

All Chandler Engineering products are covered by a full one-year warranty against defects in materials and workmanship. Sales terms, conditions, and warranty statements are included with each quotation or confirmation of order.

More than 50 years ago, Chandler Engineering pioneered High Pressure and High Temperature Equipment. Today, Chandler Engineering is the leading manufacturer of a broad range of innovative and extremely reliable Measurement Instruments for the Energy Industry.

Chandler Engineering specializes in outfitting laboratories designed for testing cement, drilling muds and stimulation fluids. Through Research and Development, experienced manufacturing and worldwide logistic operations, Chandler Engineering provides for your complete laboratory requirements.

CHANDLER PRODUCTS

Drilling Fluids

Atmospheric Viscometers (6, 12, and 16 speeds)
 HPHT Rotational Rheometer
 Mud/Cement Density Balances

Production Enhancement

Formation Response/Core Flow Systems
 Reciprocating Capillary Viscometer
 Low Shear Atmospheric Viscometers
 HPHT Viscometer (automated)
 Crosslink Time Detector
 HPHT Corrosion Test Apparatus
 Acid Reaction Rate Analyzer

Oil Well Cement

HPHT Consistometers
 Atmospheric Consistometers
 HPHT Curing Chambers
 API Compressive Strength Testers

Cement Expansion/Shrinkage

API Constant Speed Mixers
 HPHT Stirred Fluid Loss Tester
 Ultrasonic Cement Analyzers (UCA)
 Static Gel Strength Analyzers (SGSA)
 Horizontal UCA

Gas/Fluid Migration Analyzers (FMA)
 Mechanical Properties Analyzers (MPRO)
 Portable Labs
 Data Acquisition and Control (DAC) System
 & Software

Fluid Technology

Digital Gasometers
 Positive Displacement Pumps
 Phase Detection Systems
 Phase Behavior (PVT) Systems
 Sample Cylinders

Model 5550

Model 5550 High Temperature High Pressure Viscometer

Chandler Engineering, the leader in oilfield service instruments, is pleased to offer the Model 5550 High Pressure High Temperature (HPHT) Viscometer. The Model 5550 was designed to dramatically reduce the cost of operation by offering features that minimize downtime, improve measurements and simplify operation.

Chandler Engineering developed the Model 5550 HPHT Viscometer by combining innovation with decades of industry experience. This design is based on the laboratory experiences of both our development team and field operators that have spent significant laboratory time performing viscosity measurements.

The Model 5550 is a concentric cylinder viscometer that employs the same rotor and bob geometry utilized by the energy industry for many years. The Model 5550 design meets the requirements set forth in the ISO and API standards on viscosity measurement of completion fluids at high pressure and high temperature. The industry dictates any instrument designed for the measurement of viscosity be reliable, easy to operate and simple to maintain.

The benefits of the Model 5550 are focused on these concepts:

- Convenient compact size- Counter-top installation
- Gel climbing is inhibited by our unique climb inhibitor
- Bearings are protected within a bottom closed cup to ensure reliable measurements
- Sample heat-up uses an industry-first dry heater for rapid heating without an oily mess
- Replacement of seals and bearings is fast and simple
- The Windows®-based Rheo 5000 software user interface is designed for full automation and ease-of-use



Model 5550 High Pressure High Temperature Viscometer

- Hastelloy® wetted components are incorporated to minimize reactive fluids affecting test results and maintenance

The Model 5550 viscometer measures viscosity by spinning an external rotor at precise speed. The stationary bob measures the force transmitted through the fluid. The Rheo 5000 application software precisely logs the rotational speed, the transmitted torque and calculates the viscosity and rheological parameters of a test fluid. Several rotor and bob combinations are available for differing measurement requirements.



Mindex Limited

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OPERATIONS

RHEO 5000 APPLICATION SOFTWARE

Each Model 5550 Viscometer comes with Chandler Engineering's Rheo 5000 Data Acquisition and Control Software. This proprietary software allows the operator to automatically calibrate the instrument and operate a test. The operator may also control the heat-up rate of the test sample and output both graphical and text data. An unlimited number of testing criteria and test data can be stored for quick recall and reference. The Rheo 5000 software creates an environment that maximizes an operator's ability to collect data with minimal effort.

The following figures illustrate the main operations screen and a typical test as plotted within the Rheo 5000 Data Acquisition and Control Software.

Operations Screen



Typical Test Plot



FEATURES AND BENEFITS

- Compact convenient size
- Counter-top installation - minimal space requirements
- HASTELLOY Rotor, Bob and Bob Shaft
- Corrosion resistant wetted materials
- Ease of Maintenance
 - Flip-up front access door to serviceable parts
 - Hinged rear access panel to electrical components
 - Quick access to replace seals and bearings with basic hand tools
 - Bearings protected from fluid contact
 - Unique Heater Design
 - Rapid heat-up and cool-down for short turnaround times
- Oil free, no residual odors or mist - resulting in a cleaner and safer operating environment
- Chandler Support
- 12-month warranty
- Well-established worldwide service organization

SPECIFICATIONS

Performance Specifications

Temperature, maximum	500F/260C
Pressure, maximum	1,000psi / 7.0 MPa
Shear rate range	0.1 to 1022 sec ⁻¹ (0.1 to 600 rpm)
Shear stress, maximum	3462 dyne/cm ² (R1/B5)-standard rotor/bob combination
	2975 dyne/cm ² (R1/B1)-optional
	5872 dyne/cm ² (R1/B2)-optional
Sample size	44ml (R1/B5)
Turnaround time	Less than 15 min. typical
Heating Power	1200 watts
Heater type	Dry block heater
Power requirements	110VAC 15A, 50/60 Hz or 220VAC 8A, 50/60 Hz
Data acquisition	Chandler Rheo 5000 Application & Control Software
Dimensions	11" x 16" x 22" / 30 x 41 x 56cm (Width x Depth x Height)
Net Weight	80lbs/36 kg
Wetted materials	HASTELLOY®C Rotor, Bob and Bob Shaft

Torque Transducer Specifications

Non-repeatability	0.05% of full scale
Non-linearity	0.05% of full scale
Hysteresis	0.05% of full scale

*Manufacturer's specifications subject to change without notice

ORDERING INFORMATION

Part No.	Description
5550-220V	Viscometer 220VAC, 50/60Hz
5550-110V	Viscometer 110VAC, 50/60Hz
5550-SP1	Recommended spare parts for one (1) year
5550-SP2	Recommended spare parts for two (2) years

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