

# Kinematic Viscosity

## test method

For the determination of the kinematic viscosity,  $\nu$ , of liquid petroleum products, both transparent and opaque, by measuring the time for a volume of liquid to flow under gravity through a calibrated glass capillary viscometer. The dynamic viscosity,  $\eta$ , can be obtained by multiplying the kinematic viscosity,  $\nu$ , by the density,  $\rho$ , of the liquid.

Kinematic viscosity is of primary importance in the design and selection of a wide range of petroleum products. Many petroleum products, and some non-petroleum materials, are used as lubricants, and the correct operation of the equipment depends upon the appropriate viscosity of the liquid being used. In addition, the viscosity of many petroleum fuels is important for the estimation of optimum storage, handling, and operational conditions. Thus, the accurate determination of viscosity is essential to many product specifications.

## kinematic viscosity bath

- Conforms to ASTM D445 and related specifications
- Accommodates 7 capillary viscometers
- Stainless Steel Bath Construction
- Dual digital displays show setpoint and actual bath temperature
- Selectable temperature scale - Fahrenheit or Celsius
- Integrated redundant overtemperature and low liquid level cut-off circuitry

Constant temperature bath with advanced temperature control circuitry for convenient, accurate glass capillary viscometry determinations. Microprocessor PID circuitry assures precise, reliable temperature control within ASTM specified stability and uniformity throughout the operating range of the bath. Simple push-button controls and dual digital displays permit easy setting and monitoring of bath temperature. Baths accommodate seven glass capillary viscometers of various types. Viewing the viscometers is made easy by LED illumination inside the bath and a baffle that provides a background for easy viewing. Temperature control uniformity is assured by means of an integrated stirrer and baffling system for uniform bath temperature distribution. Connection of the built-in cooling coil to tap water or a recirculating water chiller facilitates temperature control at ambient or below ambient temperatures.

## ordering information

catalog no.	description
<b>K239000</b>	Kinematic Viscosity Bath, 115-240V 50/60 Hz

### accessories

<b>355-001-007</b>	Silicone Heat Transfer Fluid, 10 cSt, 1 gallon
<b>355-001-008</b>	Silicone Heat Transfer Fluid, 10 cSt, 5 gallon



K23900 Kinematic Viscosity Bath

## specifications

Conforms to the Specifications of:  
ASTM D445, D6074, D6158; IP 71; ISO 3104; DIN 51550;  
FTM 791-305; NF T 60-100

Temperature Range: 15 °C to 105 °C  
Temperature Display Resolution:  $\pm 0.01$  °C  
Temperature Display Accuracy:  $\pm 0.01$  °C  
Bath Temperature Stability:  $\pm 0.02$  °C  
Bath Temperature Uniformity:  $\pm 0.02$  °C  
Thermometer Ports: 2  
Connectivity: USB - 1  
Drain Valve:  $\frac{1}{2}$ " female NPT fitting (back of unit)  
Bath Fluid: Water or 10 cSt Silicone Oil  
Bath Fluid Capacity: 5.7 gal  
Electrical Requirements:  
115-240V, 50/60Hz, 12A Max

### Included Accessories

Test Port Covers (7)

### Dimensions wxdxh,in.(cm)

15.4 x 17.2 x 24.4 (39.12x43.69x61.98)  
Net Weight: 72 lb (32.66 kg)