

## Viscosity - Rotational Viscometer Method - RV (automatic)

ASTM D 4402, EN 13302, AASHTO T316, AASHTO TP48 (obs.), SHRP 1006, Superpave®

**Product group(s):** Bitumen, Viscosity

**User group(s):** Asphalt, Bitumen

**Scope:** Used to determine the flow resistance, the dynamic & apparent viscosity, at elevated temperatures. (e.g. +38 to +260°C). Suitable for bituminous binders.

The torque on a spindle rotating in a special thermostatically controlled sample holder containing a small sample of asphalt is used to measure the relative resistance to rotation.

A factor is applied to the torque dial reading to yield the viscosity of the asphalt in millipascal seconds.

- Brookfield Thermosel
- Display of torque, viscosity, shear rate, shear stress
- Carry case



### Digital Rotational Viscometer Test Equipment

to be composed of:

- RV - Digital Rotational Viscometer
- Spindle Extension, including link and coupling nut
- Spindle
- Tempering Unit - RV
- Tempering Controller - RV
- PC-Software - RV
- Viscosity Standard

### Technical Data

|                                |                                                             |
|--------------------------------|-------------------------------------------------------------|
| <u>Measuring range:</u>        | depending on spindle from 50 up to 3.3 million mPa • s      |
| <u>Display of:</u>             | torque, viscosity, shear rate, shear stress and temperature |
| <u>Serial RS232 interface:</u> | for data transfer to PC                                     |
| <u>Parallel output:</u>        | for printer                                                 |
| <u>Analog output:</u>          | for torque (0-1 V) and temperature (0-4 V)                  |

## Main Unit

10-0600

### RV - Digital Rotational Viscometer

Superpave®: ASTM D 4402 - AASHTO T316 - SHRP 1006  
EN 13 302

Consisting of:

measuring head (without spindle), temperature probe (Pt-100), digital display, RS232, parallel and analog output, stadia material.

Supplied with: 1 carry case

Note: Spindle, Viscosity Standard, Tempering Unit (& Controller for 115 V) are required. The application PC-Software is recommended.

Power supply: 230 V, 50 Hz

|                |                                                                                                          |
|----------------|----------------------------------------------------------------------------------------------------------|
| <b>10-1600</b> | <b>RV - Digital Rotational Viscometer</b><br>Like 10-0600 but:<br>Power supply: 115 V, 60 Hz             |
| <b>10-0604</b> | <b>Spindle Extension, including link and coupling nut</b><br>(only for test without Tempering Unit - RV) |
| <b>10-0602</b> | <b>Spindle (Viscosity range: 50 to 170 000 mPa•s)</b>                                                    |

**Options & Accessories**

|                |                                                                                                                                                           |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>10-0601</b> | <b>Tempering Unit - RV</b><br><b>(temperature controller with thermo-container)</b><br>Temperature range: ambient to 300 °C<br>Power supply: 230 V, 50 Hz |
| <b>10-1601</b> | <b>Tempering Unit - RV</b><br>Like 10-0601 but:<br>without temperature controller<br>Power supply: 115 V, 60 Hz                                           |
| <b>10-1602</b> | <b>Tempering Controller - RV (for 115 V -Tempering Unit)</b>                                                                                              |
| <b>10-0603</b> | <b>PC-Software - RV</b><br>provides automatic data collection and instant flow curves (rheograms), for Windows®, data transfer cable included.            |
| <b>10-0605</b> | <b>Viscosity Standard 1000 cPs, 500 ml</b><br>(for calibration at 10, 20, 30 rpm)                                                                         |

**Order Guideline**

Minimum equipment: 10-0600, 1x 10-0602, 1x 10-0604 and 10-0601  
10-1600, 1x 10-0602, 1x 10-0604, 10-1601 and 10-1602

Additional requirements: