

Dynamic Viscosity by Rotational Viscometer

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.

digital series rotational viscometer

No calculations required:

Direct reading of viscosity in cP or mPa·s

Displayed Information:

Viscosity (cP or mPa·s)

% Torque

Speed/Spindle

Easy to use:

Flip a switch

Turn a knob

Auto Range Button:

Push for determining full scale range (FSR) viscosity

advanced digital series rotational viscometer

User Configuration Display:

User choice of most important parameter is displayed in larger font size

Choice of static or scrolling display mode

Displayed Information:

Viscosity (cP, P, mPa·s, or Pa·s)

% Torque

Speed/Spindle

Temperature (°C or °F)

*If RTD Temperature Probe is purchased

Choice of Multiple Languages:

English, French, German, Portuguese, Russian, Spanish

USB PC Interface for use with optional Software

Direct Access:

To time measurement function (time to torque, time to temperature, time to stop)

Automatic Range Calculation

Full Scale Range (FSR) at 100%

Maximum Viscosity measured with Spindle/Speed combination

Temperature Off-Set capability to $\pm 5^{\circ}\text{C}$

included accessories

All Units

6 Spindles (R/H) or 4 Spindles (L)

Spindle Guard Leg

Lab Stand

Carrying Case

Programmable & Advanced Programmable

Software

Convenience Pack (USB Flash Drive, Stylus, Cleaning Cloth)

programmable series

5-Inch Full Color Touch Screen Display:

Simplified User Interface

Enhanced Controls

Real Time Trend Indicator

Supports Multiple Languages

Displayed Information:

Viscosity (cP or mPa·s)

Temperature (°C or °F)

Shear Rate/Stress

% Torque

Speed/Spindle

Step Program Status

Enhanced Security:

Customizable User Access, Date and Time Stamp

File, Password Access, Portable Log-in Settings

Built-In Options:

Timed Tests, Data Averaging, Programmable

QC Limits/Alarms, Customizable Speed/Spindle

Lists, Test Based User Instructions, On Screen Data Comparison

Auto Range Showing

Maximum Viscosity measured with Spindle/Speed Combination

Download Custom Test Programs

Built-In RTD Temperature Probe

Convenient Bubble Level

advanced programmable series

7-Inch Full Color Touch Screen Display

Real Time Graphing

Supports Multiple Languages

Displayed Information:

Viscosity (cP, P, mPa·s, or Pa·s)

Temperature (°C or °F)

Shear Rate/Stress

% Torque

Speed/Spindle

Step Program Status

Math Model Calculations

Built-In Math Models:

For Data Analysis in Stand-Alone Mode

Enhanced Security

Built-In Options:

Math Modeling, Temperature Control, Yield Tests, Programmable QC Limits/Alarms

Analyze Characteristics:

Such as Yield Stress, Flow Curves (mixing, pumping, spraying) Leveling and Recovery

Internal Data Storage: 150 MB

Stand-Alone Programming or Download Custom Tests

Built-In RTD Temperature Probe

Convenient Bubble Level

specifications

All Units

Accuracy: $\pm 1.0\%$ of range

Repeatability: $\pm 0.2\%$ of range

Dynamic Viscosity by Rotational Viscometer



Digital Model
K3475X



Advanced Digital
Model K3474X



Programmable
Model K3476X



Advanced Programmable
Model K3473X

ranges and speeds

Digital & Advanced Digital

- L Series: Viscosity Range: 1 to 2M cP (mPa·s)
- R Series: Viscosity Range: 100 to 13M cP (mPa·s)
- H Series: Viscosity Range: 800 to 104M cP (mPa·s)
- For L, R, and H Series: Speeds: 0.3 to 100 RPM
- Number of Increments: 18

Programmable & Advanced Programmable

- L Series: Viscosity Range: 1 to 6M cP (mPa·s)
- R Series: Viscosity Range: 100 to 40M cP (mPa·s)
- H Series: Viscosity Range: 800 to 320M cP (mPa·s)
- For L, R, and H Series: Basic: 0.1 to 200 RPM
- Advanced: 0.01 to 250 RPM
- Number of Increments: Basic: 200
- Advanced: 2.6K

ordering information

catalog no.	description/series	type	electrical requirements
K34750	Digital Rotational Viscometer	Low Viscosity (L)	115V 60Hz
K34751	Digital Rotational Viscometer	Low Viscosity (L)	230V 50Hz
K34752	Digital Rotational Viscometer	Low Viscosity (L)	230V 60Hz
K34753	Digital Rotational Viscometer	Mid Viscosity (R)	115V 60Hz
K34754	Digital Rotational Viscometer	Mid Viscosity (R)	230V 50Hz
K34755	Digital Rotational Viscometer	Mid Viscosity (R)	230V 60Hz
K34756	Digital Rotational Viscometer	High Viscosity (H)	115V 60Hz
K34757	Digital Rotational Viscometer	High Viscosity (H)	230V 50Hz
K34758	Digital Rotational Viscometer	High Viscosity (H)	230V 60Hz
K34740	Advanced Digital Rotational Viscometer	Low Viscosity (L)	115V 60Hz
K34741	Advanced Digital Rotational Viscometer	Low Viscosity (L)	230V 50Hz
K34742	Advanced Digital Rotational Viscometer	Low Viscosity (L)	230V 60Hz
K34743	Advanced Digital Rotational Viscometer	Mid Viscosity (R)	115V 60Hz
K34744	Advanced Digital Rotational Viscometer	Mid Viscosity (R)	230V 50Hz
K34745	Advanced Digital Rotational Viscometer	Mid Viscosity (R)	230V 60Hz
K34746	Advanced Digital Rotational Viscometer	High Viscosity (H)	115V 60Hz
K34747	Advanced Digital Rotational Viscometer	High Viscosity (H)	230V 50Hz
K34748	Advanced Digital Rotational Viscometer	High Viscosity (H)	230V 60Hz
K34760	Programmable Rotational Viscometer	Low Viscosity (L)	115V 60Hz
K34761	Programmable Rotational Viscometer	Low Viscosity (L)	230V 50Hz
K34762	Programmable Rotational Viscometer	Low Viscosity (L)	230V 60Hz
K34763	Programmable Rotational Viscometer	Mid Viscosity (R)	115V 60Hz
K34764	Programmable Rotational Viscometer	Mid Viscosity (R)	230V 50Hz
K34765	Programmable Rotational Viscometer	Mid Viscosity (R)	230V 60Hz
K34766	Programmable Rotational Viscometer	High Viscosity (H)	115V 60Hz
K34767	Programmable Rotational Viscometer	High Viscosity (H)	230V 50Hz
K34768	Programmable Rotational Viscometer	High Viscosity (H)	230V 60Hz
K34730	Advanced Programmable Rotational Viscometer	Low Viscosity (L)	115V 60Hz
K34731	Advanced Programmable Rotational Viscometer	Low Viscosity (L)	230V 50Hz
K34732	Advanced Programmable Rotational Viscometer	Low Viscosity (L)	230V 60Hz
K34733	Advanced Programmable Rotational Viscometer	Mid Viscosity (R)	115V 60Hz
K34734	Advanced Programmable Rotational Viscometer	Mid Viscosity (R)	230V 50Hz
K34735	Advanced Programmable Rotational Viscometer	Mid Viscosity (R)	230V 60Hz
K34736	Advanced Programmable Rotational Viscometer	High Viscosity (H)	115V 60Hz
K34737	Advanced Programmable Rotational Viscometer	High Viscosity (H)	230V 50Hz
K34738	Advanced Programmable Rotational Viscometer	High Viscosity (H)	230V 60Hz