



**Alltest Instruments, Inc.**

500 Central Ave.  
Farmingdale, NJ 07727

P: (732) 919-3339  
F: (732) 919-3332

**alltest.net**  
sales@alltest.net

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## AUTOMATED THERMAL STRESS SYSTEMS

Automated Thermal Stress Systems (ATSS) accelerate thermal stress testing with rapid thermal shocking, accelerated product stressing, and controlled thermal cycling. Thermotron ATSS Chambers offer turnkey system integration to meet demanding test needs (IEC, MIL-STD, JEDEC, IPC, etc.). Thermal stressing is ideal for many industries including: automotive, military, aerospace, electronics, telecommunications, and more.

### ATSS Chamber Features

- Multiple Chamber Sizes and Performance Configurations
- Space-Saving, Self-Contained Design
- 8825 Controller
- Worldwide Service & Support

### Bi-Directional Zone Control

Bi-Directional Zone Control allows heating and cooling in either zone. Product temperature change rates are monitored by Product Temperature Control algorithms that control the product's temperature based on user-defined parameters.

Powerful circulator motors deliver high volume airflow to each zone for tight gradients, fast recovery, and test repeatability. Heating in the cold zone provides an efficient means for automatic defrost, and allows this portion of the chamber to be used for conventional thermal cycling.



### Retractable Transfer Mechanism

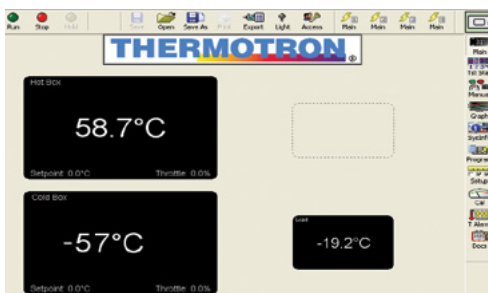
The patented retractable transfer mechanism makes full use of each zone's workspace. This feature increases product loading and throughput potential and reduces overall height requirements. The transfer carrier basket is designed to withstand rigorous temperature changes, yet be as light as possible to minimize thermal loading restraints. Built-in safety features detect transfer basket jams and prevent basket transfers while the doors are open.



### 8825 Controller

The 8825 Controller is a 12-inch touchscreen developed specifically for programming and controlling thermal stress test profiles. Main screen navigation buttons make it easy to get from screen to screen.

- Automatic and Manual Operation Modes
- Automatic Product Carrier Transitions and Backup/Restore
- Built-In System Monitor and Alarm Status Screens
- Data Export via USB Port
- Detailed Test Profile Graphs
- Ethernet-Compatible and Web-Enabled
- Multi-Level, Password-Based Security System
- Pre-Programmed Profiles and Guided Program Creation
- Product Carrier Location Display
- Product Temperature Control
- Programmed Automatic Defrost Cycle
- Selectable Transfer Soak Methods
- Step-by-Step Calibration



# GENERAL SPECIFICATIONS

| Model                                                                                                                                                                        | ATSS-30-2-2                                                                | ATSS-30-4-4                                                 | ATSS-80-6-6                                      | ATSS-80-10-10                                          | ATSS-130-6-6                                                                  | ATSS-130-15-15                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------|
| Temperature Range<br>Cold Zone<br>Hot Zone                                                                                                                                   | -73°C to 180°C (-100°F to 356°F)<br>25°C to 215°C (77°F to 419°F)          |                                                             |                                                  |                                                        |                                                                               |                                                     |
| Temperature Control Tolerance                                                                                                                                                | +/- 1.1°C (+/- 2°F)                                                        |                                                             |                                                  |                                                        |                                                                               |                                                     |
| Actual Test Zone — W x D x H<br>Inches<br>Centimeters                                                                                                                        | 18 x 23 x 13<br>45 x 58 x 33                                               |                                                             | 30 x 23 x 16<br>76 x 58 x 41                     |                                                        | 30 x 32 x 16<br>76 x 81 x 41                                                  |                                                     |
| Transfer Basket Size — W x D x H<br>Inches<br>Centimeters                                                                                                                    | 12 x 14 x 12<br>30 x 35 x 30                                               |                                                             | 25 x 14 x 14.5<br>63 x 35 x 37                   |                                                        | 25 x 23 x 14.5<br>63 x 58 x 37                                                |                                                     |
| Transfer Time Between Zones                                                                                                                                                  | Approx. 8 Seconds                                                          |                                                             |                                                  |                                                        |                                                                               |                                                     |
| Maximum Weight Capacity in Basket<br>Pounds / Kg                                                                                                                             | 20 / 9                                                                     |                                                             | 100 / 45                                         |                                                        |                                                                               |                                                     |
| Interior Airflow                                                                                                                                                             | 400 SCFM (11.3m3/minute)                                                   |                                                             | 1,200 SCFM (33.9m3/minute)                       |                                                        |                                                                               |                                                     |
| Inlet Water —<br>Gal / Liters per Minute<br>29.4°C (85°F)<br>23.9°C (75°F)<br>18.3°C (65°F)                                                                                  | Air Cooled                                                                 |                                                             |                                                  | 16 / 60<br>9 / 34<br>7.5 / 28                          | Air Cooled                                                                    | 24 / 91<br>14 / 53<br>11 / 44                       |
| Noise Level                                                                                                                                                                  | 75 dBA                                                                     |                                                             | 78 dBA                                           |                                                        |                                                                               |                                                     |
| Move-In Dimensions — W x D x H<br>Inches<br>Centimeters                                                                                                                      | 34 x 70 x 80<br>87 x 178 x 204                                             |                                                             | 49 x 70 x 83<br>124 x 178 x 211                  |                                                        | 49 x 83 x 83<br>124 x 211 x 211                                               |                                                     |
| Performance* — Lbs / Kg<br>1010.7, A (85°C to -55°C)<br>1010.7, B (125°C to -55°C)<br>1010.7, C (150°C to -65°C)<br>1010.7, D (200°C to -65°C)<br>1010.7, F (175°C to -65°C) | 13 / 6<br>9 / 4<br>2 / 1<br>LN <sub>2</sub> Boost<br>LN <sub>2</sub> Boost | 20 / 9<br>20 / 9<br>7 / 3<br>LN <sub>2</sub> Boost<br>4 / 2 | 55 / 25<br>33 / 15<br>14 / 6.5<br>2 / 1<br>9 / 4 | 60 / 27<br>60 / 27<br>30 / 13.5<br>15 / 7<br>25 / 11.5 | 45 / 21<br>25 / 12<br>7 / 3<br>LN <sub>2</sub> Boost<br>LN <sub>2</sub> Boost | 80 / 37<br>80 / 37<br>50 / 23<br>25 / 12<br>40 / 18 |
| Compressor Size                                                                                                                                                              | (2) 2.5 HP                                                                 | (2) 4 HP                                                    | (2) 6 HP                                         | (2) 10 HP                                              | (2) 6 HP                                                                      | (2) 15 HP                                           |
| Shipping Weight (Approx.)<br>Pounds / Kg                                                                                                                                     | 1,400 / 637                                                                | 1,480 / 671                                                 | 2,000 / 910                                      | 2,160 / 980                                            | 2,160 / 980                                                                   | 2,400 / 1,088                                       |
| Electrical Service — Full Load Amps<br>460 / 3 / 60<br>230 / 3 / 60<br>208 / 3 / 60<br>400 / 3 / 50                                                                          | 36<br>60<br>66<br>39                                                       | 39<br>66<br>72<br>45                                        | 44<br>88<br>107<br>54                            | 59<br>107<br>125<br>68                                 | 57<br>115<br>126<br>63                                                        | 70<br>148<br>168<br>80                              |

\*Performance to Mil-Std 883E

Performance is based on 60 Hz and laboratory ambient conditions of 23.9°C (75°F) with 50% relative humidity, and may vary slightly on 50 Hz power or at other temperature and humidity levels. ATSS chambers are designed for normal laboratory conditions.

This unit is not designed for use with hazardous materials. If hazardous materials are involved, please consult the factory for an alternative quote for a properly designed unit.

Specifications are subject to change without notice.

For more than 55 years, Thermotron has provided quality environmental test equipment. We've worked to establish a trusted reputation among our peers, and when people hear the name *Thermotron*, they have confidence in the testing of their own product. We've been building our name since 1962; now it's your turn.

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**T H E R M O T R O N . C O M**

US: 291 Kollen Park Drive, Holland, Michigan 49423 | P: (616) 393-4580 | F: (616) 392-5643 | [info@thermotron.com](mailto:info@thermotron.com)

UK: Winch Rd., Kent Science Park, Sittingbourne, Kent, ME9 8EF England | P: 01795 436333 | F: 01795 436777 | [sales@thermotron.co.uk](mailto:sales@thermotron.co.uk)

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