

DROPPING POINT AND SOFTENING POINT TESTER - TORONDSPT™ 100



Dropping Point and Softening Point Tester - ToronDSPT™ 100

A Dropping Point and Softening Point Tester helps labs measure phase-change temperatures for materials like greases, waxes, resins, and asphalt. ToronDSPT™ 100 uses high-definition video observation with stable, PID-controlled heating to capture clear transition behavior and support consistent endpoint decisions.

Two-channel processing lets you run two samples per batch for faster daily throughput. The system also supports direct printing and controlled documentation features such as audit trail and electronic signature options.

ToronDSPT™ 100 combines precise temperature control with HD video viewing to replace traditional microscope-based observation. The instrument is designed to measure dropping point and softening point using dedicated cups and controlled ramp programs.

Built-in method management supports repeatable operation across operators and shifts. Data handling supports export formats and interfaces used in QC environments, plus optional QR-code scanning for sample ID entry.

APPLICATIONS

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Applications

- Grease and lubricant QC: Dropping point testing supports batch qualification and routine QC checks for lubricating greases. Results are often used to compare thickener systems and track consistency over time.
- Asphalt and high-temperature asphalt evaluation: Softening point results help classify and compare bitumen behavior at elevated service temperatures. This supports incoming inspection and product development for paving and roofing materials.

- Wax, para control: Softening point data supports composition control for waxes and resins used in adhesives, coatings, inks, and processing aids. The cup-and-ball approach is commonly referenced for resins and rosin applications.
- Petroleum jelly, ointments, and cosmetic bases: Softeniors help screen consistency for semi-solid bases such as petrolatum and ointment-style formulations. Video recording supports review when melt behavior needs confirmation for internal documentation.



Standards

- 21 CFR Part 11 expectations may apply when electronic records/e-signatures are used in regulated environments.

FEATURES

Dropping Point and Softening Point Tester - ToronDSPT™ 100 Key Features

- AI-assisted setup for routine tests
 - Built-in automation supports faster method setup and more consistent day-to-day operation.
- Two-sample throughput per run
 - Dual-channel processing allows two samples to be tested at the same time for better daily capacity.
- HD video observation instead of microscope viewing
 - High-definition video helps operators observe endpoint behavior clearly and review the melt or drop event when needed.
- On-instrument printing for quick documentation
 - Results can be printed directly for lab records and batch documentation.
- Compliance-ready data controls
 - Supports controlled documentation features such as audit trail and electronic signature aligned with 21 CFR Part 11 workflows.
- Stable ramp control with programmable segments
 - PID control with a closed furnace design and multi-segment programming supports repeatable heating profiles.
- Sample ID capture via QR scanning (optional)
 - A scanning gun can be used to scan QR codes and input sample information.









THEORY & METHOD

Theory and Method

A prepared sample is loaded into the appropriate cup depending on whether you are measuring dropping point or softening point. The furnace heats at a controlled ramp rate while the HD camera records the full transition.

The result is reported at the defined endpoint, such as the first drop for dropping point or the defined softening transition for softening point methods. PID control and multi-segment programming help keep ramp profiles consistent from run to run. Stored methods support standardized testing across operators.

TECHNICAL SPECIFICATIONS

Dropping Point and Softening Point Tester - ToronDSPT™ 100 Technical Specification

Specification	ToronDSPT™ 100
Temperature range	Room temperature to 400 °C
Detection method	Semi-automatic
Dropping point cup configuration	2 drip cups, 2.8 mm orifice
Softening point cup configuration	2 softening point cups, 6.35 mm orifice
Throughput	2 channels per batch (two samples at the same time)
Temperature resolution	0.01 °C
Heating rate	0.1 to 20 °C (200-speed adjustable)
Temperature control	PID precise temperature control, fully closed furnace design
Programmable segments	Up to 10 segments
Accuracy	±0.2 °C (<250 °C); ±0.4 °C (>250 °C)
Repeatability	±0.1 °C at 0.1 °C/min
Optical magnification	Standard 9× (other magnifications configurable)

Specification	ToronDSPT™ 100
Display	10.4-inch TFT color touch screen
Data storage	64 GB
Method storage	600 sets
Method lock	Yes
User management	Four-level rights management
Audit trail	Yes
Electronic signature	Yes
Custom method library	Yes
Export integrity	MD5 verification supported
Export formats	PDF, Excel
Data interfaces	USB, RS232, SD, Wi-Fi, RJ45, U disk
QR scanning input	Supported (scanning gun)
Packing size	430 x 320 x 370 mm
Voltage	110-230 V 50/60 Hz, 120 W
Gross weight	6.50 kg



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