

Rheometer Model 40

Part number 103330812

Multi-Speed Rotational Rheometer



Overview

The **Rheometer Model 40** is a high-precision Couette coaxial cylinder rotational rheometer designed for direct viscosity measurement across a wide range of shear rates and rotational speeds. It is engineered for laboratory and field applications involving drilling fluids, cement slurries, completion fluids, and other complex industrial liquids.

The test fluid is contained in the annular space between a rotating outer cylinder (rotor) and a stationary inner cylinder (bob). As the rotor turns at a controlled speed, viscous drag exerts torque on the bob, which is transmitted to a precision torsion spring. The resulting deflection is directly related to shear stress and viscosity.

This proven measurement principle ensures accurate simulation of real flow conditions encountered in oilfield and industrial processes.

Key Features

- Wide speed range: 0.1 – 999 RPM
- Preset speed buttons: 1 – 600 RPM
- Direct viscosity reading at 300 RPM with standard configuration
- High accuracy: $\pm 0.5\%$ of torque range
- Interchangeable rotors, bobs, and torsion springs for extended measurement ranges
- Integrated temperature sensor
- Optional heated thermo-cup (up to 93°C / 200°F)
- Rugged stainless steel components
- Portable shock-resistant carrying case (optional).



Power Flexibility

In addition to standard AC power supply (100–240 V, 50–60 Hz), **Rheometer Model 40 can operate using 12V power banks.**

✓ Recommended power output: **45–65 Watts**

This allows convenient field operation where standard power sources are unavailable.

Why Choose Rheometer Model 40?

- ✓ Accurate Couette measurement system
- ✓ Broad viscosity and shear rate coverage
- ✓ Portable and field-ready
- ✓ Compatible with industry testing standards
- ✓ Expandable with accessories
- ✓ Flexible power options including 12V power banks

Standard Configuration

- Rotor R1 – stainless steel
- Bob B1 – stainless steel
- Torsion Spring F1
- Stainless steel sample cup
- Power supply & cable

Measurement Capabilities (R1-B1-F1 Configuration)

- Viscosity range: 0.05 – 10,000 cP
- Shear rate range: 0.17 – 1021 s⁻¹
- Shear stress range: 5.11 – 1533 dyn/cm²
- Operating temperature: Ambient to 93°C
- Operating pressure: Atmospheric

Applications

- Drilling fluid rheology
 - Cement slurry evaluation
 - Completion & stimulation fluids
 - Industrial drilling slurries
 - Research laboratories
 - Quality control
 - Field testing operations
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Optional Accessories

- Heated thermo-cup for elevated temperature testing
 - Additional rotor-bob combinations
 - Multiple torsion springs for sensitivity adjustment
 - Calibration kits and reference fluids
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Technical Highlights

Dimensions: approx. 42 × 13 × 20 cm

Weight: approx. 4.5 kg

Accuracy: ±0.5% of torque range

Material: Stainless steel wetted components

Ordering Information

Part No. 103330812 - Rheometer Model 40

For sales, service, and technical support, please contact your authorized distributor or representative.