

VISCOLab PVT High Pressure Viscometer

Recirculating bath & High Pressure Fluid Management System for PVT Oil Research, Core Analysis & Supercritical Fluids



The VISCOLab PVT has recently achieved the highest accuracy for any laboratory viscometer and it is mercury free.

Equipment Description

The new VISCOLab PVT viscosity system incorporates the Cambridge Viscosity SPL440 viscometer and the VISCOpro 2000 processor with an elegant new graphic user interface and a high pressure fluid management system. Sample flow can be controlled with a simple 3-valve plumbing configuration. Pressure is monitored with a digital pressure gauge. Temperature is controlled with a recirculating bath.

The VISCOLab PVT is based on years of experience in oil research, exploration and supercritical fluid viscosity measurements. The new instrument minimizes fluid volume and produces rapid iso-thermal temperature equilibration with the use of a recirculating bath. The temperature management system heat traces all the critical parts to insure ISO conditions with the entire fluid sample. The system also simplifies the process of pressurizing the measurement cell and requires no mercury.

PVT measurements that used to take days take just a few hours with the VISCOLab PVT. It is the first viscometer to measure gas and gas condensates. A new graphic interface provides a real time display of test conditions, easy data storage and management. The VISCOLab PVT provides statistical certainty that insures the fluid conditions are stable, accurate, and repeatable.

Key Features

- New graphic user Interface
- Rapid temperature stabilization to +/- 0.01°C
- Major technology breakthrough now measures gas & gas condensates
- 10 fold accuracy improvement over other high pressure viscometers
- Pressure transducer, valve & plumbing design eliminates cross contamination
- Mercury free
- Optional burst disc
- 3 ml total system volume
- Viscosity in cP or cSt ; Temperature in °C or °F
- Fixed angles: 0°, 45°, 90° for testing gas, liquid or degassing samples after bubble point

The VISCOLab PVT correlates with ASTM D445 and conforms to ASME & CRN pressure vessel requirements.

Specifications

Overall Viscosity	0.02 to 10,000 centipoise (cP)
Viscosity Ranges	0.02-0.2 cP, 0.2-2 cP, 0.25-5 cP, 0.5-10 cP, 1-20cP, 2.5-50 cP, 5-100 cP, 10-200 cP, 25-500 cP, 50-1,000 cP, 100-2,000 cP, 250-5,000 cP, 500-10,000 cP
Accuracy	±1.0% full scale
Repeatability	±0.8% of reading
Temperature Sensor	Internal Platinum RTD
Wetted Materials	Inconel 718 / 17-4 Stainless Steel
Maximum Particle Size	25 - 360 Microns
Maximum Temperature	375°F (190°C)
Maximum Pressure	20,000 psi (1,406 bar) / 19,000 psi (CRN)
Power	Requires ViscoPro 2000 electronics