

### **Durable, Reliable, and Affordable Digital Power**

The Grace Instrument M3600 Viscometer is true Couette, coaxial cylinder, rotational viscometer that incorporates years of customer feedback into its design. This instrument features a steel framework and robust electronics and is engineered to meet the various fluid rheology measuring needs of our customers. From on-site oilfield personnel doing single-speed tests in harsh environments to laboratory researchers doing advanced rheology tests, the innovative design, rugged construction, versatility and portability of the M3600 Viscometer makes it indispensable at home in the field or in the laboratory.

### **Software Covers All Tests From General Viscosity to Specialty**

The included *M3600Frac*<sup>™</sup> software is designed for measuring fracturing fluids, and the included *M3600DAQ*<sup>™</sup> is designed for general viscosity measurement and mud testing.

### **Two Operational Modes: Standalone or Integrated with PC**

The M3600 Automatic Viscometer can be used as a standalone unit, enabling users to create test sequences and record test data without the use of external equipment. It can also be connected to a Microsoft Windows PC operating our custom software for advanced test operations, test results analysis, and to export test data in spreadsheet format.



U.S. Patent: 6,571,609

M3600 has two operating modes:

#### **1) Standalone Mode:**

- Perform standard API tests by pressing two keys. Press 5, 6, or 7 to bring up a selection of pre-programmed tests, then press the key for the test you want.
- Quickly create multiple custom test steps and save the results of your tests.
- Review your test results quickly and easily.

#### **2) PC Interface Mode:**

- Interface M3600 with PC using *M3600DAQ*<sup>™</sup> or *M3600Frac*<sup>™</sup> software for advanced rheology test setup, control, display, and data management.
- Microsoft Windows-Based Software
- Export Data into Microsoft Excel
- Customize Charts for Data Relationships

#### **Measurement Range (B1, B2, B5, and B7 bob):**

Sample Size:	35-480 ml (Depending Bob/Cup/Sleeve Size)
Speed:	0.01 to 600 rpm Continuous
Shear Rate:	0.0038 to 1021 S <sup>-1</sup>
Temperature:	Ambient (20 °F w/chiller) to 212 °F
Pressure:	Atmospheric Pressure
Viscosity:	0.1 to 100,000,000 Centipoise
Torque:	7 μN.m to 14 mN.m
Shear Stress:	.02 to 3,500 dyne/cm <sup>2</sup>
Resolution:	1 dyne/cm <sup>2</sup>
Accuracy:	±0.5% of torque span or better with all combinations. (Compliant with API 13 & 10 requirements or better.)

#### **Mechanical Specifications:**

Dimensions / Footprint: 16" tall x 5" wide x 8" deep  
Weight: 12.5 lbs

#### **Electrical Supply:**

Viscometer Voltage: 90V AC to 240V AC  
Viscometer with Heater Cup Wattage: 350 W  
Frequency: 50-60 Hz  
Heater Cup (Sold Separately) Voltage:  
Varies per user's power supply requirements. **Either a 110-120V AC OR 220-240V AC configuration (not both).** Please check electrical labeling on your heater cup to verify which voltage configuration applies.\*

\*If unsure if your power supply setup is appropriate, or if there are any questions or doubts, contact Grace Instrument before plugging anything in.

*M3600 geometries conform to API test specifications.*