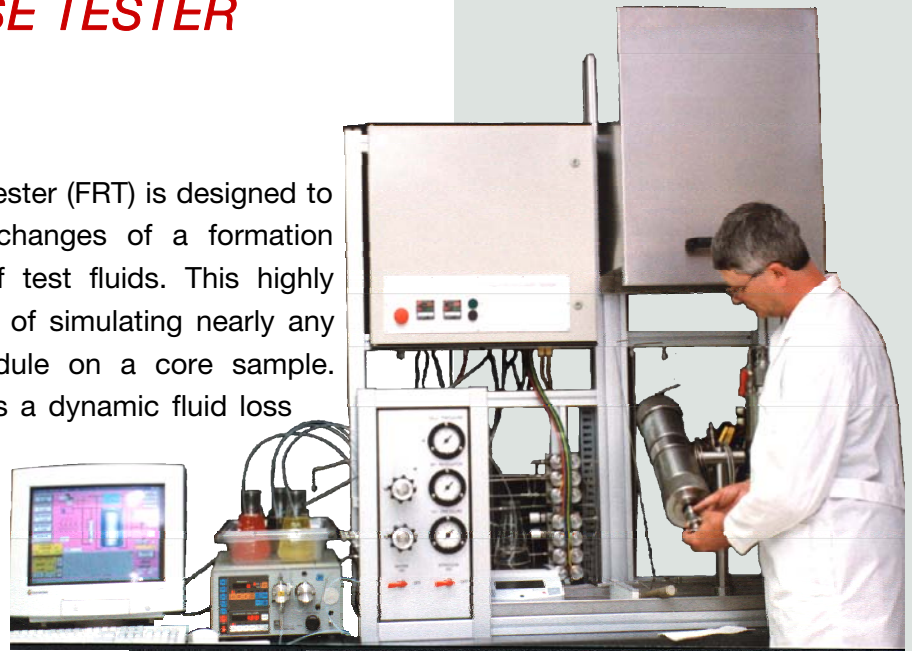
FORMATION RESPONSE TESTER

A Critical Tool for Reservoir Analysis

The Model 6100 Formation Response Tester (FRT) is designed to accurately measure the permeability changes of a formation sample when exposed to a variety of test fluids. This highly flexible, easy to use system is capable of simulating nearly any well completion and stimulation schedule on a core sample. The unit is also capable of operating as a dynamic fluid loss tester with the optional Slurry Cart.

Designed for Flexibility and Reliability

The unique design of the Model 6100 allows fluids to be injected through a prepared core sample to simulate the flow of treating fluids or formation fluids. Core flow can be directed through three paths: forward, reverse and across the face. Up to five separate fluids can be controlled in any sequence through any flow path. The system is designed to handle acids and other corrosive fluids at temperatures up to 350°F / 177°C. An example of this flexibility is shown in the following test schedule. Reliability is designed into the Model 6100 to ensure many years of service. A custom stainless steel valve manifold contains all necessary flow paths. This significantly reduces the number of fittings, the maze of tubing, the fluid dead volume, and most importantly the number of potential leaks. Durable, air-operated valves with HASTELLOY® C-276 wetted parts can be quickly and easily replaced if needed.

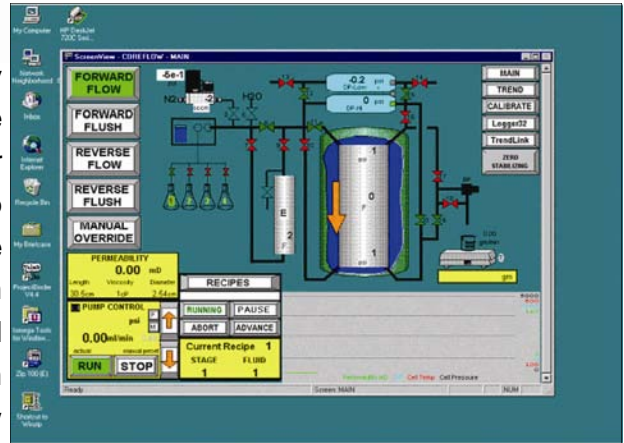


FEATURES

- ✓ Multiple Flow Paths
 - Forward Flow
 - Reverse Flow
 - Across-Face Flow
- ✓ Fully Automated Control and Data Acquisition
- ✓ 20 Programmable Test Schedules
- ✓ Easy-Loading Core Holder
- ✓ Valve Manifolds Minimize Fittings
- ✓ Corrosion / Acid Resistant Wetted Materials

Operational Simplicity

The Model 6100 is designed to be very user friendly both mechanically and in its software interface. The core holder pivots to ease insertion of a core sample or inspection of the holder. Once the core is loaded into the core holder, a confining pressure is applied to the Hassler Sleeve to seal the core. The technician then programs or selects a flow schedule and a desired temperature before clicking on the “run” button to begin the test. Multiple pressure ports along the core allow monitoring the change in permeability as fluids invade deeper into the core as well as the determination of skin factors which may influence the testing results.



The software for the Model 6100 also performs the data acquisition. All channels are recorded with time and can either be outputted directly or exported in spreadsheet format. The recorded data includes the measured and calculated values selected by the user. Upon test completion, an automated cleaning cycle can be run to prepare the system for the next test.

Specifications

Max Pumping Pressure	5,500 psi / 38 MPa
Max Confining Pressure	6,000 psi / 42 MPa
System Temperature	75°F – 350°F / 24°C – 177°C
Wetted Materials	Valves HASTELLOY® C-276 Manifolds 316SS, (HASTELLOY® optional) Tubing 316SS, (HASTELLOY® optional) Cell Ends 316SS, (HASTELLOY® optional) Hassler Sleeve Buna (Viton optional)
Flow Rate	0-50 mL/min.
Pumped Fluids	4
Displaced Fluids	1
Core Dimensions	Diameter 1.0 – 1.5 inches Length up to 12 inches
No. of Pressure Taps	Up to 5 spaced 2 inches apart along the core
Utilities	
Power	220 VAC 50/60 Hz, 30 A
Air	80psi minimum / Oil-Free

Typical Weights and Dimensions

Dimensions (wxhxd)	67 in. x 64 in. x 34 in. / 170 x 163 x 87 cm
Weight	560 lb / 254 kg
Shipping Weight	760 lb / 345 kg
<i>Manufacturer's specifications subject to change without notice</i>	



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