

# ThermalAir TA-1000A

## An Evolution in Localized Temperature Test Systems

The ThermalAir TA-1000A 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 -25°C to +200°C.



### More Options

- Air Dryer
- Easy Roll Around Cart



### 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 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<sub>2</sub> required [ Built-in Chiller ]

### Features and Advantages

- Ultra cold temperatures are maintained at 50Hz or 60Hz.
- The systems touch screen lets operator control temperature settings, ramp and cycle right at user test bench workstation.
- Plug-in anywhere from 185 to 250 VAC. 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

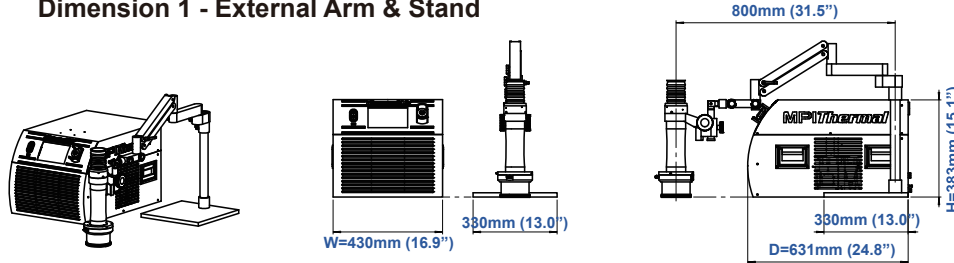
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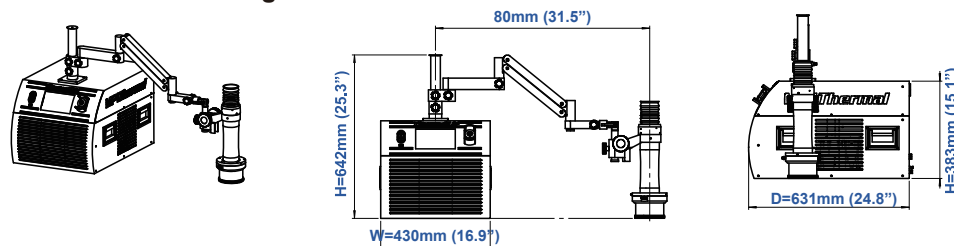
\*\*\*Please note: The system includes Integrated Arm & Stand, Microscope Style External Stand and 3.28" Glass Cap. Additional accessories are available.

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**MPI Thermal ThermalAir TA-1000A INFO Sheet**

### Dimension 1 - External Arm & Stand



### Dimension 2 - Integrated Arm & Stand



### Full interface for all communication control requirements



2 USB-Type A, 1 USB-Type B, 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	-25°C to +200°C (50/60Hz same system) (*See Note 1)
Typical Temperature Transition Rate	-5°C to +125°C / +125°C to -5°C <10 sec
Temperature Accuracy	± 1.0°C (calibrated system)
Temperature Resolution	± 0.1°C
Temperature Air Output System	4 to 12 SCFM (1.9 l/s to 5.7 l/s) Continuous
Temperature Control Methods	Environmental Internal Air TC and Remote External Type T, K, RTD (TC Sensors)

Note 1 : Systems DO NOT degrade @50Hz or @High Air Flow Output Rates

Note 2 : Ultimate Hot & Cold Temperature (± 1.0°C) achieved at 8 SCFM

### Facility Requirements / Dimensions & Weights

Base Unit & System Weight	W=43.0cm(16.9in.), D=63.1cm(24.8in.), H=38.3cm(15.1in.) Un-packed : 64kg (141 lbs) / Packed : 156 kg (344 lbs)
Portability	4 Lifting Handles
Maximum Reach	80.0 cm (31.5 in.) with 6 ft. output gas hose
Arm & Stand Installation	Two ways: External (On the table) / Integrated (On the unit)
Hi-Temp Glass Cap Enclosures	3.28" I.D. } Stands and 3.28" Cap are included in the system
Noise Level	<52 dBA average
Power	System operates both at 50Hz & 60Hz 185 - 250VAC (220 Nominal), 60 / 50Hz, 16amp, 1 phase

### Compressed Air

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	Contaminants -40°C dewpoint or dryer@90PSI (6.2 BAR)
Input Air Pressure	90 to 120 PSIG (6.2 to 8.3 BAR)
Input Air Flow	7 to 15 SCFM (3.3 to 7.0 l/s) 14 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