

miniPV and miniPV-X 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:

- Biopolymers
- Cellulose
- Elastomers
- Halogenated polymers
- Polyacetates
- Polyacrylates
- Polycarbonates
- 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>/miniPV-X

## Automated Dilute Solution/Kinematic Viscometer

For Dilute Solution Viscosity of Polymers and Kinematic Viscosity for General Purpose Applications  
ASTM D445, ASTM D1243, ASTM D1795, ASTM D2857, ASTM D3591, ASTM D4243, ASTM D5226,  
ISO 1628-1, ISO 1628-2, ISO 1628-4, 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 aggressive aqueous, aqueous, caustic, 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 dual solvent input



#### INCLUDES

- ✓ VISCPRO<sup>®</sup> Software
- ✓ Viscometer Tube
- ✓ Standards
- ✓ Digital Thermometer

**CANNON**  
INSTRUMENT COMPANY

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# miniPV®/miniPV-X | Dilute Solution/Kinematic Viscometer

## Ordering Information

CANNON® miniPV and miniPV-X 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® data storage/management software are also included. Specify desired factory installed options and viscometer tubes when ordering. Computer sold separately.

Description	Part #
miniPV 100 VAC, 50/60 Hz	9725-A92
miniPV 115 VAC, 50/60 Hz	9725-A91
miniPV 230 VAC, 50/60 Hz	9725-A93
miniPV-X 100 VAC, 50/60 Hz	9725-C10
miniPV-X 115 VAC, 50/60 Hz	9725-C11
miniPV-X 230 VAC, 50/60 Hz	9725-C12

## Options

Factory installed options (see NOTE) must be specified when ordering. Part numbers are listed below for field installable options.

Description	Part #
External heated waste drain line w/ external power supply	81.3115

NOTE: Additional temperature calibration (for each temperature beyond the first), PEEK tip, heated stage, and saline options are available for an added charge at the time of ordering.

## Accessories & Consumables

Description	Part #
Spare parts kit (1 year supply)	81.3030
CANNON Solution Preparation System (SPS) 100–240V	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, .42ID; 1 each	65.3888
Vials (20 mL clear glass); case of 40	81.3023
Vials (20 mL clear glass); case of 144	65.0025
Vials (20 mL amber glass); case of 144	81.2816

## Product Specifications

Dimensions (W x D x H)	<b>Unit:</b> 25.4 cm x 39.6 cm x 61.9 cm (10.0 in x 15.6 in x 24.375 in) <b>Power Supply:</b> 33.0 cm x 39.6 cm x 17.2 cm (13.0 in x 15.6 in x 6.8 in) <b>Waste Receiver:</b> 33.0 cm x 39.6 cm x 17.2 cm (13.0 in x 15.6 in x 6.8 in)
Weight	<b>Unit:</b> 24 kg (53 lb) <b>Power Supply:</b> 11 kg (24 lb) <b>Waste Receiver:</b> 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) 10 (miniPV-X)
Viscosity range*	<b>Dilute Solution:</b> 0.3 mm <sup>2</sup> /s (cSt) to 700 mm <sup>2</sup> /s (cSt) <b>Kinematic:</b> 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	8 mL (as low as 1.6 mL with low-volume option) sample/ 24 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 watt 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® 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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