

# TP04310B

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



## TEMPERATURE PERFORMANCE AND AIRFLOW CAPACITY

<b>Temperature Range:</b> <sup>1,3</sup>	-80° to +225°C (60 Hz System) -75° to +225°C (50 Hz System)
<b>Typical Temperature Transition Rate (air)</b> <sup>1,2</sup>	-55° to +125°C: approximately <5 seconds <sup>2</sup> +125° to -55°C: approximately <13 seconds <sup>2</sup>
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
<b>Temperature Control:</b>	
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)

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

<sup>2</sup>Note: Transition performed under nominal operating conditions.

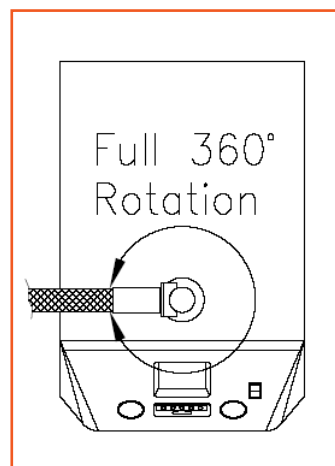
<sup>3</sup>Note: Low temperature extremes can be achieved at reduced airflow rates.

## USER FEATURES

### System Configuration Options (Choice):

- **Modular TP04310B Base unit with Turret Assembly and choice of Flexible Extender Air Transfer Hose**  
(Specify length- up to 1.8 meter (6 ft.) long is included with system.) Longer Flexible Extender Hoses are also available. Contact factory.)
- **Modular TP04310B Base unit with Adapter Kit for connecting ThermoChamber™ compact chamber atop base.**  
(ThermoChamber is sold separately.)

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 <sup>4</sup> 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
Range of Motion	Turret Assembly (connecting Flexible Extender Hose) rotates for 360° freedom of positioning the Flexible Extender around the base unit.



Turret Assembly Rotation: 360° of freedom around TP04310 base.



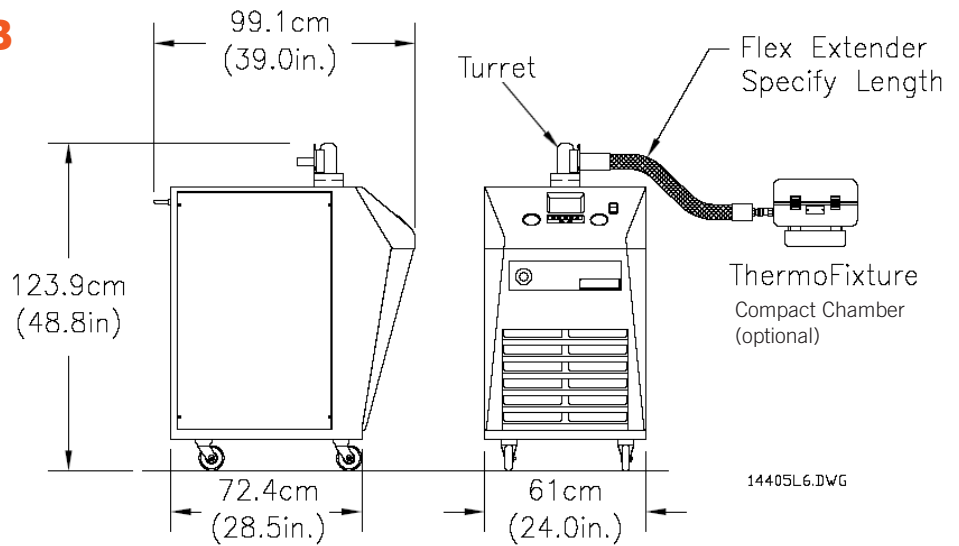
Part No. SL10430 R/A

<sup>4</sup>Note: US Patent no. 4,734,872



Model TP04310B ThermoStream® System Specifications

# Model TP04310B ThermoStream® System Specifications



TP04300B System is shown with Turret Assembly connecting to Flexible Extender air transfer hose to optional ThermoFixture® thermal enclosure. ThermoFixture also available from Temptronic, is sold separately.

## 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); 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: Width: 61.0 cm (24 in.) Depth: 71.1 cm (28 in.); Height: 124 cm (49 in.); Height includes Turret Assembly.  
System weight: 226 kg (500 lbs); Packed: 341 kg (752 lbs)

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

## FACILITY REQUIREMENTS

<b>Power Requirements<sup>5</sup></b>	200-240 VAC (230V nominal), 50 Hz, 30 amp, 1 phase 200-240 VAC (230V nominal), 60 Hz, 30 amp, 1 phase
<b>Compressed Air Requirements</b>	
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)

<sup>5</sup>Note: 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



**TEMPTRONIC**  
an inTEST Company

4 Commercial Street  
Sharon, MA 02067 USA  
Tel: (781) 688-2300  
Fax: (781) 688-2301  
www.temptronic.com

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Part No. SL10430 R/A 2/2005