



ECO-560/660 ThermoStream® Temperature Forcing System

Temperature forcing system for fast and precise thermal conditioning of components, parts, hybrids, modules, subassemblies, and printed circuit boards. Capable of ultra-low temperatures without the use of Liquid Nitrogen (LN₂) or Liquid Carbon Dioxide (LCO₂).

Performance:

Temperature Range*

-60 to +200°C (50/60Hz)
No LN₂ or LCO₂ Required

Transition Rate*

-40 to +105°C, approx. 15 seconds or less
105 to -40°C, approx. 35 seconds or less

System Airflow Output*

4 to 18scfm (1.9 to 8.5 l/s) Continuous

* Under nominal operating conditions. Ultimate low temperatures ($\pm 1^\circ$) achieved at 12scfm.

Temperature Control:

Temperature Display & Resolution

+/- 0.1°C

Temperature Accuracy

1.0°C (when calibrated against NIST standard)

DUT Temperature Control

Proprietary control algorithm enables DUT temperature to be directly controlled

DUT Sensor Ports

Thermocouples (T & K)

Features:

- **Frost Free Feature**
Dry air purge for tester interface, prevents condensation: 0.5 to 3scfm (0.25 to 1.5 l/s)
- **Local & Remote Operations**
- **LabView™ & LabWindows® driver**
- **Ethernet, IEEE-488, RS232 ports**
- **Customizable and Savable Test Setups**
- **User Defined Temperature Limits**

Application Options:

- **Thermal Cap or FlexExtender Hose**
4.5 or 5.5 inch ID Thermal Cap or optional FlexExtender Hose for connection to external Thermal Chambers or enclosures
- **Manual or Automatic Flow Control**
Optional Automatic Flow Control enables main air control from digital touch screen

TS inTEST Thermal Solutions
an inTEST Company



Operator Screen



Data Graphing Screen

ECO-560/660-HT ThermoStream Performance

| Weight and Dimensions | |
|---|--|
| Base ¹ | Width: 46.4 cm (18.25 in.) Depth: 66.7 cm (26.25 in.) Height: 142.2 cm (56 in.) |
| System Weight | Not packed: 181 kg (400 lbs.) Packed: 227 kg (500 lbs.) |
| Mobility | Locking swivel caster wheels |
| Maximum Reach | 68.6 cm (27 in.) |
| Maximum Operating Height | 106.7 cm (42 in.) |
| Minimum Operating Height | 90.9 cm (35.8 in.) |
| Noise Level | <57 dBA |
| ¹ an additional 20.3cm (8 in.) clearance is required for supply connections and cabinet ventilation | |
| Service and Safety | |
| Refrigerants | HCFC and CFC-free, non-toxic, non-flammable |
| Serviceability | Auto-diagnostics and field replaceable modules |
| Over Temperature Protection | +230°C (Factory Set): (Operator can set high and low air temperature limits) |
| Facility Requirements | |
| Power ² | 200 - 250 VAC (230V nominal) 50/60Hz 30 amp, 1phase |
| Compressed Air ³ : Clean, Dry Air (CDA) | Filtered to 5 micron particulate contamination Oil Content: <0.1 ppm, by weight, filtered to 0.01 micron oil contaminant Dewpoint: <10°C @ 6.2 BAR (90PSI) |
| Air Supply Pressure | 6.2 to 7.6 BAR (90 to 110 PSIG) |
| Total Air Flow Required | 7.1 to 14.2 l/s (15-30 scfm) 11.8 l/s (25 scfm) nominal |
| Air Supply Temperature | +20° to +25°C; +22°C nominal |
| Operating Environment ³ Operating Temperature | +20° to +28°C; +23°C nominal |
| Humidity | 0 to 60%; 45% nominal |
| ² System is configured for operation within voltages listed above using an internal transformer. Please specify power configuration with order. | |
| ³ Under operating conditions which are greater or less than nominal, performance may be less than specification provided. | |



The inTEST Thermal family includes three temperature-related corporations: Temptronic, Sigma Systems, and Thermonics. Products include thermal chambers and plates, temperature forcing systems, and process chillers. Specifications subject to change.