

TP04310A

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

TEMPERATURE PERFORMANCE AND AIRFLOW CAPACITY

Temperature Range: ^{1,3}	-80° to +225°C (60 Hz System) -75° to +225°C (50 Hz System)
Typical Temperature Transition Rate (air) ^{1,2}	-55° to +125°C: approximately 10 seconds or less ² +125° to -55°C: approximately 10 seconds or less ²
System air flow output	2.4 to 9 liters/second (5 to 18 scfm) CONTINUOUS
Temperature accuracy	1.0°C (when calibrated against NIST transfer standard)
Temperature set, display and resolution	± 0.1°C
Temperature Control:	
DUT Sensor Ports	Type T and Type K Thermocouple ports standard
DUT Control	Control to within ± 0.1°C; SELF-TUNING available in DUT Control
Remote interface ports	IEEE-488, RS232C Serial, and Start Test/End of Test/Stop on First Fail (ST/ET/SFF)

¹Note: Ultimate low temperature and system performance may vary under operating conditions less than or greater than nominal.

²Note: Transition performed under nominal operating conditions.

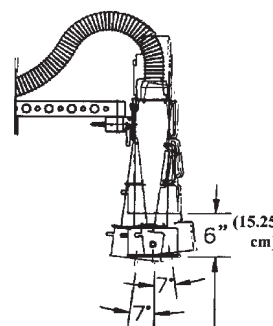
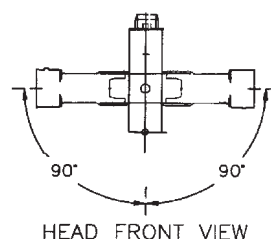
³Note: Low temperature extremes can be achieved at reduced airflow rates.



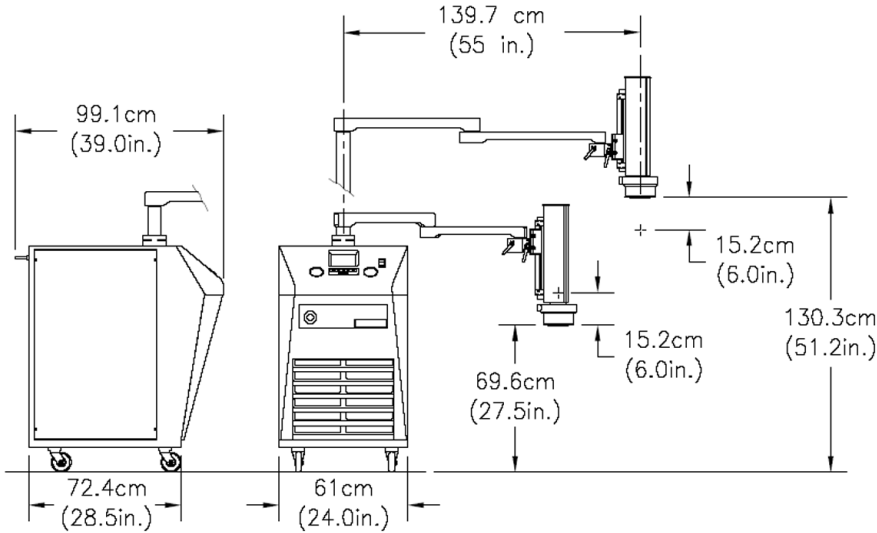
Model **TP04310A** ThermoStream® System Specifications

USER FEATURES

Modes of Operation	Two: Manual and Program Modes
Test set-up configurations	12 Manual Mode test programs and 12 Program Mode test programs may be created
Test set-up storage	11 Manual Mode test programs, 11 Program Mode test programs and 11 affiliated "Define Parameters" test set-ups can be stored for later recall.
Ramp/soak/cycle configurations	In Program Mode, up to 12 sequences per test set-up; table is displayed on-screen
DUT temperature control	Patented ⁴ Dual Loop Temperature Control
Status indicators	Real-time status displayed on-screen and via remote interface
Purge flow tester interface protection	Dry air purge protects tester electronics from condensation
Purge flow capacity	0.25 to 1.5 liters per second (0.5 to 3 scfm) airflow
Calibration	Automated, simplified and accurate for all airflows and DUT types
Thermal head raising and lowering	Pneumatic control on thermal head, operated manually or via remote interface
Head positioner movement	Manual locking (4 locks), 360° head rotation; head can be manually pivoted, turned, tilted and vertically swung for ease of interface at tester site.
Manipulator (arm) movement	Motorized raising and lowering of arm; 330° positioning range around the base unit



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ENVIRONMENTAL AND SAFETY FEATURES

Over-Temperature Protection	+235°C (factory-set) (Also uses user-settable high and low air temperature limit)
Mobility	4 swivel caster wheels with locks (10.16 cm (4 inch) diameter, static dissipative); rear handle for ease of transport
Refrigerants	HCFC-free and CFC-free, non-toxic, non-flammable
Noise level	<65 dBA approximately
Serviceability	Field-replacement modules and printed circuit boards
Weights and Dimensions	Base: <u>Width:</u> 61.0 cm (24 in.) <u>Depth:</u> 71.1 cm (28 in.); <u>Height:</u> 108 cm (42.5 in.); <u>System weight:</u> 236 kg (520 lbs); <u>Packed:</u> 365 kg (805 lbs)
Maximum operating height	130.3 cm (51.25 in.) approximately
Minimum operating height	69.9 cm (27.5 in.) approximately

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

FACILITY REQUIREMENTS

Power Requirements ⁵	200-250 VAC (230V nominal), 50 Hz, 30 amp, 1 phase 200-250 VAC (230V nominal), 60 Hz, 30 amp, 1 phase
Compressed Air Requirements	
Clean, Dry Air	Filtered to 5 micron particulate contamination Oil content: <0.01 ppm by weight filtered to .01 micron oil contaminant Dewpoint: <10°C @ 6.2 BAR (90PSI)
Supply Pressure	6.2 to 7.6 BAR (90 to 110 PSIG)
Supply flow at minimum supply pressure	7.2 l/s to 14.3 l/s (15 to 30 scfm) (Nominal 25 scfm)
Air supply temperature	+20° to +25°C (+22°C nominal)
Operating Temperature	+20° to +28°C (+23°C nominal)
Humidity	0 to 60% (45% nominal)

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

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

ISO 9001-2000 Certified



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