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°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 percise temperature control when you need it while saving energy.
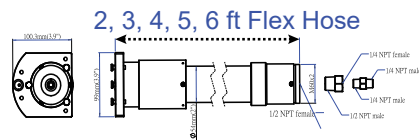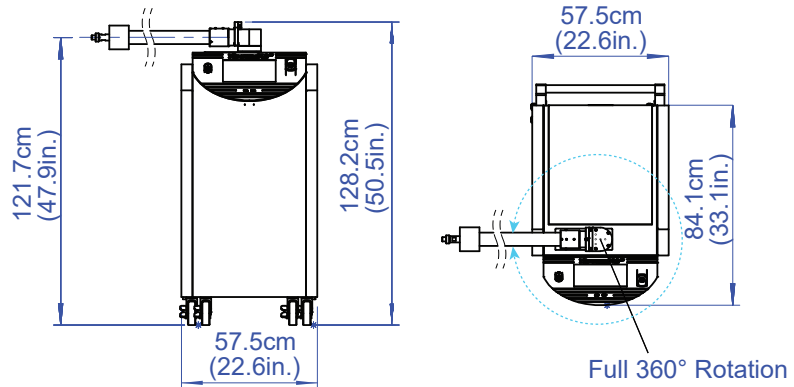
Features and Advantages

- 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

Compact Chamber
Clamshell Style

Temperature range: -60°C to +200°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.

Temperature Solutions **MPIThermal** A Division of MPI Corporation **For The Future** CE ISO9001 Certified

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Information Sheet

Dimensions & Flex Hose Lengths

121.7cm (47.9in.)
128.2cm (50.5in.)
57.5cm (22.6in.)

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84.1cm (33.1in.)

Full 360° Rotation

2, 3, 4, 5, 6 ft Flex Hose

100.3mm(3.9") 85mm(3.3") 69.0mm(2.7")

1/4 NPT female
1/4 NPT male
1/4 NPT male
1/2 NPT female
1/2 NPT male

USB   HDMI   LAN   USB   RS232   DUT T DUT K   DUT RTD/DIODE   ST/EOT/SFF   IEEE-488

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 dewpoint or dryer@90PSI (6.2 BAR)
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

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