



QRS™-700 VIBRATION SCREENING SYSTEM AND LN2 THERMAL CHAMBER

Mobile Vibration Screening and LN2 Thermal Chamber For Small Products or Extremely High Performance

(Shown with optional remote console)



Designed for extreme testing conditions, The QRS-700 system meets the challenge making Accelerated Stress Testing easy to implement in laboratory or manufacturing environments. The patented vibration table generates realistic 6 dof vibration motion assuring efficient precipitation of material and workmanship flaws such as bad intermittent connection and bonds, and PCB opens and shorts. Like other systems in the QRS series, the QRS-700 system uses pneumatic vibration to induce controlled repeatable omni-axial excitation within the most efficient frequency range. For ease of operation, the QRS-700 system is controlled via the SSC-2000 PC-based controller.

THE QRS ADVANTAGE

- Patented 6 Degree of Freedom Quasi-Random Segmented Vibration Table for Superior Performance
- Optimized for HALT, HASS, ESS and other Accelerated Testing Methods
- Proprietary Algorithms provide unexcelled accuracy and repeatability
- 6 Control Accelerometers anywhere on table top for true closed-loop control
- 5 Hz to 3000 Hz Continuous PSD
- Product Protection using Redundant Thermal and Vibration Safeties

Specifications

Omni-Axial Quasi-Random Vibration Table

Excitation	Omni-axial quasi-random vibration excites all axes of motion simultaneously										
Actuation	Four pneumatic, impulse-type vibrators										
Vibration	Six degrees of Freedom, continuous broadband spectrum										
Control	Digital flow valve										
Typical Acceleration (Average of x, y, z)	<table border="0"> <tr> <td>Freq (Hz)</td> <td>15 x 18</td> </tr> <tr> <td>5-1000</td> <td>33 g_{rms}</td> </tr> <tr> <td>5-2000</td> <td>52 g_{rms}</td> </tr> <tr> <td>5-3000</td> <td>55 g_{rms}</td> </tr> <tr> <td>5-5000</td> <td>61 g_{rms}</td> </tr> </table>	Freq (Hz)	15 x 18	5-1000	33 g _{rms}	5-2000	52 g _{rms}	5-3000	55 g _{rms}	5-5000	61 g _{rms}
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Max Payload	90 Lbs 41 Kg										
Tabletop Dimensions	15"D x 18"W 38cm x 46cm										
Temp Range (°C)	-100 to +200°C										
Rate of Change	>75°C/min going hot >110°C/min going cold										
Spectral Density	Average acceleration spectral density is +/-6 db in 1/3 Octave bands										

System

Safeties	Emergency power-off circuitry, interior light External Hi/Lo Temp limits, Redundant Hi Temp limit
Interior Dimensions	19.0"H x 26"W x 16"D 48cm x 66cm x 41cm
Exterior Dimensions	68"H x 36.63"W x 43"D 173cm x 93cm x 109cm
Weight	900 Lbs/409 Kg
Electrical	480VAC, 3Φ, 60 Hz 400VAC, 3Φ, 50 Hz
Air Requirements	45 SCFM at 90 psig
Port Holes	2 square 4" x 4" (10.2cm)
Cable Notch	3"H x 5"D (7.6 x 12.7cm)

Control

Vibration/Temperature Controller	SSC-2000 PC-based (Notebook or Desktop)
Operating System	Windows 95/98/Millennium
Safeties	Hierarchical key lock, self-test, vibration set point, channel & peak limit protection, Internal Hi/Lo Temp limits, shorted or open thermocouple protection, heater protection thermocouple, phase detector
Accelerometers	6 Control Accelerometers

Included

System Installation & Training	11 available 5B module rack slots to add more response thermocouples RS-232 & GPIB Interfaces
6 Control Accelerometers	
Extended Temperature Range table blanket	Support for 6 Response Accels and 12 Response Thermocouples
Operation & Maintenance Manuals	Low g _{rms} kit for reliable performance below 5 g _{rms}
4 Extendable 3" ID aluminum air flow ducting tubes	Control and Product thermocouples
	O ₂ depletion monitor

Options

Product Response Accelerometer Kit	Product Response Thermocouple Kit
Remote Control Console	Metric Inserts
Spare Parts Kit	Other table insert hole patterns
SBF-100 Fixture Kit	Porthole number, size and location
FSK-100 Fixture Starter Kit	Custom Product Monitoring
Custom Fixture Design and Fabrication	TCP/IP Interface

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