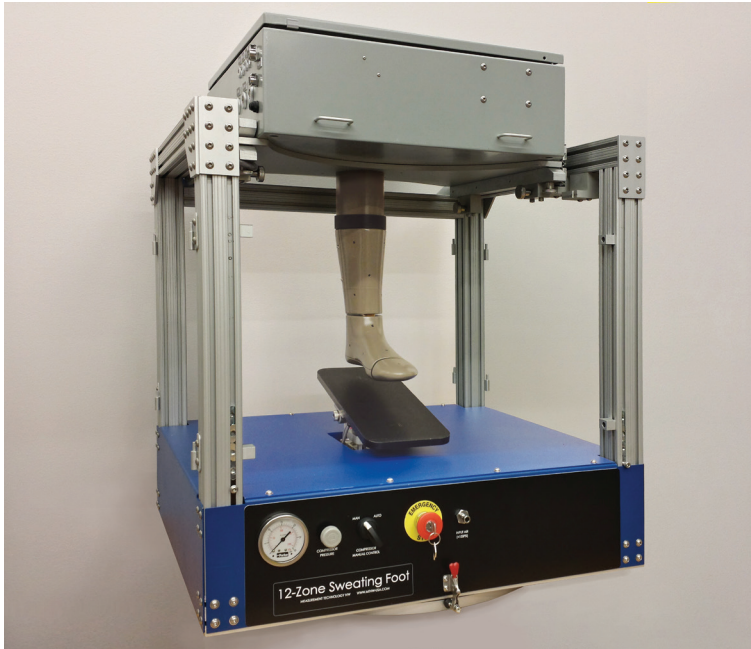


Thermal Foot Test System



Thermetrics' Thermal Foot Test System was developed to provide high resolution data to measure local heat loss and regional insulation values of footwear. The TFTS system is suitable for product design, quality control, and QC testing of a variety of footwear systems.

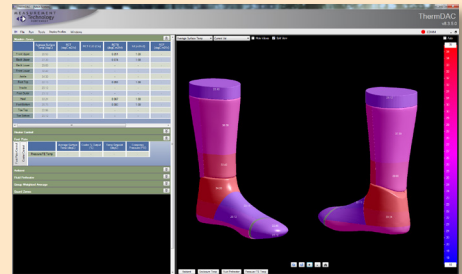
With this device the thermal comfort effects of shoe design, insulation, and ventilation can be quantified accurately and repeatably. The proven "High-Top" foot design with rotating ankle joint and flexing toe allows the foot to be fitted in any shoe or boot – even ski boots or in-line skates.

The Thermal Foot Test System is available in both dry and sweating models. The sweating model includes a removable wicking fabric skin layer, fluid reservoir, and positive displacement fluid metering system. A temperature controlled sole compression system is also available.

Each Thermal Foot Test system comes complete with foot model, integrated support frame, control electronics, PC computer, and our exclusive ThermDAC Windows-based graphical interface and data analysis software.

FEATURES AT A GLANCE

- 50th percentile adult male foot (US size 9, Euro size 42).
- Independent thermal zones with ultra-stable resistance wire heating for uniform heat flux.
- Ankle and toe joints permit easy installation into even the most rigid footwear.
- System includes two ambient temperature sensors and one relative humidity sensor.
- Optional sole compression system simulates human weight for realistic evaluation of sole/midsole insulation.
- System includes a Dell PC laptop computer and exclusive ThermDAC control software. This intuitive, user-friendly, Windows-based application provides full thermal control, fault detection, system configuration and calibration, real-time data display, and data logging capabilities.



Thermetrics

Thermal Foot Test System

Standard Specifications

- High-conductivity carbon epoxy shell
- 12-zone design for high data resolution
- Ultra-stable resistance wire heating
- Distributed wire sensors for each zone
- Optional removable fabric sweating skin system with distribution pumps, reservoir, and tubing
- Optional sole compression system with 0-200 pound (0-90kg) load capacity
- Dell PC laptop computer included
- Pre-installed ThermDAC control software
- Two ambient temperature sensors
- One relative humidity sensor
- Signal conditioning electronics
- Power and control cabling
- Operators manual
- One year warranty

Environmental

- -20°C to +50°C ambient range.
Manikin must be preheated before use in below-freezing conditions.
- 600 W/m² maximum power output
- 0 to 100% R.H. including condensation
- Sweating system: 0–1000 ml/hr

Performance

- $\pm 0.2^\circ\text{C}$ temperature measurement
- $\pm 1\%$ power measurement accuracy
- $\pm 3\%$ relative humidity measurement

Thermal Foot Sizes

- 50th percentile foot, Western male
- Shoe size: US 9, Euro 42

Call for a quote on custom sizes

ThermDAC Control Software

ThermDAC was developed by Thermetrics specifically for manikin and hotplate systems. It is a user-friendly, intuitive, Windows-based application providing full device control, fault detection, and data logging capabilities. System configuration and calibration can also be carried out within ThermDAC.

ThermDAC includes the following special features:

- Color coded manikin pictorial displays, selectable for any manikin variable (temperature, heat flux, resistance, etc.)
- Automatic steady state detection
- User programmable work cycle simulation
- Instantaneous bar graph and time history line graph for any user selectable manikin variable
- Real-time calculation of test statistics over any user defined time interval
- Manikin control modes: temperature regulation, constant heat flux, and comfort equation.

