



DIGITAL DUCTILOMETER TT-113

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Digital Ductilometer TT-113 aligns with the ASTM D113 Standard Test Method for Ductility of Bituminous Materials. This instrument is designed to ascertain the distance of elongation before breakage occurs when two ends of a briquette specimen of the material are pulled apart at a defined speed and temperature.

APPLICATIONS

The primary application of the Digital Ductilometer TT-113 is to measure the **ductility of bituminous materials (asphalt)**, in compliance with the **ASTM D113** standard. The test determines how far a standard specimen of asphalt binder can be stretched before it breaks under controlled temperature and speed. This measurement is a crucial indicator of the asphalt's cohesive and adhesive properties, which are essential for ensuring the long-term durability and crack resistance of pavement.

Key Industries

- **Asphalt Production & Petroleum Refining:** This is a fundamental quality control test for asphalt producers. It allows them to grade their asphalt binders and certify that they possess the required cohesive properties to perform effectively in paving applications.
- **Road Construction & Paving:** Paving companies and highway agencies rely on this test to ensure the material used will resist cracking and raveling under traffic loads and temperature changes.
- **Civil Engineering & Materials Testing Laboratories:** These labs, including Departments of Transportation (DOTs) and commercial testing firms, use the ductilometer for quality assurance and compliance testing on materials used in infrastructure projects, ensuring they meet all engineering specifications.

FEATURES

- Embracing a human-centric design philosophy, this system eliminates leading screws, lead rails, or other intrusive components in the test trough. Installing samples is effortless, with a maximum measurement distance of up to 1.5m.
- Incorporating a high-precision digital temperature controller for enhanced accuracy.
- Introducing an innovative transmission design ensuring stable and synchronous stretching. Experience smooth operation devoid of tremors, with uniform speed maintained throughout.
- Capable of testing three specimens, perfectly aligned with asphalt ductility testing standards.
- After determination, specimens automatically return to their original position, ensuring efficient testing processes.
- Featuring a membrane panel and LCD temperature controller, this system offers a waterproof, durable, and easy-to-clean interface for seamless operation.

TECHNICAL SPECIFICATIONS

1. Power Supply: AC 220V (-5% to +10%), 50Hz. (110V also available)
Maximum Power Consumption: 4100W
2. Measurement Distance: 1.5m (± 10 mm)
3. Heating Mode: Electric Heater
4. Heating Power: 3000W
5. Liquid Circulation: Magnet Circulation Pump
6. Temperature Control Range: Adjustable from 5°C to 49°C. Resolution: 0.01°C. Accuracy: $\pm 0.1^\circ\text{C}$
7. Tensile Speed: Two Grades - 10mm/min and 50mm/min
8. Measurement Accuracy: ± 1 mm
9. Ductility Display: Digital Display, processed by a single-chip machine
10. Refrigeration: 1.25P Compressor, Input Power: 950W
11. Ambient Requirements: Temperature: -10°C to +35°C. Humidity: $\leq 85\%$



Torontech Inc.

251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada 

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC

601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA 

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE

Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE 

Phone: +971 488 19252
Email: me@torontech.com

