



DIGITAL DUCTILOMETER

Digital Ductilometer TT-113

Digital Ductilometer TT-113 adheres to the ASTM D113 Standard Test Method for Ductility of Bituminous Materials. This ductilometer for bitumen is utilized to ascertain the distance of elongation before breaking when two ends of a briquette specimen of the material are pulled apart at a specified 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 conditions. This measurement is a crucial indicator of the asphalt's adhesive and cohesive properties, which are essential for preventing cracking and ensuring the long-term durability 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:** The ductility of the asphalt binder is a critical performance parameter. Paving companies and government 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

- Incorporates a human-centered design philosophy. The test trough does not include leading screws, lead rails, or other components, allowing for easy installation of samples with a maximum measurement distance of up to 1.5m.
- Utilizes a high-precision digital temperature controller with a resolution of 0.01°C and an accuracy of 0.1°C.
- Introduces an innovative transmission design ensuring stable and synchronous stretching without any tremble, maintaining uniform speed.
- Accommodates three specimens, aligning with the test standards for asphalt ductility.
- Enables automatic return and positioning of the specimen following determination.
- Features a membrane panel and LCD temperature controller, offering waterproof, durable, and easy-to-clean properties.

TECHNICAL SPECIFICATIONS

1. Power supply: AC220V (-5%~+10%), 50Hz. (110V also available)
2. Maximum power consumption: 4100W.
3. Measurement distance: 1.5m (± 10 mm).
4. Heating mode: Electric heater.
5. Heating power: 3000W.
6. Liquid circulation: By magnet circulation pump.
7. Temperature control range: (5~49)°C, adjustable. Resolution is 0.01°C, Accuracy: ± 0.1 °C.
8. Tensile speed: 10mm/min and 50mm/min, two grades.
9. Measurement accuracy: ± 1 mm.
10. Ductility display: Digital display after data processed by a single-chip machine.
11. Refrigeration: Compressor 1.25P, input power is 950W.
12. Ambient requirements: Temperature: (-10~+35)°C, Humidity $\leq 85\%$.



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