



CHANDLER ENGINEERING

Model 7600

ULTRA HPHT VISCOMETER

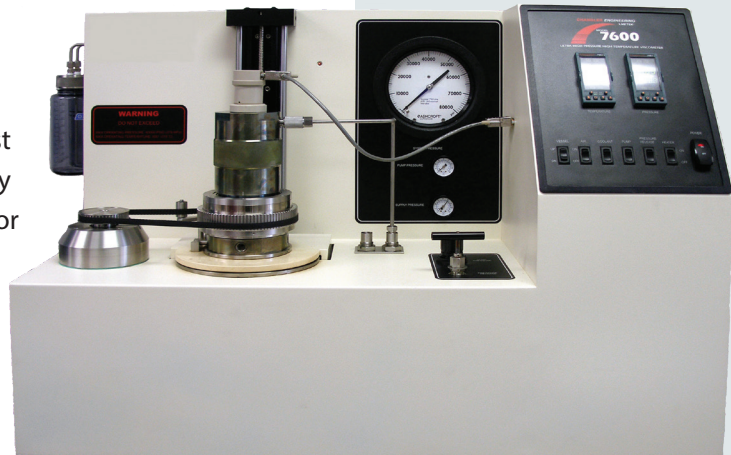
A Critical Tool for Deep-Well Completions

The Model 7600 Ultra HPHT Viscometer is the highest pressure viscometer for the Oil and Gas Industry available on the market. Designed specifically for the most severe conditions the viscometer is able to handle virtually any temperature or pressure encountered during drilling and completion operations. The Model 7600 is a complete package with customized automation software and computer. The viscometer has many safety features that ensure proper protection.

The Model 7600 is designed with wide shear stress and viscosity ranges along with excellent measurement accuracy. The design also features a removable sample vessel assembly with vessel elevator mechanism to ease set-up and cleaning.

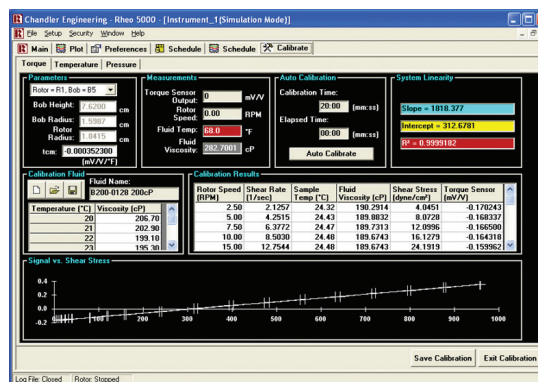
Operational Simplicity

The Model 7600 is a fully automated viscometer. Its software is a powerful data acquisition and analysis tool designed to make its user's life easier. Through this software, which runs on almost any computer, virtually any test cycle can be programmed and run. It automatically captures peak gel strength as well as 10 second and 10 minute gel values. Designed to provide users with as much flexibility as possible, the control software allows a test cycle to be edited during testing.



FEATURES

- ✓ External Digital Torque Measurement
- ✓ Removable Sample Vessel Assembly with Vessel Elevator Mechanism
- ✓ Sample/Oil Separation Zone
- ✓ High Strength, Corrosion Resistant, Steel Superalloys
- ✓ Programmable Temperature and Pressure Controllers
- ✓ Temperature and Pressure Control Time-Based Profiles
- ✓ Automatic Calibration
- ✓ Ability to Capture Peak, 10 Sec and 10 Min Gel Values
- ✓ Ability to Edit, Pause or Skip Profile Steps During Testing
- ✓ Configurable Multiple Axis Plots of All Variables



Model 7600

Test cycles can be easily paused and resumed or profile steps skipped. The software even has the capability to run automatic calibration cycles using your calibration fluids.

When testing is completed, all variables can be displayed and analyzed on-screen in user-configurable plots. Sharing test results with other programs and colleagues is very easy as all test data is stored in a spreadsheet compatible file format.

Specifications

Maximum Pressure
40,000 psi / 276 MPa

Temperature Range
40°F to 600°F / 4°C to 316°C

Shear Stress Range
5.1 – 1533 dyne/cm²

Viscosity Range
5 cP @ 600 rpm to 300 cP @ 300 rpm

Shear Stress Resolution
0.1 degree, 5.1 dyne/cm², 1 cP @ 300 rpm

Shear Stress Accuracy
±0.50% of F.S. from 51.1 – 1533 dyne/cm²

Minimum Motor Speed
1 rpm

Minimum Shear Rate
1.7 sec⁻¹ (using R1/B1 Rotor/Bob)

Shear Rate Range
1.7 – 1022 sec⁻¹, corresponding to 1 – 600 rpm with R1-B1 Rotor and Bob combination

Sample Gel Strength
Peak value at 3 rpm

Couette Geometry

Bob Radius (R_i)
1.7245 cm (B1)

Rotor Radius (R₀)
1.8415 cm (R1)

Bob Length (L)
3.805 cm (B1)

Utilities

Power Requirements
230 Volts ±10%, 50/60 Hz, 15A (Instrument)
115/230 VAC, ±10%, 50/60 Hz, 2A (Computer)

Instrument Air or N₂
120 psi ±10% (filtered and dry)

Coolant
Water, chilled ethylene glycol/water mixture optional

Physical Dimensions
Dimensions (wxdxh)
40 x 28 x 28.5 in. / 102 x 71 x 73 cm

Weight
250 lb / 114 kg

Manufacturer's specifications subject to change without notice

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