

The CANNON® miniAV® is a fully automated, single-sample, benchtop viscometer for D445 testing. The Ubbelohde-style tube covers a 100-fold viscosity range at values between 0.5 mm<sup>2</sup>/s (cSt) and 10,000 mm<sup>2</sup>/s (cSt) from 15 °C to 100 °C (with available TE cooler).

#### Common Applications

- Formulated oil analysis
- Hydraulic oil analysis
- Additive analysis
- Marine fuel testing
- Base stock analysis
- Light and heavy fuel testing
- Waxes/paraffin
- Crude oil testing
- Glycols

# miniAV® Single-Bath Kinematic Viscometer

For Kinematic Viscosity of Transparent and Opaque Liquids  
ASTM D445/D446, ISO 3104/3105, IP 71

## Product Features & Benefits

### D445 precision in a compact, robust design

- Temperature range: ambient to 100 °C (15 °C to 100 °C with available TE cooler)
- Viscosity range: 0.5 mm<sup>2</sup>/s (cSt) to 10,000 mm<sup>2</sup>/s (cSt)\* in 100-fold increments (easily covering the range of 5 separate manual glass viscometers)
- Fits in roughly the same benchtop area as an analytical balance
- Optional, environmentally friendly Peltier cooling requires no external refrigeration
- A well tested CANNON viscometer platform offers reliability and dependable support

### Fully automated benchtop testing

- Up to 12 determinations/hour
- VISCPRO® PC software enables one computer to manage and control up to four instruments
- User-configurable reports may be viewed, printed, saved and exported

### Reduced consumable costs

- ASTM D446/ISO 3105 Ubbelohde-style tube reduces solvent usage and disposal costs by 50%
- Automated vial washing and drying enables reuse and reduces vial consumption

### Simplified maintenance & test versatility

- Modular bath for easy maintenance access
- Operators physically replace tubes in minutes, eliminating the need for related service calls
- Single-point temperature calibration avoids tube recalibration costs and maximizes flexibility
- Instrument includes standard dual-solvent input



**INCLUDES**  
✓ VISCPRO Software  
✓ Viscometer Tube  
✓ Standards  
✓ Digital Thermometer

**CANNON**  
INSTRUMENT COMPANY

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# miniAV® | Single-Bath Kinematic Viscometer

## Ordering Information

CANNON's miniAV® Single-Bath Kinematic Viscometer comes with an external power supply and waste receiver assembly. Also included is one viscometer tube, one set of oil viscosity standards, a case of glass vials, a high precision digital thermometer with probe, VISCPRO® data storage/management software, and a one year warranty. Specify desired factory installed options and viscometer tubes when ordering. Computer sold separately.

Description	Part #
100 VAC, 50/60 Hz	9725-A82
115 VAC, 50/60 Hz	9725-A80
230 VAC, 50/60 Hz	9725-A81

## Options

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

Description	Part #
TE bath cooling (external)	81.2216
External heated waste drain line w/ external power supply	81.3115

NOTE: Heated cup, heated sample holder and additional temperature calibration (for each temperature beyond the first) are also available for an added charge at the time of ordering.

## Accessories & Consumables

Description	Part #
Viscosity reference standards	various
Replacement silicone bath fluid, 1 L	9726-L40
20 mL vials (glass); case of 40	81.3023
Spare parts kit (1 year supply)	81.2900

## Product Specifications

Dimensions (W x D x H)	<b>Unit:</b> 25.4 cm x 30.5 cm x 59.8 cm (10.0 in x 12.0 in x 23.5 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> 12.5 kg (27.5 lb) <b>Power Supply:</b> 11.0 kg (24.0 lb) <b>Waste Receiver:</b> 6.0 kg (13.0 lb)
Shipping dimensions (W x D x H)	74.0 cm x 64.0 cm x 92.0 cm (29.0 in x 25.0 in x 36.0 in)
Shipping weight (with all items)	64.0 kg (140.0 lb)
Max. throughput	12 tests per hour
Automated sample capacity	1
Viscosity range*	0.5 mm <sup>2</sup> /s (cSt) to 10,000 mm <sup>2</sup> /s (cSt) in 100-fold increments (depending on viscometer tube selection). Fast run tubes are also available.
Timing resolution	0.01 s (timing accuracy to ± 0.001 s)
Temperature range & accuracy	15 °C to 100 °C ± 0.01 °C <sup>†</sup> <sup>†</sup> temperatures within 5 °C of ambient and below require bath cooling
Minimum sample/ solvent volume	5 mL sample <sup>‡</sup> /15 mL solvent per test <sup>‡</sup> as little as 3 mL with fast run tubes
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 via DB-9 connector

## Viscometer Tubes

Std Tubes	Part #	Std Tubes	Part #	Fast Run Tubes	Part #	Fast Run Tubes	Part #
KV Range in mm <sup>2</sup> /s (cSt)				KV Range in mm <sup>2</sup> /s (cSt)			
0.5-50	12.0581	10-1,000	12.0294	0.5-5	12.0304	10-100	12.0312
1-100	12.0287	15-1,500	12.0302	1-10	12.0305	15-150	12.0313
2-200	12.0288	20-2,000	12.0295	2-20	12.0306	20-200	12.0314
3-300	12.0289	30-3,000	12.0296	3-30	12.0307	30-300	12.0315
4-400	12.0290	40-4,000	12.0297	4-40	12.0308	40-400	12.0316
5-500	12.0291	50-5,000	12.0298	5-50	12.0309	50-500	12.0317
6-600	12.0292	60-6,000	12.0303	6-60	12.0310	60-600	12.0318
7-700	12.0578	-	-	-	-	80-800	12.0319
8-800	12.0293	100-10,000	12.0299	8-80	12.0311	100-1,000	12.0532

\*Some upper viscosity measurements may be limited by test temperature and sample type. Fast-run (10-fold range) tubes are also available.

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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