

CANNON® DPV

Digital Rotational Paddle Viscometer



- **Designed for non-homogenous materials including marine fuels, emulsified asphalts, suspensions, residual oils, slurries, foods, and other materials**
- **Environmentally Friendly**
- **Small Sample Size**
- **Follows Standardized Test Methodology: ASTM D7226**

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ASTM D7226, ASTM D2397, ASTM D0977

The CANNON Digital Paddle Viscometer has been designed to accurately measure the viscosity of emulsified asphalts, suspensions, marine fuels, residual oils, slurries, paints and similar materials between 30 and 30,000 mPa·s at temperatures of 25°C, 40°C, 50°C, 80°C, and 100°C (see temperature specifications for temperature associated with each model). Follows Standardized Test Methodology: ASTM D7226 for emulsified asphalt testing. Available in two models (standard and water-cooled), the Digital Rotational Paddle Viscometer can also be used for other applications consistent with its temperature control and viscosity measurement capabilities. Ideally suited for field use, the Rotational Digital Paddle Viscometer can determine the viscosity of lubricating oils, marine fuels and other liquids, yielding results with an accuracy of five percent or better for most materials—better than that required by ASTM D445 for residual oils at 50°C.

Novel Design Features

The Digital Paddle Viscometer consists of a base, adjustable heated tray assembly, two sample cups, head unit, and two paddles (high and low viscosity), each with a one-hundred-fold range. A digital display on the front panel of the head unit indicates viscosity in centipoise (cP or mPa·s, or centistokes (cSt or mm²/s) and Saybolt Furol Seconds if a known density value is input by the operator prior to testing. The digital display also indicates the temperature, duration of test, and test status. Test data can be transferred to the optional label printer via an RS232 connector.



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An Automated Alternative

The Digital Paddle Viscometer has been designed to provide a cost-effective and automated alternative to older, labor-intensive and less precise instrumentation and methodologies. Test data has been found to correlate well with the Saybolt viscometer method.

Running the Test

To test a sample, the operator fills a sample cup to the fill line, places the cup in the insulated tray assembly, and raises the tray to lock it in the test position. One touch on the keypad initiates the test. Most tests can be completed in less than 15 minutes. No operator supervision is required after the test has begun. When the test is complete, viscosity is automatically calculated and displayed. Cleaning is quick and convenient; just detach the paddle and remove the sample cup from the holder.

Safety Features

The unit performs an automatic self-test of display, memory, analog-digital converter function, and power supply voltage levels on startup. A thermostat in the heater cup senses any over-temperature fault condition and removes power from the heater until the temperature drops to a safe level. If the control RTD is disconnected, power to the heater cup is cut off. If the motor shaft and attached paddle are immobilized, power to the motor is removed.

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Dimensions:	191 mm wide x 235 mm deep x 451 mm high 7.5 x 9.5 x 17.75 inches (150 mm rear clearance required)
Weight:	7.7 kg; 17 lbs
Shipping Weight:	12.3 kg; 27 lbs
Viscosity Range:	30 to 30,000 mPa (100-fold range dependant on paddle selection)
Viscosity Accuracy:	±5% from 30 to 3000 mPa; 10% from 300-30,000 mPa
Test Temperatures:	Standard Model: 40°C, 50°C, 80°C, 100°C Water-Cooled Model: 25°C†, 40°C, 50°C, 80°C, 100°C
Temperature Accuracy:	±0.1°C
Operating Conditions:	15°C to 30°C, 15 to 95% relative humidity, non-condensing
Power Requirements:	100 to 120V, 50/60 Hz, 120W; 200 to 240V, 50/60 Hz, 120W

Order Information

Catalog#	Item Description
9725-F70	Digital Rotational Paddle Viscometer, 115V, 50/60 Hz
9725-F75	Digital Rotational Paddle Viscometer, 230V, 50/60 Hz
9725-F71†	Water-Cooled Digital Rotational Paddle Viscometer, 115V, 50/60 Hz
9725-F76†	Water-Cooled Digital Rotational Paddle Viscometer, 230V, 50/60 Hz

Please specify exact voltage and frequency when ordering.

† Julabo F200 Recirculating Cooler recommended; contact CANNON for required specifications.



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