



3D

THE WORLD'S MOST ADVANCED
INSTRUMENTS FOR TEXTILE AND BIOPHYSICAL TESTING

THERMAL MANIKIN - SLEEPING BAG SIMON

The Simon thermal manikin system is designed to meet the garment evaluation needs of sleeping bag manufacturers and research/testing institutes in accordance with relevant ASTM and ISO standards.

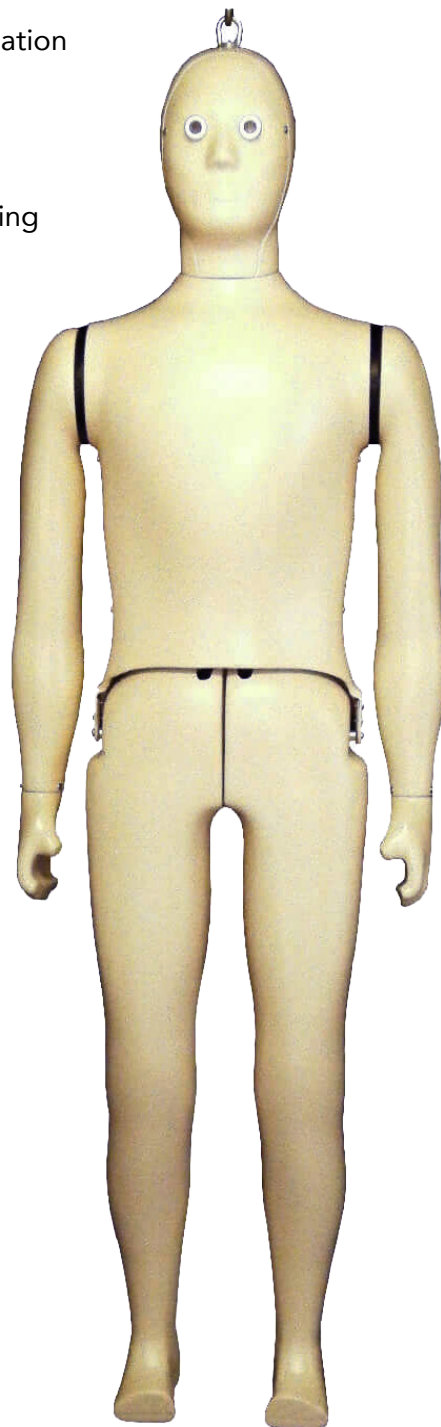
Simon is jointed at the hips and shoulders with simplified hands and feet and modular control electronics to help lower the system cost while retaining the advanced features that have made Thermetrics manikins the industry standard.

Simon's thermal properties can be customized, to a certain extent, to enable faster transient response, greater sensitivity, or easier handling.

All Simon 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 F1720
- ISO 23537





Simon Specifications

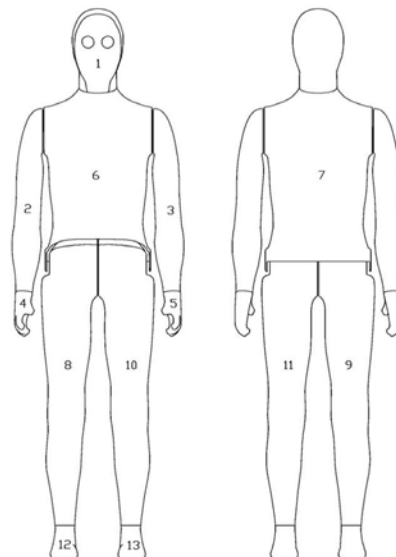
- Male body form height: 5 ft. 10 in./175 cm
 - Chest: 35.7 in./90.8 cm
 - Waist: 28.8 in./73.2 cm
 - Hip: 36.1 in./91.8 cm
- Manikin weight: 55 lbs./25 kg
- Surface area: 19 sq/ft/1.8 sq/m
- Male body form: 50th percentile
- -20°C to +50°C operating range
- 0 to 100% R.H. including condensation
- ± 0.1°C temperature measurement and setpoint control
- ± 3% relative humidity measurement
- 500 W/m² maximum power output
- Thermally conductive carbon-epoxy shell
- Power requirements: 85-265 VAC, 50/60Hz, Single-phase
- 13 independent thermal zone
- Ultra-stable resistance wire heating
- Distributed wire sensors for each zone
- Jointed at hips and shoulders only
- Two ambient temperature sensors
- One RH sensor
- Signal conditioning electronics
- Power and control cabling (via eye openings)
- Power/communication cable length: 25 ft./7.5 m

Simon Feature Highlights & Benefits

- Manikin system for sleeping bag and environmental testing
- Features 13 independent thermal zones
- Ultra-stable resistance wire heating provides uniform heat flux
- Separate sensor wire elements distributed over each zone and protected by an epoxy coating
- Hidden hanging hook at the top of the head provides an attachment point for support when needed
- System includes a PC computer and ThermDAC control software for full thermal control, fault detection, real-time data display, and data logging capabilities

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



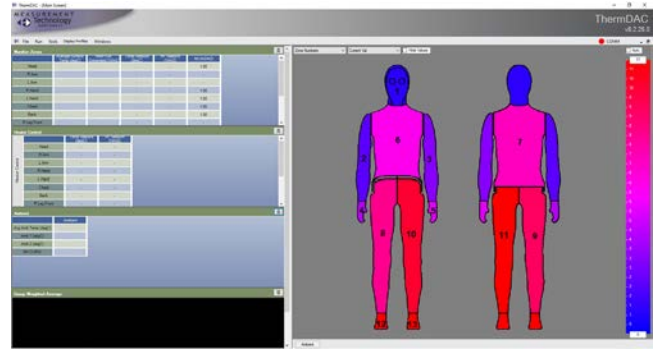
Simon
13-zone
layout



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, ManikinPC
- 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



503 - Thermal Manikin - Sleeping Bag - Simon	Item #	Description	Product Name
Semi-Custom Base Product	19-50301	Simon Manikin, 13Z, Dry, Male 178.5 cm	503-XXX_C.d13.M

Don't see what you need above? Contact Thermetrics to customize your perfect system. Keep your Simon in tip-top shape. Discuss service plan options and point-of-sale discounts with us at sales@thermetrics.com.