

miniPV-H and miniPV-HX are fully-automated, benchtop viscometers for testing dilute solution viscosity of polymers and testing kinematic viscosity for general purpose applications.

#### Common Applications for Dilute Solution Viscosity:

- Acidic fluids
- Acidic solutions
- Biopolymers
- Cellulose
- Elastomers
- Halogenated polymers
- PEEK
- Polyacetates
- Polyacrylates
- Polyamides
- Polyaramides
- Polycarbonates
- Polyesters
- Polyols
- Polysiloxanes
- Polystyrene
- Prepolymer resins
- Thermoplastic elastomers
- Thermoset resins
- Vinyl Polymers

#### Common Applications for Kinematic Viscosity:

- Alcohols
- Biomedical fluids
- Cannabis oils
- Dispersions
- Epoxy components
- Glycols
- Inks
- Liquid products and intermediates
- Oligomers
- Photoresists
- Silicones

# miniPV<sup>®</sup>-H/miniPV-HX Automated Dilute Solution/Kinematic Viscometer

For Dilute Solution Viscosity of Polymers and Kinematic Viscosity for General Purpose Applications  
ASTM D445, ASTM D789, ASTM D1243, ASTM D1795, ASTM D2857, ASTM D3591, ASTM D4243,  
ASTM D4603, ASTM D5226, ASTM D5336, ISO 307, ISO 1628-1, ISO 1628-2, ISO 1628-4, ISO 1628-5,  
ISO 1628-6, ISO 3104, ISO 5351, DIN 51562-1, IEC 60450, Ph. Eur. 1472, Tappi T230, USP 911

## Designed to meet your viscosity testing needs

- On-board software with specialized polymer calculations determines inherent, intrinsic, kinematic, reduced, relative, and specific viscosity, as well as, molecular weight
- Integrated TE cooling provides superb temperature control from 15 °C to 100 °C
- Dilute solution polymer viscosity range: 0.3 mm<sup>2</sup>/s (cSt) to 700 mm<sup>2</sup>/s (cSt); both single range and special dual range viscometer tubes are available\*
- Kinematic viscosity range: 0.02 mm<sup>2</sup>/s (cSt) to 1,200 mm<sup>2</sup>/s (cSt)\*

## Compact, robust design

- Fits in roughly the same benchtop area as an analytical balance to conserve valuable lab space
- Sealed system allows for measurement of atmospherically sensitive and volatile samples
- Compatible with most acids, aggressive aqueous, aqueous, corrosive, halogenated, organic, and salt solutions

## Fully automated benchtop testing

- Software controls the instrument and facilitates tasks such as calibration, data entry, method specification, calculation selection, report formatting, and data exporting
- Single PC manages up to 4 instruments using VISCPRO<sup>®</sup> software
- Reduces operator to operator variability
- Replaces manual tube cleaning with automated washing and drying

## Simplified maintenance & test versatility

- Modular bath for easy maintenance access
- Operators physically replace tubes in minutes, eliminating the need to schedule related service calls
- Single-point temperature calibration avoids need for tube recalibration and maximizes test flexibility
- Standard three solvent input



# miniPV<sup>®</sup>-H/miniPV-HX | Dilute Solution/Kinematic Viscometer

## Ordering Information

CANNON<sup>®</sup> miniPV-H and miniPV-HX Dilute Solution/Kinematic Viscometers consist of the viscometer unit, external power supply, and waste receiver assembly. One viscometer tube, one set of viscosity standards, a case of glass vials, a high precision digital thermometer with probe, and VISCPRO<sup>®</sup> data storage/management software are also included. Specify desired factory installed options and viscometer tubes when ordering. Computer sold separately.

| Description                 | Part #   |
|-----------------------------|----------|
| miniPV-H 100 VAC, 50/60 Hz  | 9725-C13 |
| miniPV-H 115 VAC, 50/60 Hz  | 9725-C14 |
| miniPV-H 230 VAC, 50/60 Hz  | 9725-C15 |
| miniPV-HX 100 VAC, 50/60 Hz | 9725-C16 |
| miniPV-HX 115 VAC, 50/60 Hz | 9725-C17 |
| miniPV-HX 230 VAC, 50/60 Hz | 9725-C18 |

## Options

Additional temperature calibration (for each temperature beyond the first) and heated stage option are available for an added charge at the time of ordering.

## Accessories & Consumables

| Description  | Part #   |
|--|----------|
| Spare parts kit (1 year supply)                    | 81.2918  |
| CANNON Solution Preparation System (SPS) 100–240 V | various  |
| Heating/stirring block                             | various  |
| Vacuum pump diaphragm kit                          | 65.3181  |
| Replacement silicone bath fluid, 1 L               | 9726-L40 |
| Viscosity reference standards                      | various  |
| Screw cap lids (24 mm opening); case of 144        | 65.0026  |
| Cap liner gasket, FKM, .375ID; 1 each              | 65.3889  |
| PTFE lined bottle cap, 1 each                      | 03.5132  |
| Vials (20 mL amber glass); case of 144             | 81.2816  |
| Vials (20 mL clear glass); case of 40              | 81.3023  |
| Vials (20 mL clear glass); case of 144             | 65.0025  |
| Vials (40 mL clear glass); case of 144             | 81.2838  |

## Product Specifications

|                                 |   |
|---------------------------------|---|
| Dimensions (W x D x H)          | Unit: 25.4 cm x 39.6 cm x 78.7 cm (10.0 in x 15.6 in x 30.5 in)<br>Power Supply: 33.0 cm x 39.6 cm x 17.2 cm (13.0 in x 15.6 in x 6.8 in)<br>Waste Receiver: 33.0 cm x 39.6 cm x 17.2 cm (13.0 in x 15.6 in x 6.8 in) |
| Weight                          | Unit: 24 kg (53 lb)<br>Power Supply: 11 kg (24 lb)<br>Waste Receiver: 6 kg (13 lb)  |
| Shipping dimensions (W x D x H) | 73.7 cm x 63.5 cm x 94.0 cm (29 in x 25 in x 37 in)   |
| Shipping weight                 | 117 kg (258 lb)   |
| Cycle time                      | as low as 12 minutes (includes washing and drying time)   |
| Automated sample capacity       | 1 (miniPV-H)<br>10 (miniPV-HX)  |
| Viscosity range*                | Dilute Solution: 0.3 mm <sup>2</sup> /s (cSt) to 700 mm <sup>2</sup> /s (cSt)<br>Kinematic: 0.02 mm <sup>2</sup> /s (cSt) to 1,200 mm <sup>2</sup> /s (cSt)   |
| Timing resolution               | 0.01 s (timing accuracy to ± 0.001 s)   |
| Temperature range & accuracy    | 15 °C to 100 °C ± 0.01 °C   |
| Minimum sample/solvent volume   | 10 mL sample/<br>30 mL solvent for wash   |
| Operating conditions            | 15 °C to 30 °C, 10% to 75% relative humidity (non-condensing), Installation Category II; Pollution Degree 2   |
| Electrical specifications       | 100 VAC, 50/60 Hz; 115 VAC, 50/60 Hz; 230 VAC, 50/60 Hz; 1,000 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 and RS-485   |

\*Upper viscosity measurements may be limited by test temperature and sample type.

CANNON Instrument Company<sup>®</sup> 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](mailto:sales@cannoninstrument.com).



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