



ADVANCED FULLY AUTOMATIC DIGITAL DENSITY METER - TORONDDM™ 90

Advanced Fully Automatic Digital Density Meter - ToronDDM™ 90 | ASTM D4052-11

ToronDDM™ 90 is Torontech's flagship fully automatic digital density meter, offering the highest level of measurement precision, compliance, and data integrity. It is specifically engineered for GxP-compliant laboratories, regulated manufacturing environments, and high-viscosity or high-melting-point samples.

This model supports 21 CFR Part 11 compliance with complete traceability, audit trails, multi-user access, and MD5 file security. Advanced features include external heating, viscosity compensation, and a high-definition camera to monitor sample bubbles in real time.

21 CFR Part 11 Compliant

Secure user management, audit logging, e-signature support, and MD5 export protection.

APPLICATIONS

Digital Density Meters – ToronDDM-Series

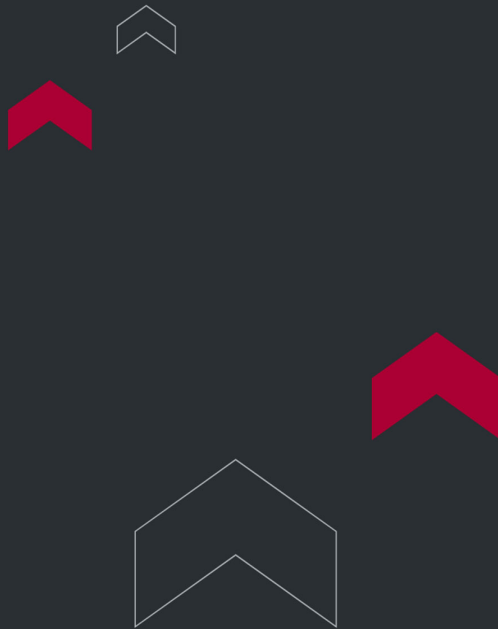
- **FDA- and GxP-Regulated Pharmaceutical Laboratories** - Provides traceable, audit-ready density and concentration testing of APIs, intermediates, and formulations with full 21 CFR Part 11 compliance, ensuring data integrity and regulatory acceptance.

- **Petrochemical & Chemical R&D** - Enables highly precise density measurement of crude oil, refined fuels, polymers, solvents, and high-viscosity liquids, supporting both product development and batch quality control.
- **Food, Beverage & Alcohol Quality Control** - Accurately determines ethanol content, proof, sugar concentration, and other parameters in spirits, wines, beers, and beverages, ensuring consistency with international quality standards.
- **Regulated Industrial Testing Centers** - Automates and secures density testing for lubricants, coatings, adhesives, and specialty chemicals where reproducibility and compliance with ASTM D4052-11 and related standards are required.
- **Cosmetics & Personal Care Manufacturing** - Verifies density and stability of emulsions, creams, and liquid formulations to maintain consistent product quality and consumer safety.
- **Academic & Research Institutions** - Supports advanced physical property research, materials characterization, and high-precision studies of high-viscosity or high-melting-point liquids.
- **Independent Certification & Verification Agencies** - Provides secure, MD5-protected electronic reports with e-signature and audit trail for third-party testing, certification, and compliance verification.

TECHNICAL SPECIFICATIONS

Model	ToronDDM™ 90
Test Modes	Density, Alcohol Concentration and Custom Formulas
Measuring range	0 g/cm³ to 3 g/cm³
Resolution	0.00001g/cm³

Model	ToronDDM™ 90
Repeatability	±0.00005g/cm³
Accuracy	±0.00008g/cm³
Sampling method	fully automatic (compatible with manual)
Observation method	video
Temperature control method	internal Peltier temperature control external heater
Temperature control range	5℃□ 85℃
Temperature control stability	±0.02℃
Display mode	10.4 inch FTF color touch screen
Data storage	64G
Output mode	USB, RS232, RJ45, SD card, U disk
User management	have/four levels of authority management
Audit Trail	Yes
Electronic signature	yes
Custom method library	yes
Export file verification high-level protection MD5	yes
Printing method	WIFI printing serial printing
Export in multiple file formats	PDF and Excel
Dimensions	480mm x 320mm x 200mm
Voltage	110V-230V 50HZ/60HZ
Weight	8kg



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