ATS-850-M THERMOSTREAM®

DATASHEET AND SPECIFICATIONS

-90° to +300°C

Designed for **60Hz operation only**, this Advanced Temperature Source is 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*  
-90° to +300°C  
No LN₂ or LCO₂ Required

Transition Rate*  
-55° to +125°C, approx. 10 seconds or less  
125° to -55°C, approx. 10 seconds or less

System Airflow Output*  
4 to 18 scfm (1.9 to 8.5 l/s) Continuous  
* under nominal operating conditions  
ultimate low (+1.0°C) achieved at 18 scfm  
ultimate high (-1.0°C) achieved at 16 scfm

**FEATURES:**

- **Frost Free Feature**  
  dry air purge for tester interface, prevents condensation: 0.5 to 3 scfm (0.25 to 1.5 l/s)

- **ECO Friendly Features**  
  Automatic Power Reduction  
  reduces power usage during idle periods  
  Heat Only Mode  
  reduces power usage when cold temperatures are not used

- **Heated Defrost Feature**  
  quickly removes moisture buildup from internal chiller

- **Fully Adjustable Thermal Head**

- **Thermal Cap**  
  5.5 inch ID, High Temperature Rated  
  Thermal Cap or optional

**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  
internal diode, thermocouples (T & K), RTD (100 Ohm platinum)

**FEATURES:**

- Windows® OS  
- Local & Remote Operations  
- LabView™ & LabWindows® drivers  
- On-Screen Help  
- Ethernet, IEEE-488, RS232 ports  
- USB, keyboard, mouse, & printer ports  
- customizable and savable test setups  
- Program & Datalog Storage  
  (via ethernet or USB)

- **User Defined Temperature Limits**

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Specifications

ATS-850-M THEROSTREAM®
Advanced Temperature Source

Weights and Dimensions

| Base | 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.) |
| Mobility      | Four static dissipative, swivel caster wheels |
| Maximum Reach | 160.0 cm (63 in.) |
| Maximum Operating Height | 130.3 cm (51.2 in.) - extended height option: 188.0 (74.0 in.) |
| Minimum Operating Height | 69.1 cm (27.2 in.) - extended height option: 81.3 (32.0 in.) |
| Noise Level   | <65dBA |

Service and Safety

| Refrigerants | HCFC and CFC-free, non-toxic, non-flammable |
| Serviceability | Auto-diagnostics and field replaceable modules |
| Over Temperature Protection | +305°C (factory set): Operator can set high and low air temperature limits |

Facility Requirements

| Power | 60Hz only, system does not operate at 50Hz |
|       | 200 - 250 VAC (230V nominal), 60Hz, 30 amp, 1phase |
| Compressed Air | Filtered to 5 micron particulate contamination. |
| Clean, Dry Air (CDA) | Oil Content: <0.1 ppm, by weight, filtered to 0.01 micron oil contaminant. |
| Air Supply Pressure | Dewpoint: <10°C @ 6.2 BAR (90PSI) |
| Total Air Flow Rate Required | 6.2 to 7.6 BAR (90 to 110 PSIG) |
| 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 | +20° to +28°C; +23°C nominal |
| Operating Temperature | 0 to 60%; 45% nominal |
| Humidity | |

1 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

www.inTESTthermal.com part number SL10890A