

PolyVISC® is a fully automated, benchtop capillary viscometer with an 11 position sample handler for unattended processing and testing of the dilute solution viscosity of polymers dissolved in organic solvents and aqueous solutions. The ultra-stable thermostatic air chamber provides temperature control from 20 °C to 135 °C (with available options).

Common Applications

- Elastomers
- Plastics
- Thermoplastic elastomers
- Copolymers
- Biopolymers
- Polymer blends
- Oligomers
- Pre-polymers
- Resins
- Viscosity modifiers

PolyVISC® AIRBATH® Dilute Solution Polymer Viscometer

For Dilute Solution Viscosity of Polymers in Organic Solvents and Aqueous Solutions to 135 °C
ASTM D789, ASTM D1243, ASTM D1601, ASTM D1795, ASTM D2857, ASTM D3591, ASTM D4243
ASTM D4603, ASTM D5336, ISO 307, ISO 1628-1, ISO 1628-3, ISO 1628-5, ISO 5351

Product Features & Benefits

Designed to meet specific polymer industry needs

- Fluorinated thermoplastic coating and components provide the best chemical resistance to a wide range of solvents, including concentrated acids used to dissolve polyamides (D789, ISO 307) and aggressive solvents such as mixtures of phenol with chlorinated solvents (D4603, ISO 1628-5)
- Specialized software determines relative, inherent, reduced and intrinsic viscosity
- Temperature range: 20 °C to 100 °C (± 0.01 °C) due to ultra-stable AIRBATH® technology. High temperature option permits testing from 40 °C to 135 °C
- Viscosity range: 0.3 mm²/s (cSt) to 60,000 mm²/s (cSt) in 100-fold increments (easily covering the range of 5 separate manual glass viscometers)*



Compact, robust design

- Efficient, bench-top design conserves valuable lab space
- Integrated thermoelectric cooling requires no external chiller

Fully automated bench-top testing

- User-friendly software controls sampling, measurement and viscometer tube washing and drying
- 11 position sample handler allows unattended operation
- Automation reduces operator to operator variability

Simplified maintenance & test versatility

- Infrared (for transparent/some opaque samples) are available
- AIRBATH® chamber permits rapid temperature adjustment and viscometer tube replacement without the inconvenience of messy bath liquids
- Compatible with modified Atlantic compound viscometer tubes (for highly viscous samples) or modified Ubbelohde tubes (for volatile samples)
- Optional volatile sample inserts protect from solvent evaporation, enhances precision and reduces toxic/corrosive vapors in the AIRBATH® chamber
- Data handling options include on-screen display, print or LIMS routing

*Special range tubes are also available.

Professional installation, software, a viscometer tube, standards and a high precision digital thermometer are included.



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PolyVISC® AIRBATH® Dilute Solution Polymer Viscometer

Ordering Information

PolyVISC® AIRBATH® Dilute Solution Polymer Viscometer includes a waste receiver assembly, a viscometer tube, a set of oil viscosity standards, a case of glass vials, a high precision digital thermometer with probe, data storage/management software and professional installation. Comes with fluorinated thermoplastic components for extended wear. Specify desired factory installed options and viscometer tubes when ordering. Computer is not provided.

Description	Part #
100 VAC, 50/60 Hz	9724-Z21
115 VAC, 50/60 Hz	9724-Z22
230 VAC, 50/60 Hz	9724-Z23
PolyVISC HIGH TEMP 100 VAC, 50/60 Hz	9727-Z24
PolyVISC HIGH TEMP 115 VAC, 50/60 Hz	9727-Z25
PolyVISC HIGH TEMP 230 VAC, 50/60 Hz	9727-Z26

Options

Factory installed options (see NOTE) must be specified when ordering. Part numbers are listed below for field installable options. Field installation must be performed by factory-trained personnel. Field installation costs are not included.

Description	Part #
High temp option (to 135 °C) - removes cooling	65.3006
Vapor purge option	65.3211

NOTE: Additional temperature calibrations (for each temperature beyond the first) are available for an added charge when ordering

Accessories & Consumables

Description	Part #
Viscosity reference standards	various
PTFE lined bottle cap, 1 each	03.5132
Vials (20 mL clear glass); case of 144	65.0025
Vials (20 mL clear glass); case of 40	81.3023
Vials (20 mL amber glass); case of 144	81.2816
FKM ample cap liner with slits, 1 each	65.3887
BoPET volatile sample cap liner, 1 each	65.3281
Screwcap lids (24 mm opening); case of 144	65.0026
Fumehood pedestal riser	65.3254
Low volume vial kit (12 inserts/springs, 1 tube)	65.3284
Low volume vial inserts (12/pkg)	65.0035
Low volume vial springs (12/pkg)	65.0029
Spare parts kit (for 1 year)	65.4525

Product Specifications

Max. throughput	12 tests per hour
Automated sample capacity	11
Viscosity range	0.3 mm ² /s (cSt) to 60,000 mm ² /s (cSt) in 100-fold increments (depending on viscometer tube selection)
Timing resolution	0.01 s
Temperature range & accuracy	20 °C to 100 °C ± 0.01 °C* 40 °C to 135 °C with high temperature option
Minimum sample/solvent volume	10 mL sample*/20 mL solvent per test <i>*as little as 5 mL with low volume vial testing option</i>
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; 1,750 to 1,850 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

Viscometer Tubes

Kinematic Viscosity Range in mm ² /s (cSt)	
0.14-14	16-1600
0.3-30	25-2500
0.5-50	75-7500
1-100	300-30000
3-300	600-60000
8-800	

Either modified Atlantic compound (for most samples) or modified Ubbelohde viscometer tubes (for volatile samples) are available.

PolyVISC Solution Preparation System (SPS)

Description	Part #
Single titrator with balance	9727-Z61
Single titrator, no balance	9727-Z64
Single titrator, no balance, manual mode only	9724-Z65
Dual titrator with balance	9724-Z66
Dual titrator, no balance	9724-Z67

Please inquire with questions regarding the proper SPS for your system.

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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