

DPV[®] is an automated, rotational digital paddle viscometer for measuring the dynamic viscosity of non-homogenous materials such as emulsified asphalts, marine fuels, residual oils, slurries and foods at 40 °C, 50 °C, 80 °C and 100 °C. The DPV provides an automated alternative to older, labor-intensive and less precise methods.

Common Applications

- Emulsified asphalts
- Marine fuels
- Suspensions
- Slurries
- Foods
- Paints
- Residual oils

DPV[®]

Digital Paddle Viscometer

For Dynamic Viscosity of Non-Homogenous Materials including Emulsified Asphalts ASTM (D7226, D2397, D977) and AASHTO Provisional Standards for Emulsions

Product Features & Benefits

Designed specifically for viscosity testing of non-homogenous materials

- Meets ASTM (D7226, D2397, D977) and AASHTO provisional standard requirements for asphalt emulsions
- Viscosity range: 30 mPa·s (cP) to 30,000 mPa·s (cP) in 100-fold increments depending on paddle selection
- Integrated heating measures dynamic viscosity at 40 °C, 50 °C, 80 °C and 100 °C ± 0.1°C
- Digital display presents viscosity values in mPa·s (cP), mm²/s (cSt)
- Suitable for applications including emulsified asphalts, marine fuels, suspensions, slurries, foods, paints and residual oils

Improves data quality

- Automated sample processing and testing reduces dependence on operator skill for quality data
- Paddle continuously mixes the sample for greater sample homogeneity and more representative sample data
- Direct measurement of the sample rather than the bath temperature provides more accurate temperature measurement
- Viscosity data is automatically calculated and may be transferred to an optional dot matrix printer

Eliminates laborious and tedious sample processing

- No sieving or sample pre-heating is required, just load the sample and push a button to initiate sample prep and testing
- Removable sample cup allows for quick and easy cleaning between samples
- Allows unattended sample processing without the need to invest in additional, expensive equipment
- Completes most tests in 10 to 30 minutes with less messy post-test cleanup

Reduces safety risks

- No hot dripping sample or tricky cork removal; no glass components or accessories
- Heater cup thermostat senses over-temperature fault conditions and removes power to the heater until the temperature is at a safe level.
- Motor shaft and paddle immobilization automatically disables motor power

Low cost, easily transportable design

- Self contained, compact instrument with no ancillary equipment (e.g. ovens, water baths)
- Transports easily for field applications. DPV is up to 1/7 the benchtop footprint and 1/3 the weight of a traditional Saybolt viscometer bath
- Low overall system cost



DPV[®] Digital Paddle Viscometer

Ordering Information

DPV[®] Digital Paddle Viscometer consists of the viscometer with an adjustable heated tray assembly and head unit, two reusable sample cups, two sample paddles (high and low viscosity) and one set of viscosity standards (N100, N4000, S600, S30,000). Optional printer sold separately.

Description	Part #
DPV [®] Digital Paddle Viscometer	
115 VAC, 50/60 Hz	9725-F70
230 VAC, 50/60 Hz	9725-F75

Accessories & Consumables

Description	Part #
Replacement cup	17.4003
Disposable sample cup (case of 300)	17.4210
Replacement paddle (low viscosity)	17.4004
Replacement paddle (high viscosity)	17.4104
N100 oil viscosity standard (500 mL)	9727-C42.016
N4000 oil viscosity standard (500 mL)	9727-C57.016
S600 oil viscosity standard (500 mL)	9727-C50.016
S30000 oil viscosity standard (500 mL)	9727-C65.016
Compact dot matrix impact printer	82.0067

Product Specifications

Dimensions (W x D x H)	19.1 cm x 23.5 cm x 45.1 cm (7.5 in x 9.5 in x 17.75 in)*
Weight	7.7 kg (17 lb)
Shipping dimensions (W x D x H)	38.1 cm x 40.6 cm x 53.3 cm (15 in x 16 in x 21 in)
Shipping weight (with all items)	12.3 kg (27 lb)
Max throughput	2-4 samples per hour
Automated sample capacity	1
Viscosity range & accuracy	30 mPa·s (cP) to 30,000 mPa·s (cP)* 30 mPa·s (cP) to 3,000 mPa·s (cP) ± 5% 3,000 mPa·s (cP) to 30,000 mPa·s (cP) ± 10% <i>*in 100-fold increments based on paddle selection</i>
Test temperatures & accuracy	40 °C, 50 °C, 80 °C, 100 °C ± 0.1°C
Minimum sample volume	135 mL per test
Operating conditions	15 °C to 30 °C, 10% to 75% relative humidity (non-condensing), Installation Category II; Pollution Degree 2
Electrical specifications	115 VAC, 50/60 Hz; 230 VAC, 50/60 Hz; 120 watts power consumption
Compliance	CE Mark; EMC directive (2004/108/EC); Low voltage directive (2006/95/EC); HI-POT (1900 VDC, 60 sec.); ROHS
Data output	RS-232

*15 cm rear clearance required



CANNON Instrument Company[®] provides a variety of physical property testing equipment and consumables (vials, bath fluids, and reference materials) for your testing needs. To learn more, contact sales@cannoninstrument.com.



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