

Liquid Nitrogen Stress Screening Chambers



THERMOTRON

Reducing Failures Through Rapid Stress Screening Methods

Thermotron's Liquid Nitrogen Stress Screening chamber (LNSS) is the latest advancement for stress screening methods. This high performance thermal chamber allows for very aggressive product temperature change rates. The effectiveness of the screening test procedure is improved through the uniform airflow of the chamber. Cutting costs, improving test times, and reducing failures is what the LNSS is all about.

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

European Operations
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: Thermotron_uk@compuserve.com

Visit us on the Internet
www.thermotron.com

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Benefits

- ¥ Even distribution of high volume airflow allows for fast and uniform screening.
- ¥ Mechanical door lock prohibits entry while chamber is in operation.
- ¥ The 7800 Programmer/Controller features a 3-1/2" disk drive, digital refrigeration control, a large LCD screen, a Thermalarm safety limit, and a System Monitor for diagnostics and failure indication.
- ¥ Microprocessor-controlled temperature offset, or setpoint margining, increases product temperature change rate performance.
- ¥ Condensation control on test specimens.
- ¥ Chamber abilities include a wide temperature range spanning from -100°C to +200°C.
- ¥ Solenoid valves are standard. Optional proportional liquid nitrogen valves are available for closer temperature control and tolerance.
- ¥ Backplane and port access provide convenient support for product test electronics and continuous failure monitoring.
- ¥ Multi-level password security ensures the safety and integrity of a test.
- ¥ Optional oxygen monitor is available for safe use of the liquid nitrogen.
- ¥ Optional CE compliance.

EQUIPMENT SPECIFICATIONS

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| Workspace Dimensions | 26" w x 34" d x 30" h (66cm x 86cm x 76cm) |
| Exterior Dimensions | 69" w x 46" d x 91" h (175cm x 117cm x 231cm) |
| Weight | 1600 lbs. (727 kg.) |
| Temperature Range | -100°C to 200°C (-148°F to 392°F) |
| Product Temperature Change Rate | Greater than 45°C/min (greater than 80°F/min) |
| Liquid Nitrogen Supply | 30 psi input minimum 90 psi input maximum |
| Heater Size | 96 kW |
| Blower Size | 5 Hp |
| Voltage | 460/3/60 133 Full Load Amps, 175 Minimum Service 400/3/50 150 Full Load Amps, 200 Minimum Service |

-Specifications subject to change.

-The addition of accessories may impact performance.

-Special order options are available, please check with Thermotron.

Accelerated Stress Screening Processes

The LNSS chamber is designed to accelerate thermal stress on multiple products. Used mainly for production level screening, this high performance machine forces possible failures to occur very rapidly. Using this method, the time-consuming dwell periods can be effectively eliminated.

This chamber allows multiple testing capabilities. You can expose failures in deficient products and eliminate early life failures. Uncover process defects, component defects, design problems and weaknesses before the product ever reaches the end user. The testing process will happen in your facility rather than in the hands of your customer.

7800 Programmer/Controller: Sophisticated Simplicity

The 7800 Programmer/Controller represents revolutionary technological enhancement. The standard 3-1/2" disk conveniently located near the door makes it easy for you to store and transport data for generating reports and charts. The disk drive also allows you to transfer programs from chamber to chamber limiting the number of reentry mistakes. The disk drive can eliminate the need for a traditional chart recorder.

Increased operating speed and additional memory capacity provide a new level of performance for your testing requirements. Easily accessible editing options allow the user to edit the program if a mistake is made without having to start the entire program over. The controller features on-line, context-sensitive help to assist in programming and editing. Overall, the 7800 Programmer/Controller is simple to use, easy to understand, and a worthy device for the serious tester.