

# Advanced Test Equipment Corp. www.atecorp.com 800-404-ATEC (2832)

# 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  $(LN_2)$  or Liquid Carbon Dioxide  $(LCO_2)$ .

# **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 (±1°) 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**

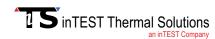
Thermocouples (T & K)

# **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









**Operator Screen** 



**Data Graphing Screen** 

# ECO-560/660-HT ThermoStream Performance

| Weight and Dimensions                                    |  |
|--|--|
| Base <sup>1</sup>  | 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.)<br>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.) clea                      | rrance 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):<br>(Operator can set high and low air temperature limits)  |
| Facility Requirements                                    |  |
| Power <sup>2</sup>                                       | 200 - 250 VAC (230V nominal) 50/60Hz 30 amp, 1phase  |
| Compressed Air³:<br>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)<br>11.8 l/s (25 scfm) nominal   |
| Air Supply Temperature                                   | +20° to +25°C; +22°C nominal   |
| Operating Environment <sup>3</sup> Operating Temperature | +20° to +28°C; +23°C nominal   |
| Humidity   | 0 to 60%; 45% nominal  |

<sup>2</sup> System is configured for operation within voltages listed above using an internal transformer.

Please specify power configuration with order.

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.