



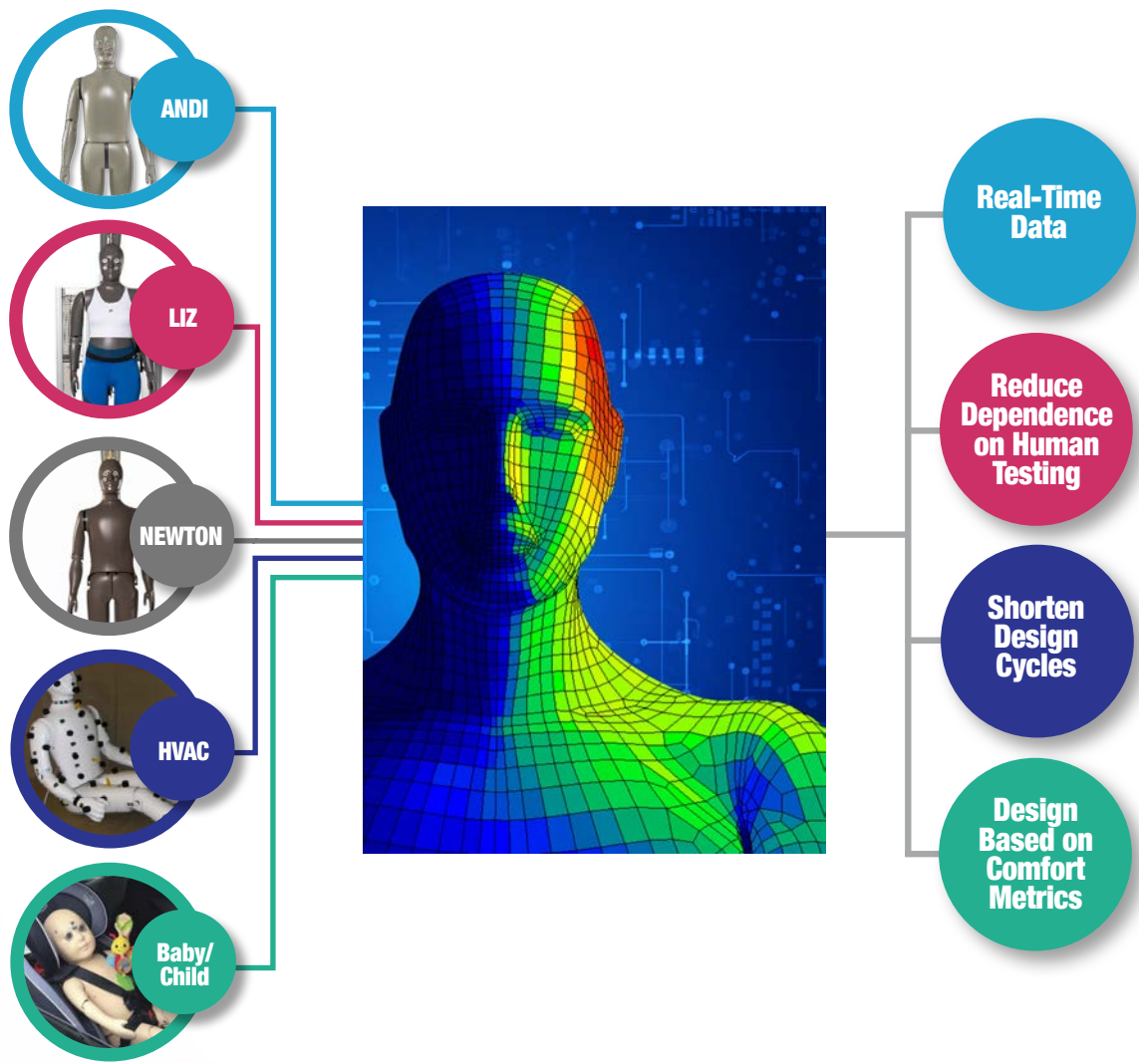
THE WORLD'S MOST ADVANCED THERMAL MANIKINS

THERMAL MANIKIN - ACCESSORY MANIKINPC SOFTWARE

ManikinPC (Manikin Physiology and Comfort) software allows your manikin to thermally respond like a human. It is a closed-loop feedback control package that accurately mimics the human thermoregulatory system and provides metrics for comfort and sensation. The software permits variable activity levels that simulates the human metabolism while sleeping, resting, working, or exercising.

ManikinPC is integrated directly into ThermDAC manikin control software adding new thermal regulation and output data options. It consists of a physiological control module and a comfort module to predict perceived thermal sensation and comfort based on the physiological response.

Compatible with:



How does ManikinPC Work?

Thermal manikins can measure heat loss, regulate temperature, and control sweat delivery, but most standard testing uses fixed temperature setpoints and sweat delivery rates. By coupling the manikin to an underlying virtual model of the human physiology, the manikin can control to variable setpoints. With ManikinPC, the entire system only has one control input: metabolic rate. The user chooses the clothing, static or dynamic environment, and can adjust the metabolic rate in real-time to simulate realistic situations. The virtual model computes the resulting physiological response and adjusts setpoints to the manikin. The manikin measures skin temperature and heat loss, which are applied to the virtual model as boundary conditions. This process continues in a loop to create human-realistic behavior without the human.

Software Outputs

- Skin and core temperatures (hypothalamus, rectal, blood pool)
- Metabolic heat generation rate
- Shivering heat generation rate
- Respiratory heat loss based on ambient temperature and RH
- Basal and Active sweating rates
- Cardiac output to estimate blood flow
- Skin blood flow as estimate of vasoconstriction/vasodilation
- Thermal sensation (local + whole body)
- Thermal comfort (local + whole body)
- Dynamic thermal sensation (DTS)

ManikinPC Feature Highlights & Benefits

- Software module integrated directly to ThermDAC
- Based on TAItherm Human Thermal Model (HTM) by Thermoanalytics Inc.
- Real time data
- Predicts local and whole body sensation and comfort using Berkeley Comfort Model
- Reduces dependence on human testing, improves reproducibility
- Run tests in conditions/durations that are not safe for human subjects

ManikinPC	Item #	Description	Product Name
Base Product	11-01407/ 11-03396	Software, ManikinPC License (Permanent)	—

 *Contact us at sales@thermetrics.com to customize your perfect system.*