



TORONTECH

PETROCHEMICAL VISCOSITY & LOW TEMPERATURE TESTING EQUIPMENT



Petrochemical Viscosity & Low Temperature Testing Equipment

Viscosity and low-temperature performance are two of the most critical physical property dimensions for petroleum products, lubricants, fuels, and process fluids. Viscosity governs lubrication film thickness, heat transfer efficiency, fuel atomization, and pumpability. Low-temperature properties — pour point, cloud point, and freezing point — determine whether a product will perform reliably in cold-climate applications or fail catastrophically due to wax crystallization or solidification.

Torontech's Viscosity & Low Temperature Testing portfolio brings together the most comprehensive range of viscosity and cold-flow measurement instruments available for the petroleum industry. Spanning kinematic viscosity testers, pour and cloud point instruments, freezing point testers, and advanced rotational viscometers, the Torontech range addresses every viscosity and low-temperature testing need encountered in modern petroleum quality control laboratories.

APPLICATIONS

Application

Torontech's Viscosity & Low Temperature Testing instruments serve every stage of the petroleum and lubricant value chain:

- Lubricant blending and manufacturing: Kinematic viscosity grade verification at 40°C and 100°C, pour point testing of finished lubricants, and advanced viscometer characterization of complex formulations.
- Refinery product quality control: Kinematic viscosity testing of diesel, fuel oil, base oil, and lube cuts at multiple process stages.
- Cold-climate fuel and lubricant applications: Pour point, cloud point, and low-temperature kinematic viscosity measurement for products destined for arctic, high-altitude, or winter-climate service.
- Engine coolant production and quality control: Automatic freezing point testing ensures every coolant batch meets its specified freeze protection level.

- Petroleum trading and custody transfer: Kinematic viscosity and pour point data are key commercial specification parameters for crude oil and fuel oil trading contracts.
- Specialty chemical and polymer laboratories: Advanced viscometers provide rheological characterization for non-petroleum fluid products requiring shear-rate-dependent viscosity data.
- Automotive and industrial OEM testing: Viscosity and low-temperature property verification for new lubricant product approvals and OEM certification programs.

FEATURES

Why Choose Torontech's Viscosity & Low Temperature Testing Series?

Torontech's integrated approach to viscosity and low-temperature testing delivers unique advantages for petroleum laboratories:

- Unmatched Product Range: With seven kinematic viscosity tester models, two pour and cloud point instruments, a dedicated freezing point tester, and three advanced viscometer series, no other supplier offers greater coverage across this testing category.
- Scalable Automation: Whether your laboratory needs a manual viscosity bath or a fully automatic dual-bath kinematic viscosity tester with unattended operation, Torontech has the right solution for your throughput and budget requirements.
- Standards Compliance Across All Methods: ASTM D445 (kinematic viscosity), D97 (pour point), D2500 (cloud point), D1177 (freezing point), and related international standards are all addressed by Torontech's instrument range.
- Low Temperature Specialization: Torontech is one of the few suppliers to offer dedicated low-temperature kinematic viscosity testing capability alongside pour point and cloud point instruments, providing a truly complete cold-flow testing solution.

- Expert Application Support: Torontech's technical team provides viscosity instrument selection guidance, method development support, calibration services, and operator training across the entire Viscosity & Low Temperature Testing portfolio.

Frequently Asked Questions

TECHNICAL SPECIFICATIONS

Categories & Products Covered

1. Kinematic Viscosity Testing

The industry's most complete kinematic viscosity tester range — from manual to fully automatic, single-bath to dual-bath — covering ASTM D445 for all petroleum product viscosity grades.

2. Pour Point and Cloud Point Testing

Precise pour point (ASTM D97) and cloud point (ASTM D2500) determination for fuels, lubricants, and crude oils — available in metal bath and fully automatic configurations.

3. Freezing Point Testing

Rapid, automatic freeze protection verification for ethylene glycol and propylene glycol engine coolants per ASTM D1177.

4. Rotational / Advanced Viscometers

The TorontechVisc™ advanced viscometers extend viscosity measurement beyond Newtonian petroleum products to non-Newtonian fluids, polymers, and specialty formulations across a wide dynamic viscosity range.



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