

ThermalAir TA-5000B

An Evolution in Localized Temperature Test Systems



The ThermalAir TA-5000B high capacity thermal air stream system is used for temperature testing, fast thermal cycling, and device temperature characterization of components, hybrids, modules, PCBs, and other electronic and non-electronic assemblies at precise temperatures from -80°C to $+225^{\circ}\text{C}$.

Performance Plus!

- Eco-friendly with up to 50% power energy savings
- Ultra-stable DC temperature control with Smart DC Energy efficient chiller
- Built-in color touch screen display GUI. The front panel touch display's easy icons are made for convenient user operation and intuitive user friendly menus.
- No voltage or frequency configuration needed
 - One system worldwide
- Quiet low audible noise for engineering laboratory
- No LN_2 or CO_2 required [Built in Chiller & Air Dryer]

The DC controlled ThermalAir TA-5000B System power adjusts almost instantaneously to your temperature settings and test conditions real time, providing precise temperature control when you need it while saving energy.

Compact Chamber Clamshell Style



Temperature range: -60°C to $+200^{\circ}\text{C}$;
Clamshell-style chamber connects to the TA-5000 series.

ThermalAir temperature source via the Flex Transfer Hose to provide a controlled temperature test environment.

Features and Advantages

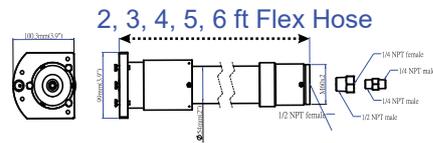
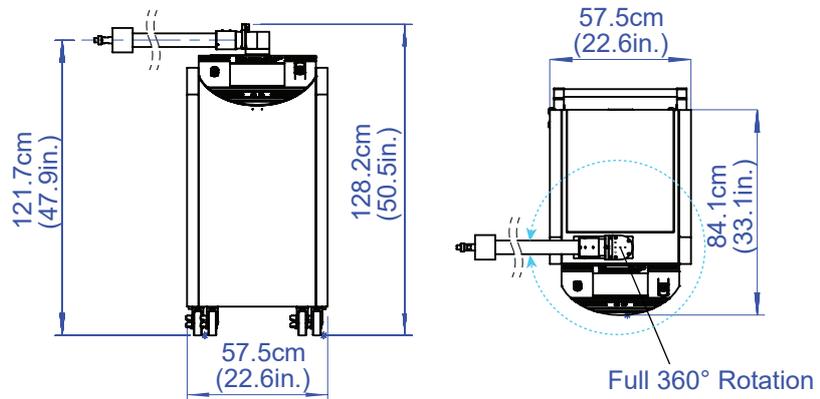
- Ultra cold temperatures are maintained at 50Hz or 60Hz.
- The system's touch screen lets operator control temperature settings, ramp and cycle right at user test bench workstation.
- Plug-in anywhere from 185 to 250VAC. No need for user voltage re-configuration when system moved to different locations.
- USB and SSD for thermal file management and data logging
- A separate temperature controlled dry air purge keeps the surrounding test area frost-free operation during long test time at extremely cold temperatures.
- Two User Control Modes - Standard Operator & Temperature Cycle (Temp Cycle, Ramp & Soak)
- User Interface and Operations - Remote Control Compatible Modes for existing user test programs
 - Center Control Color Touch Screen Display
 - IEEE-488.2(GPIB), USB, Ethernet, Serial, LXI
 - Intranet via LAN
 - LabVIEW drivers

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Information Sheet

Dimensions & Flex Hose Lengths



Full Interface For All Communication Control Requirements

4 USB-Type A, 1 USB-Type B, HDMI, IEEE-488, LAN, RS-232, T-Type, K-Type and RTD temperature sensors PLUS Auto Start Test & End of Test for automatic temperature cycling Hot-Cold-Amb.

All these are made for simple control and serviceability.



Specifications

Temperature Performance & Airflow Capacity

Temperature Range	-80°C to +225°C (50/60Hz same system, same temperature performance)
Typical Temperature Transition Rate	-55°C to +125°C / +125°C to -55°C <10 sec
Temperature Accuracy	± 1.0°C (calibrated system)
Temperature Resolution	± 0.1°C
Temperature Air Output System	4 to 25 SCFM (1.9 to 11.8 l/s) Continuous
Temperature Control Methods	Environmental Internal Air TC and Remote External Type T, K, RTD (TC Sensors)

Note: Systems DO NOT degrade @ 50Hz or @ High Air Flow Output Rates

Dimensions & Weights

Base Unit & System Weight	W=57.5cm(22.6in.), D=92.8cm(36.5in.), H=136.3cm(55.7in.) Un-packed : 265kg (584 lbs) / Packed : 395kg (870 lbs)
Portability	Static dissipative, four easy roll swivel caster wheels
Noise Level	<49 dBA average

Facility Requirements / Compressed Air

Power	185 - 250VAC (220 Nominal), 60 / 50Hz, 30amp, 1 phase
Clean, Dry Air (CDA)	Filtered to 5µ particulate contamination Oil Content: < 0.10 ppm by weight and filtered to 0.01µ oil contaminants
Input Air Dewpoint	<10°C @6.2BAR (90PSI)
Input Air Pressure	90 to 120 PSIG (6.2 to 8.3 BAR)
Input Air Flow	15 to 30 SCFM (7.2 to 14.3 l/s) 25 SCFM nominal
Input Air Temperature	+15° to +25°C, +22°C nominal
Operating Temperature Environment	+15° to +28°C, +23°C nominal
Operating Humidity	0 to 60% RH, 45% nominal

MPI Thermal TA-5000B Infosheet
A Division of MPI Corporation

Temperature Solutions **MPI Thermal** For The Future  ISO9001 Certified

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