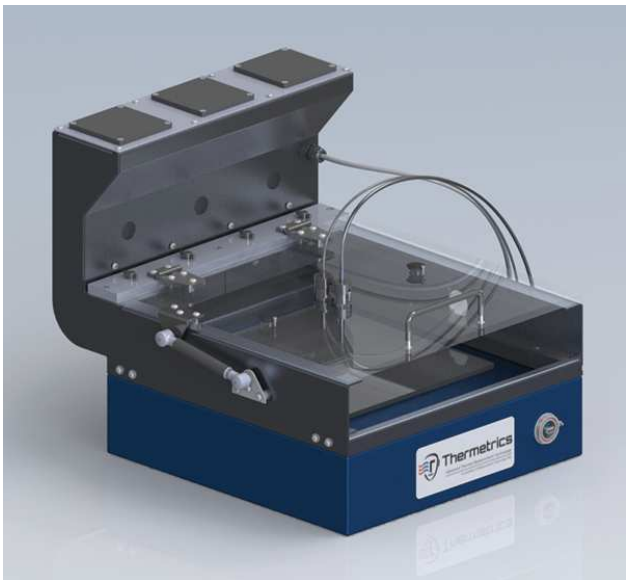
Drying Rate Tester 201: Heated Plate Method



Thermetrics Drying Rate Tester 201 (DRT201) determines the drying rate of a fabric based on the evaporative rate that occurs when a predetermined amount of water is absorbed into a fabric that is placed upon a heated plate and then dried with constant controlled airflow.

Quick drying and fast wicking functions are key features of moisture management textiles, and a thorough understanding of moisture management requires a consistent test method to measure the drying rate of textiles.

The DRT201 uses the heated plate method described in AATCC Test Method 201–2012 to study the drying rate of textiles when in contact with a heated plate set to human skin temperature.

Tests begin with the delivery of a small amount of water (0.2 ml) to the sample, which has been placed onto the hotplate surface. ThermDAC software then displays a real-time graph which charts the sample's drying rate over time, and upon conclusion of the test automatically calculates the specimen's drying rate under the measured test conditions.

The DRT201 system includes test device with precision airflow hood, micro-pipette, windspeed sensor, and ThermDAC control software.

ASSOCIATED TEST METHODS

- AATCC 201

FEATURES AT A GLANCE

- Precision built air flow plenum with airflow tuning gates.
- Windspeed can be measured at 3 different points to verify airflow uniformity.
- Actively controlled, high-performance fans for excellent airflow stability.
- Thermetrics designed control board for data logging and controlling systems features.
- USB interface to PC, cable included.
- ThermDAC Control Software automatically reports drying curve calculation and water delivery totals.

OPTIONAL FEATURES

- Computer Controlled Fluid Delivery is available.

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Specifications

- Metal hotplate 30.5 X 30.5 cm, controlled to 37°C ± 1.0°C
- Controlled fans generate 1.5 ± 0.2 m/s of air flow across the width of the hotplate
- Infrared thermocouple probe capable of measuring 15.0-50.0 ± 0.1°C
- Anemometer, hot-wire type, capable of measuring air flow from 0.5 to 2.5 ± 0.1 m/s
- Water system delivers a controlled volume of liquid between 0.1 - 1.0 ml ± 0.003 ml

Model Information

- Unit Dimensions: 53.5 x 48.5 x 41 cm, not including adjustable rubberized feet
- Space Requirements: Bench top location at standard laboratory temperature and conditions
- Power Requirements: 85-265 VAC, 50/60Hz, Single-phase. Maximum nominal current 5 Amps

ThermDAC Control Software

ThermDAC is a Windows-based application providing full device control, fault detection, data logging and analysis capabilities. Automatic data collection, drying curve calculation, and water delivery totals are also contained within ThermDAC.

- Define non-standard test conditions and custom tolerance criteria
- View multiple device and ambient variables on a single graph screen
- Apply real-time statistical functions to test data over any user-selected time range

Service

All systems come with a one year warranty.
Please ask about these service options:

- Startup installation and training
- Extended warranty
- Annual Service Care Package—a periodic maintenance and service contract designed to keep your Thermetrics equipment calibrated and in top operating condition

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4220 – 24th Avenue West, Seattle, WA 98199
Phone: **206.456.9119** / Fax: **206.634.1309**
www.thermetrics.com