

miniPV™

POLYMER SOLUTION Automatic Viscometer



- **Accurate and Fast Analysis**
- **Supports Standard and Proprietary Methods**
- **Intuitive and Versatile Software**
- **Simple Operation**
- **Robust Performance**

 **CANNON**
INSTRUMENT COMPANY®

CANNON®

CANNON® miniPV™ POLYMER SOLUTION Automatic Viscometer

Essential Automation for Polymer Solution Viscosity

The miniPV™ from CANNON Instrument Company is an essential tool for the measurement of polymer solution viscosities. Its accuracy and convenience are based on the masterful design of temperature control, fluid handling, sensor technology, and automation. Complete control of the instrument is provided through VISCPRO II software (for Windows® 98/NT®/XP®) which also facilitates procedural tasks such as calibration, data entry, method specification, calculation selection, report formatting, and data exporting. All data is securely maintained by VISCPRO II in a Microsoft Access database.

The miniPV™ occupies roughly the same footprint as an analytical balance, yet is able to provide a high level of automation which includes sample loading, temperature equilibration, flow time measurement, and cleaning of the entire system between measurements. Support for a sequence of samples is available with the optional autosampler.

VISCPRO II is unique in its ability to perform the Huggins-Kraemer determination of intrinsic viscosity in addition to single-point methods based on Billmeyer and on Solomon-Ciuta. Multiple viscosity calculations are also available, leading to relative, inherent, and reduced viscosity determinations. In addition, the software provides flexible and sophisticated control of data export options and database management.

Operation

Operation of the miniPV™ is simple. First, the sample vial is charged with about 15 mL of solution. Second, the sample vial is positioned in the vial holder beneath the viscometer. Third, the sample platform is raised to the viscometer. This action initiates the sample loading procedure and the subsequent series of automatic processes that were specified by the user in the VISCPRO II method parameters. In general, the sample is drawn into the viscometer tube, held until the temperature has equilibrated, and then released to drain during automatic timing of the flow rate. Data is transferred via the RS-232 serial connection to a host computer that stores and maintains the data in a MS Access® database. The sample is then ejected as waste and the sample vial becomes a wash station as solvent is automatically injected into the viscometer tube to initiate the cleaning cycle which can include a second solvent for a subsequent rinse and a final purge of compressed air. Following tube drying, the vial holder is returned to its original position, ready to receive the next sample.

miniPV™ Features

- Designed to Meet the Unique Needs of Users in the Polymer Industry
- Calculation of Relative, Inherent, Reduced and Intrinsic Viscosity
- 0.3 to 5,000 centistokes range (special ranges available on request)
- Superb Temperature Control from 20 to 100°C
- Accurate Flow Times (to 0.01 seconds)
- Thermistor Sensors
- Peltier Technology Cooling for efficient operation near ambient temperatures



- Powerful VISCPRO II® Software for Control, Calculation and Database Management
- Compatible with Most Solvents used for Polymer Characterization
- Applications: Solutions of Elastomers, Plastics, TPEs, Copolymers, Bio-polymers, Blends, Oligomers, Pre-Polymers, Resins, and Viscosity Modifiers

For more information or to arrange a demonstration, we invite you to contact Cannon Instrument Company.

For applications using potentially incompatible chemicals, please consult CANNON for special maintenance

miniPV™ Automatic Viscometer Specifications

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|---------------------------|--|
| miniPV™ Dimensions: | 254 mm wide x 437 mm deep x 598 mm high (10 x 17.2 x 23.5") |
| Power Supply Dimensions: | 330 mm wide x 396 mm deep x 172 mm high (13 x 15.6 x 6.8") |
| Air-Water Heat Exchanger: | 385.6 mm wide x 511.2 mm deep x 348.8 high (15.2 x 20.1 x 13.7") |
| Weight: | Bath Unit: 27 kg (45 lbs); Power Supply: 12 kg (26 lbs); Waste Receiver: 6 kg (13 lbs); AWHE: 14 kg (30 lbs) |
| Shipping Weight: | 72 kg (159 lbs) with all units/accessories |
| Fuse Rating: | 115V & 100V Units: M 250V 8A, 1.25 x 0.25"; 230V Unit M 250V 4A, 1.25 x 0.25" |
| Compliance: | CE Mark pending |
| Computer Requirements | Computer not included, please contact Cannon for specifications. |

miniPV™ Order Information

| Catalog # | Item Description |
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| 9725-A91 | miniPV™ 115V 50/60 hz |
| 9725-A92 | miniPV™ 100V 50/60 hz |
| 9725-A93 | miniPV™ 1230V 50/60 hz |
| P81.2450 | Dostmann Thermometer, Calibrated, Digital Single Channel Kit |
| P81.2451 | Dostmann Thermometer, Calibrated, Digital Dual Channel Kit |



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