



VISCOL 10 Series

Automatic kinematic Viscometer

Viscosity is defined as the rate of a fluid's internal resistance to the force that is required to flow. Intermolecular force, molecular mass and temperature of a fluid is considered as the three main factors effecting the viscosity. Fluids such as water, air, oil etc. that have directly proportional flow rate with friction resistance are called as Newtonian fluids.

Best method to measure viscosity of Newtonian fluids is by using capillary viscometers. With capillary viscometers, viscosity is determined based on the flow time of a fluid which is kept at a specific temperature inside a capillary with known diameter and length.

Viscol 10 Series, fully-automatic kinematic viscometers, equipped with the latest temperature control, detector, chronometer and washing properties with different models for oil, fuel, bitumen, polymer, paper, food and similar industrial demands. Viscol 10 Series viscometers provide the most reliable results for research, development and quality control practices without any user intervention.



Features

- Full automatic operation
- Temperature range from -40°C to 150°C
- Wide range (125 Fold) viscometer tubes
- Viscosity detection from 0,5 cSt to 25.000 cSt
- Dual solvent usage as a standard
- Automatic cleaning with low solvent consumption
- Easy tube change
- Full control from Windows based touch panel PC
- Low bath oil and over temperature warnings
- Small footprint
- 23 sample capacity autosampler



ASTM D445
ASTM D446
ISO 3104
ISO 3105
IP 71
DIN 51562



Viscol 10A Oil & Fuel Viscometer

Viscol 10A, developed to automatically measure kinematic viscosity of oils and fuels at 40°C and 100°C in a single high precision bath with all necessary components including rapid cooling unit.

Areas of Use

- Mine and base oils
- Used and waste oils
- Light and heavy fuels
- Crude oil
- Marine fuels

Specifications

Measurement Range	0,5 - 25.000 mm ² /s (cSt)	Dual Solvent	Built-in
Time Sensitivity	0,001 s	User Interface	Touchscreen Windows IPC
Temperature Range	from ambient temp. to 120°C	Environment	10°C - 35°C
Temperature Sensitivity	0,001°C	Dimensions (WxDxH)	30 x 50 x 80 cm
Sample and Solvent Amount	12 ml sample 10 ml solvent/test	Weight	40 kg
		Power Requirement	110-240 VAC-50/60 Hz

ASTM D789
ASTM D871
ASTM D1243
ASTM D1795
ASTM D2857
ASTM D4243
ASTM D4603
ISO 307
ISO 1628
ISO 5351
IEC 60450
TAPPI 230



Viscol 10P Plastic/Polymer Viscometer

Viscol 10P, developed with acid resistive teflon and glass components for various polymer and plastic applications to measure viscosity values between 10°C - 140°C without any user intervention.

Areas of Use

- Plastic Solutions
- Polymer Solutions
- Paper / Pulp

Specifications

Measurement Range	0,5 - 25.000 mm ² /s (cSt)	Dual Solvent	Built-in
Time Sensitivity	0,001 s	User Interface	Touchscreen Windows IPC
Temperature Range	10°C - 140°C	Environment	10°C - 35°C
Temperature Sensitivity	0,001°C	Dimensions (WxDxH)	30 x 50 x 80 cm
Sample and Solvent Amount	12 ml sample 10 ml solvent/test	Weight	40 kg
		Power Requirement	110 - 240 VAC - 50/60 Hz



ASTM D445
ASTM D446
ASTM D2170
ISO 3104
ISO 3105
IP 71
DIN 51562

Viscol 10B Asphalt/Bitumen Viscometer

Viscol 10B is suitable for viscosity measurements of heavy samples as asphalt, bitumen and etc. up to 170°C with its integrated and external preheating options.

Areas of Use

- Mineral and base oils
- Used and waste oils
- Light and Heavy Fuels
- Crude oil
- Marine Fuels
- Asphalt / Bitumen
- Bituminous Binders

Specifications

Measurement Range	0,5 - 25.000 mm ² /s (cSt)	Dual Solvent	Built-in
Time Sensitivity	0,001 s	User Interface	Touchscreen Windows IPC
Temperature Range	from ambient temp. to 170°C	Environment	10°C - 35°C
Temperature Sensitivity	0,001°C	Dimensions (WxDxH)	30 x 50 x 80 cm
Sample and Solvent Amount	12 ml sample 10 ml solvent/test	Weight	40 kg
		Power Requirement	110-240 VAC-50/60 Hz



ASTM D445
ASTM D446
ISO 3104
ISO 3105

Viscol 10J Low Temperature Viscometer

Viscol 10J is suitable for sensitive viscosity measurements down to -30°C for jet fuels and similar applications.

Areas of Use

- Jet fuels
- Transmission oils
- Hydraulic oils

Specifications

Measurement Range	0,5 - 25.000 mm ² /s (cSt)	Dual Solvent	Built-in
Time Sensitivity	0,001 s	User Interface	Touchscreen Windows IPC
Temperature Range	-30°C - 120°C	Environment	10°C - 35°C
Temperature Sensitivity	0,001°C	Dimensions (WxDxH)	30 x 50 x 80 cm
Sample and Solvent Amount	12 ml sample 10 ml solvent/test	Weight	40 kg
		Power Requirement	110-240 VAC-50/60 Hz

Spare Parts & Consumables

- Various sizes of viscosity measuring tubes
- Certified viscosity reference standards
- Silicone bath oil
- Sample cups PE, glass, metal
- Solvent and waste bottles

Optional

- Autosampler with 23 sample capacity
- Preheating unit for analysis of dense and solid samples
- Multiple preheating unit
- Adjustable bath temperature up to 170°C
- Fast cooling circulator

Standards

		Viscol 10A	Viscol 10P	Viscol 10B	Viscol 10J
ASTM D445	Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity)	✓	✓	✓	✓
ASTM D446	Standard Specifications and Operating Instructions for Glass Capillary Kinematic Viscometers	✓	✓	✓	✓
ASTM D789	Standard Test Method for Determination of Relative Viscosity of Concentrated Polyamide (PA) Solutions		✓		
ASTM D871	Standard Test Methods of Testing Cellulose Acetate		✓		
ASTM D1243	Standard Test Method for Dilute Solution Viscosity of Vinyl Chloride Polymers		✓		
ASTM D1601	Standard Test Method for Dilute Solution Viscosity of Ethylene Polymers		✓		
ASTM D1795	Standard Test Method for Intrinsic Viscosity of Cellulose		✓		
ASTM D2170	Standard Test Method for Kinematic Viscosity of Asphalts (Bitumens)	✓		✓	
ASTM D2857	Standard Practice for Dilute Solution Viscosity of Polymers		✓		
ASTM D4243	Standard Test Method for Measurement of Average Viscometric Degree of Polymerization of New and Aged Electrical Papers and Boards		✓		
ASTM D4603	Standard Test Method for Determining Inherent Viscosity of Poly(Ethylene Terephthalate) (PET) by Glass Capillary Viscometer		✓		
ISO 307	Plastics -- Polyamides -- Determination of viscosity number		✓		
ISO 1628	Plastic -- Determination of the viscosity of polymers in dilute solution using capillary viscometers		✓		
ISO 3104	Petroleum products -- Transparent and opaque liquids -- Determination of kinematic viscosity and calculation of dynamic viscosity	✓	✓	✓	✓
ISO 5351	Pulps -- Determination of limiting viscosity number in cupri-ethylenediamine (CED) solution		✓		
IP 71	Petroleum products - Transparent and opaque liquids - Determination of kinematic viscosity and calculation of dynamic viscosity	✓	✓	✓	
TAPPI 230	Viscosity of pulp (capillary viscometer method)		✓		
IEC 60450	Measurement of the average viscometric degree of polymerization of new and aged cellulosic electrically insulating materials		✓		
DIN 51562	Viscometry - Measurement of kinematic viscosity by means of the Ubbelohde viscometer	✓	✓	✓	✓