Thermetrics' Thermal Foot Test System was developed to provide high resolution data to measure local heat loss and regional insulation values of footwear. The Thermal Foot 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 repeatedly. 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 sweating system includes a removable wicking fabric skin layer, fluid reservoir, and closed loop fluid delivery system. A temperature controlled sole compression system is also available.

All Foot systems are complete, ready-to-use instruments including manikin, control electronics, laptop PC, and our exclusive ThermDAC control software. Just add your own climate chamber for a comprehensive testing solution.

Test Methods Supported
- ASTM F3426

THERMAL MANIKIN - FOOT

Thermal Foot Specifications

- Male left foot:
  - Shoe size: US 9, Euro 42
  - Thermal zones: 12

- Female and child foot available upon request

- Standard operating range: -20°C to +50°C

- Extended operating range: -40°C to +50°C (with "cold capable" option)

- 0 to 100% RH, including condensation

- Temperature accuracy: ± 0.1°C

- RH accuracy: ± 3%

- Maximum power output: 600 W/m²

- Sweating delivery range: 0-1,000 ml/hr/m²

- Power: 85-265VAC, 50/60Hz, Single-phase

- ± 0.2°C temperature measurement

- ± 1% power measurement accuracy

- Power/communication cable length: 25 ft./7.5 m

Base Products Include:

- Manikin body form with heaters and sensors
- Control electronics
- Two ambient temperature sensors
- Laptop loaded with ThermDAC control software
- Power and control cabling
- One relative humidity sensor
- Standard one-year warranty

Thermal Foot Feature Highlights & Benefits

- 12 independent thermal zones to isolate the performance of different footwear features (soles, lacing, tongue, etc.)

- Sweating version features computerized fluid delivery by zone

- Ankle and toe joints permit easy installation into even the most rigid footwear

- Optional sole compression system simulates human weight for realistic evaluation of sole/midsole insulation

- System includes a 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


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ThermDAC Control Software

ThermDAC is an engineered user interface for thermal manikin systems providing real-time device control, automated testing, and flexible display and logging capabilities, including:

- Manikin control by skin temperature, constant heat flux, comfort equation

- User-programmable test configurations, stability criteria, linked work cycles

- Automatic steady-state detection

- Color-coded manikin pictorial displays, selectable for any manikin variable

- Zoomable time-history graph of multiple device and ambient variables

- Real-time statistical analysis over any user-selected time range

- Logging of raw data, statistical analysis, user-reports

- Device calibration and fault detection
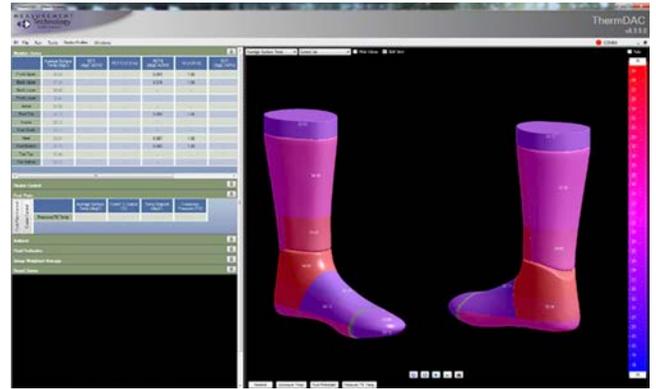
507 - Thermal Manikin - Body Part - Foot	Item #	Description	Product Name
Standard Base Product	**19-50701**	**Thermal Foot, Sweating, 12Z, Male, Size 9**	**507-XXX_.s12.M**
Semi-Custom Base Product	19-50702	Thermal Foot, Sweating, 12Z, Male, Size 9, Actuated/Compression System	507-XXX_C.s12.M.a
Custom Options	20-00776	Chamber, Standalone (Air Cooled)	—
	XX-XXXX	Cold Capable	—

Don't see what you need above? Contact Thermetrics to customize your perfect system.

*Keep your Foot Test System in tip-top shape. Discuss service plan options and point-of-sale discounts with us at **sales@thermetrics.com.***

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