

RHEOMET Viscometer



The **Rheomet Viscometer** is a high performance rotational viscometer capable of both steady shear and yield stress testing in a rugged, compact size footprint. Designed for performing both routine rheological tests like single point viscosity checks for QC, to complex rheological evaluation for R&D, the Rheomet Viscometer is ideal for investigating the mixing, stirring, and process flow characteristics of fluid systems.

The unit comes standard with built in Peltier Temperature Control for all measuring systems. Cone and plate, parallel plate and concentric cylinder measuring systems are included. The measuring systems employ novel “quick capture” mounting technology. The gapping mechanism is highly accurate and user adjustable.

The Rheomet Asphalt DRV is an "Application Specific" model designed to meet all the testing requirements of AASHTO T316-06/ASTM D4402, High Temperature Test Method for Asphalt Binders.

Rheomet is interfaced and controlled with powerful Windows based software. Key features include:

- Real time display of test values
- Automated program control using “Test Definition” windows to rapidly create multiple step experiments
- Provides instantaneous viscosity flow curves
- Interactive graphing allows full control over displayed, printed, and plotted variables
- User enterable data sets and data comparison
- Simple data exportation through Windows Clipboard
- On-line, intuitive Help System

Technical Specifications

Angular Velocity	0.01 to 200 rad/s
Shear Rate Range	Measuring System Dependent
Torque Range	0.005 to 20 mNm
Shear Stress Range	Measuring System Dependent
Temperature Range	5 to 85 C (optional -10* to 120 C)
User Selectable Shear Rates	20,000 discrete steps
Measuring Systems	Cone & Plate, Parallel Plate, and Concentric Cylinders
Dimensions	180 X 520 X 340 mm
Weight	5 Kg

*below 0 C requires liquid cooling

The Rheomet unit has a torque range of 0.005 to 20 mNm and angular velocity of 0.01 to 200 rad/s. The approximation viscosity ranges using different geometries are listed as follows:

	CC 25	PP 30 (gap 0.5 mm)	C 30/2
Stress Coeff (Pa/Nm)	2.500E4	1.415E5	1.415E5
Stress Range (Pa)	0.125 ~ 500	0.708 ~ 2830	0.708 ~ 2830
Equation ()	$r_o\Omega/(r_o-r_i)$	$a\Omega/h$	Ω/θ
Shear Rate Range	0.11 ~ 2200	0.3 ~ 6000	0.127 ~ 2548
Viscosity range (Pa.s)	1.80E-3 ~ 4.54E3	2.17E-2 ~ 9.43E3	9.19E-3 ~ 2.23E4
Sample Volume (ml)	13.0	0.36	0.13

Standard delivery:

- Comes standard with built-in Peltier Temperature Control for all measuring systems, including cone/plate, plate/plate, and cup and bob.
- Comes standard with cone/plate, plate/plate, and cup and bob measuring systems produced to DIN standards. This provides quantitative rheological results, not simply qualitative comparisons.
- Comes standard with Windows based "Micra" instrument software interface for simple operation and control of the Rheomet Viscometer, and, in addition the ability to analyze and/or compare results.
- Expanded shear rate, torque, temperature, and viscosity ranges for a very wide testing range using a single experimental setup.
- Provides automated, complete viscosity versus shear rate flow curve profile rather than single point viscosity measurement.
- One year parts and labor warranty, including unlimited applications phone support and software upgrades.
- Installation and commissioning available