TP04300

Mobile Programmable Temperature System for high speed testing of components, parts, hybrids, modules, subassemblies and printed circuit boards at precise temperature.

Temperature Performance and Airflow Capacity

Temperature Range	-80° to +225ºC (60 Hz Performance) -75º to +225ºC (50 Hz Performance)
Typical Temperature Transition Rate (air)[1]	-55º to +125ºC: approx. 10 seconds or less[1] +125º to -55ºC: approx. 10 seconds or less[1]
System Airflow Output	1.9 to 9.5 l/s (4 to 18 scfm) CONTINUOUS
Temperature Accuracy	1.0ºC (when calibrated against the NIST transfer standard)
Temperature Set, Display and Resolution	+/- 0.1ºC

[1] Note: Transition is performed under nominal operating conditions.

Features

Modes of Operation	Two: Operator Mode and Cycling Mode
Test Set-up Configurations	In Cycling Mode, an unlimited quantity may be created and saved to hard disk.
Ramp/soak/cycle Configurations	In Cycling Mode, up to 18 sequences per test set up. Table is displayed on screen.
Program and Data Storage	Datalogging and program files may be stored on the hard drive or USB storage device (i.e. USB memory stick, USB mass storage device or USB Printer)
Temperature Control:	
DUT Sensor Ports	Internal Diode, Type T and Type K thermocouple and 100 ohm platinum RTD.
DUT Control	Control to within +/-0.1ºC, SELF-TUNING available in DUT Control
DUT Temperature Control	Proprietary Dual Loop Temperature Control - Unique control algorithm enables direct temperature control (to within 0.1ºC) at the device case; measures temperature at the device.
User-settable Temperature Limits	Allows operator to select and set the upper and lower temperature limits within the -80º to +225ºC system temperature range.
Heat Only Mode:	For reduced power consumption when cold temperatures are not required.
Remote Interface Ports	IEEE-488, RS232,Start Test/End Test/Stop on First Fail (ST/ET/SFF) and Ethernet.
Drivers	LabView® and LabWindows®
External Device Ports	Ports are located on the front of the system for connecting a mouse, printer and keyboard, in addition to a USB port.
On Screen HELP	Included for both Operator's and Cycling Modes.
Status Indicators	On-screen and remote I/O
Purge Flow for Tester Interface	Dry purge to protect tester electronics from condensation, manually adjustable airflow from 0.25 to 1.5 liters per second (0.5 to 3 scfm)
Temperature Calibration	Automated, simplified and accurate for all temperatures and airflows
Thermal Head	Operation: Pneumatic control for raising and lowering of thermal head, operated manually or via remote interface. Positioner: Manual locking, 360º head rotation. Head can be manually pivoted, tilted, turned and vertically swung for ease of interface at the tester site.
Manipulator (arm) movement:	Motorized raising and lowering of arm; 330º positioning "swing" range around the base.

OPTIONS

Thermal Test Enclosures / Chambers

Thermal Cap	Available in 2 sizes (4.5 in. and 5.5 in. ID). Choice of tranparent glass or non-transparent metal (5.5 in. ID only). Enclosure attaches to Thermal Head to surround Device Under Test (DUT), providing a localized test environment at the test site.
ThermoChamber™	Compact, portable thermal enclosure attaches directly or via "Flexible Extender Hose" to ThermoStream for testing larger PCBs, assemblies and UUTs (Units Under Test). Allows convenient access for adding and removing UUTs. Available in three standard designs: Hood, Clamshell (top load) and Front Load. See ThermoChamber datasheets for specifications.

TP04300A ThermoStream® Specifications

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TP04300A

Mobile Programmable Temperature Source for testing components, parts, hybrids, modules, subassemblies and printed circuit boards at precise temperature

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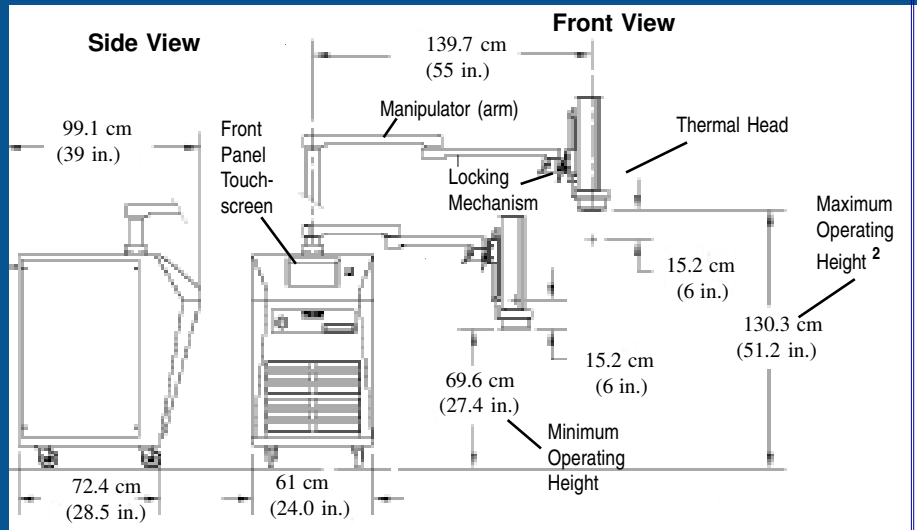
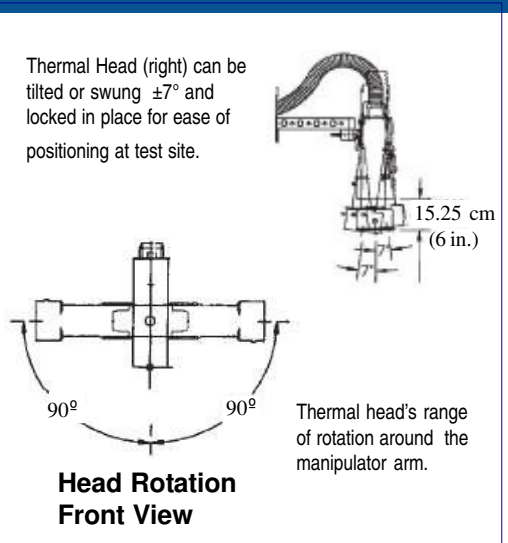
TP04300A ThermoStream Specifications





Environmental and Safety Features

Over Temperature Protection	+235ºC (factory set); (Also, operator can set high and low air temperature limits.)
Mobility	Four swivel caster wheels with locks ((10.16 cm (4 inch) diameter) static dissipative; rear handle for ease of transport
Refrigerants	HCFC- and CFC-free, non-toxic, non-flammable
Serviceability	Auto-diagnostics and field replaceable modules
Maximum Operating Height [2]	130.3 cm. (51.25 in.) approximately
Minimum Operating Height	69.6 cm. (27.4 in.) approximately
Noise Level	<65 dBA

[2] Taller operating height is optional. Contact factory for details.

Weights and Dimensions

Base[3]:	Width: 61.0 cm. (24 in.), Depth: 72.4 cm. (28.5 in.), Height: 108 cm. (42.5 in.)
System Weight:	Not packed: 236 kg (520 lbs.); Packed: 365 kg (805 lbs.)

[3] An additional 20.3 cm (8 in.) clearance is required for supply connections and cabinet ventilation.

Facility Requirements[4]

Power [5]

200-250 VAC (230 V nominal), 50/60 Hz, 30 amp, 1 phase

Compressed Air

Clean, Dry Air (CDA):	Filtered to 5 micron particulate contamination. Oil Content: <0.01 ppm. by weight , filtered to 0.01 micron oil contaminant. Dewpoint: <10ºC @ 6.2 BAR (90 PSI)
Supply Pressure	6.2 to 7.6 BAR (90 to 110 PSIG)
Supply Flow at Minimum Supply Pressure	7.2 to 14.3 l/s (15 to 30 scfm); 25 scfm nominal
Air Supply Temperature	+20º to +25ºC ; +22ºC nominal

Operating Environment

Operating Temperature	+20º to +28ºC; +23ºC nominal
Humidity	0 to 60% ; 45% nominal

[4] Under operating conditions which are greater or less than nominal, performance may be less than specification provided.

[5] Note: System is configured for operation within voltages listed above using an internal transformer. Please specify power configuration with order.

ISO 9001-2000 Certified

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