

INSTRUMENTS FOR TEXTILE AND BIOPHYSICAL TESTING

THERMAL HAND TEST SYSTEM

The World's Most Advanced Thermal Manikins

Thermetrics' Thermal Hand Test System was developed to provide high resolution data of heat loss. It is capable of quantifying the effects of glove design, insulation, and ventilation with high precision and repeatability. Glove performance and properties can be determined without the variation inherent in human test subjects.

All Hand 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.



Shown with wicking fabric sweating skin

Test Methods Supported

- EN 511
- ASTM F3426

This fourth-generation thermal hand model was developed to provide accurate test measurements for all types of handwear.





Thermal Hand Specifications

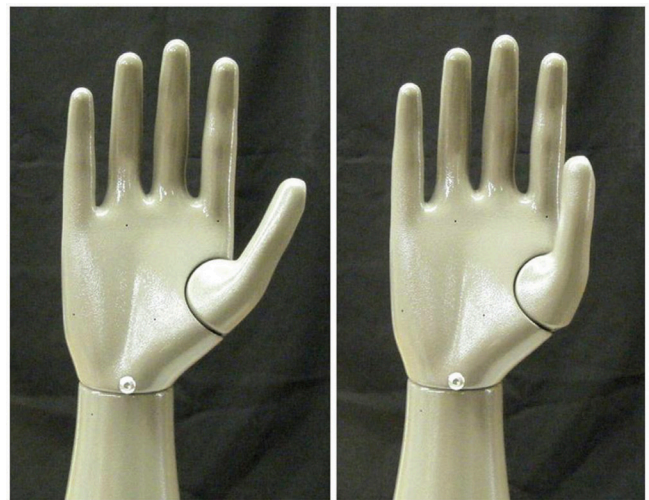
- Male hand: 75th percentile; right hand with articulated thumb
- Unit Dimensions: 16 in. x 12 in. x 18.5 in. H/ 40.6 cm x 30.5 cm x 47 cm
- Minimum Operating Space: 20 in. x 20 in. x 20 in. H/ 51 cm x 51 cm x 51 cm
- Standard operating range: -20°C to +50°C
- Extended operating range: -40°C to +50°C (with "cold capable" option)
- 0 to 100% RH, including condensation
- Temperature accuracy: $\pm 0.1^\circ\text{C}$
- RH accuracy: $\pm 3\%$
- Maximum power output: 1,000 W/m²
- Sweating delivery range: 0-1,000 ml/hr
- Power: 85-265VAC, 50/60Hz, Single-phase
- $\pm 1\%$ 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 Hand Feature Highlights & Benefits

- Quantifies the effects of glove design, insulation, and ventilation on the human hand
- 8 independent sweating thermal zones
- Articulated thumb allows for easy fitting of hand wear
- Ultra-stable resistance wire heating provides uniform heat flux
- System includes a laptop computer installed with ThermDAC control software



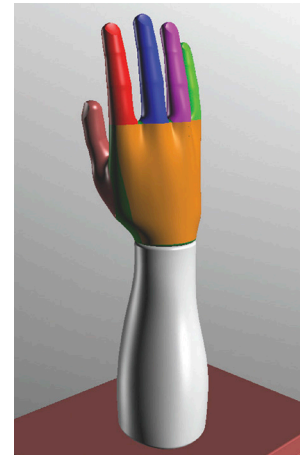
Articulated thumb



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



8-zone segmentation
(Fingers, thumb, palm, dorsal, and wrist)

HAND	Description	Product Name	Item #
Base Products	Thermal Hand, 8Z, Sweating	506.s8	19-50601
	Thermal Hand, 8Z, Dry	506C.d8	19-50602
Custom Options	Chamber, Standalone (Air Cooled)	—	20-00776
	Cold Capable	—	XX-XXXX



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

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

