

Viscosity - Dynamic Shear Rheometer Method - DSR II (automatic)

ASTM P 246, EN 12591, NF T65-001 (obs.), AASHTO T315, AASHTO TP5 (obs.), SHRP 1007, SHRP B-003, Superpave®

Product group(s): Bitumen, Viscosity

User group(s): Asphalt, Bitumen

Scope: Used to measure the linear viscoelastic properties of modified or unmodified (aged or unaged) asphalt binders in a temperature range of +5 to +80 °C.

For AASHTO MP1 tests a sample disc is confined between circular parallel plates and tested at a specific temperature.

The phase angle, in radians or degrees between the sinusoidal stress & strain, is measured, too.

Dynamic shear is determined by applying a known torque to oscillate one of the plates and measuring the resulting strain.

Resultant stress is measured in a strain control mode, while resultant strain in a stress control mode.



Automatic Dynamic Shear Rheometer Test Equipment

More details are mentioned in the "Order Number" section

Technical Data

Torque: 0.05 to 10 mNm
Temperature Range: 5 °C to +80 °C (DSR)
Heating / Cooling Rate: 2 °C / 1.5 °C (circulator)

Main Unit

10-0770

DSR II - Automatic Dynamic Shear Rheometer

Superpave®:
 SHRP B-003 - SHRP 1007 - AASHTO T315 - ASTM P 246

Paving grade: EN 12 591 (NF T65-001)

A Rheometer system configured for dynamic testing of asphalt and bitumen according the temperatures and frequencies specified by SHRP and Superpave®.

It offers precise and stable temperature control, a rapid sample equilibrium to set temperature, an automatic expansion compensation keeps the pre-set gap constant with temperature.

Consisting of:

- 1 Rheometer with mechanical bearing and fluid cell,
- 1 cooling circulator with hose,
- 1 Windows-software SHRP for Superpave® specification and grade determination
- 1 measuring plate (PU) Ø 8 mm (for average temperature tests)
- 1 measuring plate (PU) Ø 25 mm (for high temperature tests)

Note: PC and Printer are required.

Power supply: 220 V, 50 Hz

Options & Accessories

10-0774

Computer & Printer Set

Consisting of:

Windows®-software compatible minitower with DVD-ROM drive and USB-interface, TFT-monitor, keyboard, mouse and Inkjet color printer

Note: Configuration details upon request

Power supply: 230 V, 50/60 Hz

10-0775

Computer & Printer Set

Like 10-0774 but:

Power supply: 110 V, 60 Hz

Order Guideline

Minimum equipment:

1x 10-0770

Additional requirements: