



PSYCHROMETRIC AND BALANCED AMBIENT TEST ROOMS

Psychrometric and balanced ambient test rooms are utilized to measure thermal performance of air conditioning units, heat pumps and hydronic systems. Each room is capable of simulating both indoor and outdoor test conditions, simultaneously, generating thermal loading conditions which replicate typical operational conditions.

The design of the psychrometric and balanced ambient rooms is based on ETC's long history of providing these systems to customers in the HVAC industry.

TEST ROOM SPECIFICATIONS

APPLICATIONS

- Air conditioners, heat pumps, split systems and window units
- Hydronic systems, VRF, PTAC, DFS, and AHUs

FEATURES

Insulated modular panel construction

Indoor/outdoor rooms to simulate indoor/outdoor temperature and humidity conditions

Solid state sensors, PLC and PID's

Code testers/air enthalpy tunnels to measure airflow rate and psychrometric conditions

Indoor and outdoor conditioning equipment packaged in skids

Fully automated Data Acquisition System

Meets ASHRAE, ARI and ISO standards

Capacity	1 to 80 tons (12,000 to 960,000 BTU/hr) 7.0 to 210 kw
Indoor dry bulb temperature range	40° to 122°F (8° to 50°C)
Indoor wet bulb temperature range	40° to 80°F (4° to 27°C)
Outdoor dry bulb temperature range	-40° to 130°F (-40° to 54°C)
Outdoor wet bulb temperature range	40° to 90°F (4° to 32°C)
Energy balance	± 3%
Repeatability	± 1%
Dry bulb temperature control	± 0.2°F (0.1°C)
Wet bulb temperature control	± 0.2°F (0.1°C)
Code tester airflow	up to 36,000 SCFM

SOFTWARE & DATA ACQUISITION SYSTEM

- Siemens or AB PLC
- User friendly Windows® environment
- Editing of test programs
- Real time data acquisition, data display and data analysis
- Automatic test sequencing
- Graphic screen presentation of parameters
- Four level password security
- Fail-safe protection with programmable warning and shut down levels
- Performance curves and test report generation

