

## QRS™-410T Mobile Vibration Screening System and Thermal Chamber for Medium to Small Products

### KEY FEATURES

- Up to 550lb/250kg load
- Up to 100 °C/minute
- Portable (6 self locking casters)
- Programmable blower speed
- External device control
- TCP/IP interface
- Optional Rear Doors
- Door safety interlocks
- Standard 3" and 4" ducting
- Vacuum jacketed LN2 hookup hose



The QRS-410T is optimized for Accelerated Testing Methods, including HALT & HASS with true closed-loop control and unexcelled accuracy and repeatability

The mobility of the QRS-410T series omni-axial Quasi-Random Vibration and LN2 cooled thermal cycling chambers make Accelerated Stress Testing easy to implement.

### OPTIMIZED VIBRATION TABLE

The proprietary 6 Degree of Freedom Quasi-Random Segmented Vibration Table has been optimized for today's testing environments. The 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.

### ACCURATE, RELIABLE TESTING

Like other systems in the QRS series, the QRS-410T system uses pneumatic vibrators to drive vibration table to induce controlled repeatable omni-axial excitation within the most efficient frequency range. This system can easily be moved from production to R&D areas. For ease of operation, the QRS-410T system is controlled via the SSC-2000 PC-based controller. Additional data acquisition can be added for the most versatile system on the market. This system provides user-friendly tools for easy implementation.



## SPECIFICATIONS:

### Vibration Table

- Omni Axial Quasi-random vibration excites all axes of motion simultaneously
- Six Degree of freedom, continuous broadband spectrum
- Six, Eight, Nine or Thirteen pneumatic impulse type hammers
- Table Top Dimensions
  - 26"D x 30"W (6/9 hammers)
  - 26"D x 38"W (8/13 hammers)
  - 38"D x 38"W (13/21 hammers)
- Digital Flow Valve
- Spectral Density is +/- 6db in 1/3 octave band
- Maximum Payload
  - 26x30 – 250/250lbs (114/114Kgs)
  - 26x38 – 300/325lbs (136/148Kgs)
  - 38x38 – 450/500lbs (208/227Kgs)
- Typical Acceleration (gRms)
 

Freq (Hz)	26x30	26x38	38x38
5-2000	36/46	37/49	35/47
5-5000	50/64	52/69	49/66

### Thermal System

- Temperature Range -100° to + 200° C
- (Liquid Nitrogen Cooled)
- Product rates of change up to 100°C/minute

### System Safeties

- Emergency power-off circuitry
- External Hi/Lo Temperature Limits
- Blower rotation detection
- Blower/Heating/Cooling/Purge door interlock
- Interior Light
- Redundant Hi Temperature Limit
- Power phase detection

### System Hardware

- Interior Dimensions:
  - 42"H x 42"W x 42"D
  - 1067H x 1067W x 1067D mm
- Weight:
  - 2,100lbs (1000Kg)
- Electrical Requirements:
  - 380 to 480VAC, 3Φ, 50 to 60 Hz
- Port Holes: Three 6-3/8" (162mm) diameter
- Exterior Dimensions:
  - 85.0"H x 88.0"W x 53.5"D
  - 2159H x 2235W x 1359D mm
- Air Requirements
 

Table	SCFM	LPM
26x30	70/100	1982/2831
26x38	90/145	2548/4106
38x38	145/235	4106/6654

### Controller

- SSC-2000 PC-based Software
- Industrial or Desktop or Tower Computer
- Supports 14 control and/or product thermocouples
- Windows® NT/2000/XP
- Supports 1-24 control and/or product response accelerometers

### Controller Safeties

- Hierarchical key lock
- Internal Hi/Lo temperature limits
- Blower rotation detection
- Blower/Heating/Cooling/Purge door interlock
- Vibration set point and channel limit protection
- Shorted/open thermocouple protection
- Power phase detection

### Included

- System Installation & Training
- Data-logging
- 6 BNC plugs and control accelerometers
- 6 BNC plugs for additional accelerometers
- Table blanket
- 2 Operations and Maintenance Manuals
- RS-232 and TCP/IP Interface
- Type T Control and 10 Product thermocouples with plugs for total of 12 thermocouples
- Airflow Ducting kit

### Options

- Product Response Accelerometer Kit
- SBF-100 PCB Fixture Kit
- Custom table insert patterns
- Metric Inserts
- Remote control console
- 12 BNC plugs for additional control and/or response accelerometers
- Product Response Thermocouple Kit
- FSK-100 Fixture Kit
- Porthole size, number, location
- Rear doors
- Paint color