

# DYNAMIC VISCOSITY BY ROTATIONAL VISCOMETER



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BOHEMIA, NEW YORK • HOUSTON, TEXAS

# DYNAMIC VISCOSITY BY ROTATIONAL VISCOMETER



## Specifications

Precision:  $\pm 1\%$  of full scale

Resolution:

With low viscosity adapter: 0.01

For lower than 10,000 viscosity cP: 0.1

For viscosity equal to or above 10,000 cP: 1

Repeatability: 0.2%

Thermometer features:

Temperature margins:

0°C to +100°C

32°F to 212.0°F

Resolution: 0.1°C / 0.1722°F

Precision:  $\pm 0.1^\circ\text{C}$

Type of Probe PT100

Electrical Requirements: 100-240V, 50/60Hz

Measuring Range:

Master Series A: 20-6,000,000 cP

Master Series B: 100-40,000,000 cP

Master Series C: 200-106,000,000 cP

Speed: 0.01-250 r.p.m.

Number of speeds: 2,600

## Included Accessories

Standard spindles (4 spindles for A model and 6 spindles for B and C models)

Viscometer Stand

Spindle Protector

Carrying Case

USB Cable

Datalogger Software

## Ordering Information

### Catalog No.

<b>K447-MA</b>	Master Series A Rotational Viscometer
<b>K447-MB</b>	Master Series B Rotational Viscometer
<b>K447-MC</b>	Master Series C Rotational Viscometer
<b>K447-MA-SFW</b>	Master Series A Rotational Viscometer with Software
<b>K447-MB-SFW</b>	Master Series B Rotational Viscometer with Software
<b>K447-MC-SFW</b>	Master Series C Rotational Viscometer with Software

## Test Method

Determines the dynamic viscosity of a substance by the rotation of a specified spindle within the sample at the speed giving the maximum torque reading on the viscometer. The resulting torque reading is used to calculate the viscosity of the substance.

## Master Series Rotational Viscometer

- Master Series viscometers, monitored by Master Series Rotational Viscometer Software, offer a wider and unique range of rheological applications.
- Touch key board with 12 keys
- Direct readout on a graphic display
- Data displayed
  - Selected speed: r.p.m.
  - Selected spindle: SP
  - Viscosity Reading: cP (mPa-s) or cSt
  - Percentage of full scale: %
  - Sample temperature: °C or °F
  - Shear Rate (with coaxial spindles): SR (s<sup>-1</sup>)
  - Shear Stress (with coaxial spindles): SS (N/m<sup>2</sup>)
  - Density (introduced by the user): g/cm<sup>3</sup>
  - Step Program Status
  - Analyze & visual characteristics (flow curves)
- Viscosity reading: dynamic viscosity (cP or mPa-s) or kinematic viscosity (cSt)
- Program features:
  - Time to torque: target torque pre-setting device
  - Time to stop: target time pre-setting device
  - 10 working memories
  - Customizable options
  - Programmable
  - Multistep
  - Ramp
- AUTO-TEST with sound and visual malfunction alarm
- AUTO-RANGE function
- Temperature reading by PT100
- User-enabled viscosity and temperature calibration
- 10 language options
- AISI 316 stainless steel spindles

## Master Series Rotational Viscosity Software

- Complete viscometer control
- Easy to use. All programs eliminate user errors when programming the instrument to collect data.
- Provides instantaneous viscosity flow curves when performing new experiments, with definable parameters
- Clear view of program options using flanges
- Definable graphics and zoom function
- Different types of experiments can be programmed: simple curves, ramps, and multi-step
- All experiments are recorded in different databases to be able to consult them anytime
- Experiment documentation with name, number, and additional data
- In order to compare different flow curves, up to 4 experiments can be plotted simultaneously
- Over 12 different charts can be obtained

The Master Series Rotational Viscosity Software is designed to program the Master Series Viscometer and is a powerful key to document and study the viscosity behavior of fluids. The Master Series Rotational Viscosity Software is capable of graphing simple curves, ramps and "multi-step" curves allowing the user to study trends and the behavior of different materials. A powerful graph key assists the user to easily design flow curves required.



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