

Compact Unit Designed for Fast, Easy PC Operation

The patented Grace Instrument M7540 Consistometer/SGS Tester measures slurry consistency, thickening time, and static gel strength all in one test while the slurry is subjected to simulated downhole conditions. This unit's innovative hardware design prevents hydraulic fluid from mixing with the test sample and includes roller bearings on the paddle shaft that minimizes friction measurement errors.

Choose from two different testing paddles, a standard API paddle for consistometer testing or a MACS II®-Style SGS paddle for static gel strength testing. **FREE** advanced software included with each unit allows the user to construct test sequences, run tests, and interpret test results quickly and efficiently.

Robust Components Provide Exact Measurements

This unit features a rotating paddle that turns at speeds up to 250 rpm. Cement slurry is placed in a temperature-controlled, pressure-controlled cell tested under user-specified conditions via the accompanying software. The paddle is driven by a servo through a magnet coupling. The servo reads the torque to determine the slurry consistency or static gel strength. The max rated torque for the M7540's motor is 0.637 N·m, and the torque resolution is 9.72e⁻⁶ N·m. All hardware components are created in accordance with industry-standard API specifications.

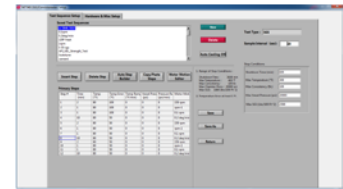
Simple Setup, Easy Operation, and Reliable, Repeatable Testing

The M7540 enables the operator to perform accurate, dependable test operations with minimal preparation time. Its unique design prevents the mixing of pressurization fluid with cement due to stirring. The M7540 is also easy to set up, use, and clean.

To ensure operator safety, the software includes several innovative safety features. The software will shut down tests with a reaction torque measurement above 1800 lb/100 ft². It can also be set to automatically stop the motor at the end of or during tests, end tests, program the heating speed to increase/decrease temperature step-by-step, enable an alarm that activates when set values of temperature and consistency are exceeded, and more.

Features

- Measures slurry consistency, thickening time, and static gel strength all in one test while the slurry is subjected to simulated downhole conditions.
- Unique patented design. Ball bearings support the inside of the rotating paddle, substantially reducing friction measurement errors and maximizing the accuracy and sensitivity of the instrument.
- Prevents pressurization fluid/hydraulic fluid from contaminating cement after stirring.
- Accurate measurement by extremely precise servo. Unit automatically conditions slurry. Control panel optimized for ease of use.
- Choose from two convenient paddle options: Macs II®-style SGS paddle or standard API consistometer paddle. Dimensions of paddle and cell fully comply with API 10B standard.
- **FREE** software included with each unit is compatible with Windows and can control up to 8 units.
- Computer-controlled, automatic 6-channel data logging with easy export.
- Performs comparisons of current test data with historical test data.
- Designed for maximum accuracy and operator safety. Software safety feature shuts down tests above 1800 lb/100 ft². Reliable temperature/pressure/consistency/time safety features also included.
- Constant temperature control system. Automatic PC-controlled temperature and pressure.



FREE Advanced
Grace Instrument
M7540 Software*



**API Consistometer
or SGS Paddles**

*Standard software is free. Custom software options (sold separately) are available, please contact Grace Instrument for details.

Specifications

U.S. Patent No.:	7,412,877
Temperature Range:	Up to 400°F (Optional 450°F Max Temperature Rating)
Pressure Range:	Up to 20,000 psi
Max Rated Torque:	0.637 N·m = 5.63 lb/in
Torque Resolution:	9.72e ⁻⁶ N·m = 8.6e ⁻⁵ lb/in
SGS Measurement Range:	Standard 10 lb/100ft ² to 1800 lb/100ft² Custom Higher ranges also available. Contact Grace Instrument for details.
Sample Volume:	Up to 530 ml
Paddle Options:	API Consistometer Paddle or SGS Paddle
Calibration:	By Weight per API Standards
Heater Power:	1,500 W
Power Supply:	220-240V AC at 50/60 Hz
Slurry Cup Rotation:	0-250 rpm
Static Gel Speed:	0.2 deg/min.
Pressure Medium:	White Mineral Oil
Thickening Time Range:	0-100 Bearden Units (Bc)
Compliances:	API Spec 10A API 10B ISO 10426-1
Dimensions:	18" W x 21" D x 27" H
Weight:	85 lbs.