

# AST-35 Accelerated Stress Test System



## THERMOTRON®

### Forcing Defects to Reduce Your Costs

Thermotron's Accelerated Stress Test (AST) System can help you achieve product maturity during the design, development and production cycles by forcing defects that might normally take years to uncover. In turn, this helps you produce a more reliable product. The AST System can be used for a variety of extreme stress testing and screening methods including ART, DV, FAST, HALT, HASS, STRIFE, Step-Stress, and many others.

Years of experience in combining ultra high rate temperature cycling chambers with vibration systems back every AST System we develop—which provides you with highly accurate and effective testing. Each AST System is designed to be used with Thermotron's Product Test Systems (PTS) which can stimulate and monitor multiple product parameters while under test.

#### THERMOTRON INDUSTRIES

291 Kollen Park Drive  
Holland, Michigan, USA 49423  
Marketing: (616) 393-4580  
Main: (616) 392-1491  
Fax: (616) 392-5643  
E-mail: [info@thermotron.com](mailto:info@thermotron.com)

#### THERMOTRON INDUSTRIES, U.K.

3 Heard Way  
Eurolink Industrial Estate  
Sittingbourne, Kent  
ME 10 3 SA England  
Phone: 01795 436333  
Fax: 01795 436777  
E-mail: [info@thermotron.co.uk](mailto:info@thermotron.co.uk)

Visit us on the Internet  
<http://www.thermotron.com>

# Our AST System is:



## An Extreme Transition Rate Chamber

Each Thermotron AST chamber is liquid nitrogen cooled for ultra-fast temperature change rates. The high volume air distribution system allows high air velocity past products which facilitates high product stress levels.



## A Multi-Axis Repetitive Shock Vibration System

Thermotron repetitive shock shakers have a unique thermal isolation system. During operation it minimizes thermal loading on the chamber and provides a stable condition for impactor operation. Teflon-coated impactors last longer and reduce maintenance downtime, allowing more time for testing. The shaker's standoff mounting design maximizes vibration transmissibility.

## The Benefits of a Single Source Supplier

Using test equipment from one manufacturer, and control systems from another, causes support confusion. Thermotron eliminates that problem by designing, manufacturing and supporting all of the hardware and software used with our testing systems. This not only means a more finely integrated system, but superior service.

With service centers worldwide, we give you immediate access to factory-trained engineers who are familiar with your system's operation. On-call and on-site troubleshooting is handled by expert technicians who can promptly answer your questions. Local service centers offer factory direct assistance with inventories of standard parts and accessories to keep your equipment on line.

### EXTREME TRANSITION RATE CHAMBER

<b>Workspace Dimensions</b>	42" W x 42" D x 40" H (1.06m W x 1.06m D x 1.01m H)
<b>Temperature Range</b>	-100° C to +200° C (-148° F to +392° F)
<b>Temperature Change Rate</b>	Greater than 70° C/min (125° F/min) on products*
<b>Liquid Nitrogen Cooling System</b>	Minimum 30 PSI input
<b>Exterior Dimensions</b>	85" W x 61" D x 105" H (2.16m W x 1.54m D x 2.66m H)
<b>Doors</b>	Two (front and rear)
<b>Windows</b>	Three 20" x 20" (50 cm x 50 cm)
<b>Access Ports With Sealed Door</b>	Two 3" x 8" (7 cm x 20 cm)
<b>Blower HP</b>	7.5 HP
<b>Airflow</b>	4,000 SCFM
<b>Heater Size</b>	100 kW**
<b>Power</b>	460v/3PH/60Hz 133 Amp Full Load, 175 Amp Minimum Service*** 400v/3PH/50Hz 155 Amp Full Load, 200 Amp Minimum Service***
<b>Door Interlock</b>	Mechanical Lockout
<b>Control System</b>	PC- Based with Lab View Interface
<b>Hi/Low Limit</b>	Therm-Alarm
<b>CE or CSA Option</b>	Available

\* Dependent on range and chamber loading

\*\* Smaller size heating systems available which reduces electrical service sizes

\*\*\* Other input voltages and frequencies available

Specifications subject to change.

### MULTI-AXIS REPETITIVE SHOCK VIBRATION SYSTEM

<b>Frequency Range</b>	0 to >10,000 Hz
<b>Acceleration Levels</b>	Greater Than 50 gs Bare Table*
<b>Number of Impactors</b>	Dependent on Performance Option Selected
<b>Impactor Air Requirement</b>	90 PSI Compressed Air
<b>Axes Excited</b>	3 Linear, 3 Rotational
<b>Maximum Payload Support Capability</b>	628 lbs. (284 Kg)**
<b>Table Sizes</b>	26" x 26", 30" x 30", 34" x 34", 38" x 38" (66cm x 66cm, 76cm x 76cm, 86cm x 86cm, 96cm x 96cm)
<b>Grid Pattern</b>	4" x 4" Grid (10cm x 10cm)

\* Dependent on table size and performance option selected

\*\* Can be increased for larger loads