

# ATS-730-M THERMOSTREAM®

## DATASHEET AND SPECIFICATIONS

**-90° to +225°C**



Advanced Temperature Source 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<sub>2</sub>) or Liquid Carbon Dioxide (LCO<sub>2</sub>).

### PERFORMANCE:

#### Temperature Range\*

-85 to +225°C (50Hz)

-90 to +225°C (60Hz)

No LN<sub>2</sub> or LCO<sub>2</sub> 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 18scfm (1.9 to 8.5 l/s) Continuous

\* under nominal operating conditions  
ultimate low temperatures (±1°) achieved at 18scfm

### 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:

#### ► Frost Free Feature

dry air purge for tester interface, prevents condensation: 0.5 to 3scfm (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

#### ► Windows® OS

#### ► Local & Remote Operations

#### ► LabView™ & LabWindows® drivers

#### ► On-Screen Help

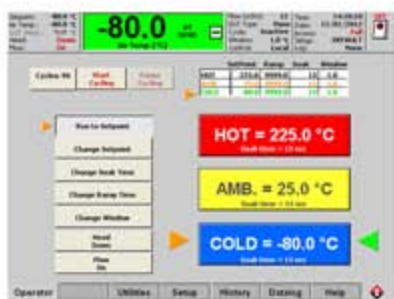
#### ► Ethernet, IEEE-488, RS232 ports

#### ► USB, keyboard, mouse, & printer ports

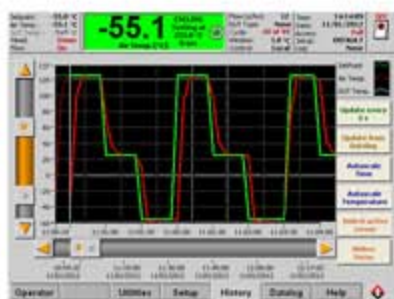
#### ► customizable and savable test setups

#### ► Program & Datalog Storage (via ethernet or USB)

#### ► User Defined Temperature Limits



OPERATOR SCREEN



DATALOG SCREEN

### APPLICATION OPTIONS:

#### ► Thermal Cap or FlexExtender Hose

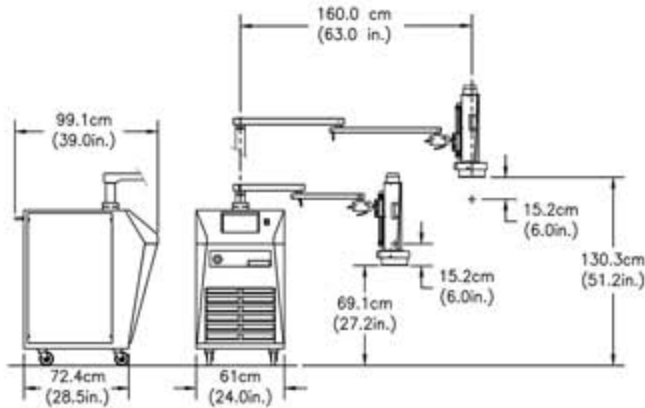
4.5 or 5.5 inch ID Thermal Cap or optional FlexExtender Hose for connection to external Thermal Chambers or enclosures

#### ► MobileTemp™ Thermal Chambers

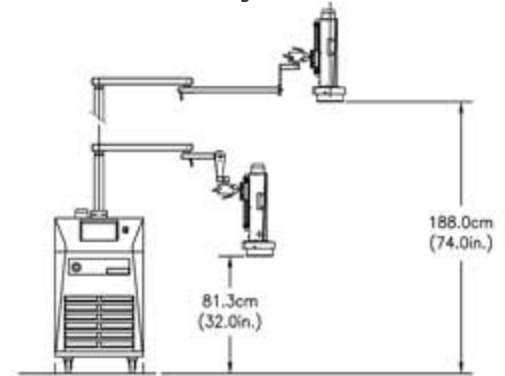
Temperature Chambers designed specifically for uses with ATS THERMOSTREAM® Systems. See Additional Datasheets for details.



System Dimensions - Standard



System Dimensions - Extended Height



### Weights and Dimensions

#### Base<sup>1</sup>

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

160.0cm (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

<sup>1</sup> 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<sup>2</sup>

200 - 250 VAC (230V nominal), 50/60Hz  
30 amp, 1 phase

#### Compressed Air<sup>3</sup>

##### Clean, Dry Air (CDA)

Filtered to 5 micron particulate contamination.  
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<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

<sup>3</sup> Under operating conditions which are greater or less than nominal, performance may be less than specification provided



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