

## T1.5



Part Number: 971-4019 (Single Phase)  
971-4021 (3 Phase)

### Standard Features

- High Rate, High Flow Typhoon Thermal System
- xLF2 Vibration Table with PSD Management
- PLC Control
- Desktop PC with a Monitor
- Typhoon Manager Software
- Optional: Vacuum Jacketed Manifold

The T1.5, with its 18" x 18" vibration table, is perfect for performing Highly Accelerated Life Testing (HALT) on small products, or where limited lab space is available. This compact system is built using ESPEC's Qualmark T-system technology which delivers impressive thermal performance and six-degree-of-freedom repetitive-shock vibration. The T1.5 is a practical addition to any company's product reliability program.

<b>Work Space</b>	27.0"w x 27.0"d x 19.5"h (686 mm x 686 mm x 494 mm)
<b>Outer Dimensions</b>	38.8"w x 47.0"d x 80.9"h (985 mm x 1194 mm x 2055 mm)
<b>Table Size</b>	18" x 18" (457 mm x 457 mm)
<b>Actuators</b>	4 Actuators Lubricant-free
<b>Table Capacity<sup>1</sup></b>	80 lb (36 kg)
<b>Acceleration<sup>2</sup></b>	5 – 70 gRMS
<b>Temp Range</b>	+200°C to -100°C
<b>Thermal Ramp Rate<sup>3</sup></b>	60°C/min (Single Phase) 70°C/min (3 Phase)
<b>Power Requirements</b>	208V, 230V (1Φ), 50/60Hz, 70A (Service Rating) 380V, 400V, 440V, 480V 3Φ 50/60Hz 35A (Service Rating)

*See Qualmark product line brochure for configuration options, accessories, and post warranty service and maintenance plans. All specifications are subject to change without notice.*

## T1.5 System includes:

- Two (2) year warranty
- System and software orientation
- Operations & Maintenance manual
- One (1) accelerometer for table control provided  
Three (3) additional accelerometer input channels available
- Two (2) 72" thermocouples provided - one (1) for product, one (1) for air  
Four (4) additional thermocouple input channels available
- One (1) 10 ft accelerometer cable
- Eight (8) User State Relays (USR)
- Control PC with Windows® operating system and monitor



<b>Vibration Features</b>	Table Top Table Top Hardware Actuators Vibration PSD Management Table Product Capacity <sup>1</sup> Vibration Range <sup>2</sup>	18" x 18" (457 mm x 457 mm) 25 threaded holes 3/8-16 on 4" centers (M10 optional) 4 pneumatic, impulse-type, lubricant-free actuators Six degree of freedom, random, OmniAxial™ broadband excitation Monitor and reset to factory specification for Power Spectral Density (PSD) 80 lb (36 kg) 5 - 70 gRMS (10 Hz to 5000 Hz)
<b>Thermal Features</b>	Heating System Cooling System Temperature Range Thermal Ramp Rate <sup>3</sup>	Open-element nichrome type Liquid nitrogen - insulated solenoid valve +200°C to -100°C (+392°F to -148°F) 208V/230V Single Phase: 60°C/min 380V, 400V, 440V, 480V 3 Phase: 70°C/min
<b>Internal Features</b>	Interior Dimension Interior Construction Lighting	27.0" w x 27.0" d x 19.5" h (686 mm x 686 mm x 494 mm) Stainless steel 1 recessed ceiling light
<b>Exterior Features</b>	Exterior Dimensions Doors External Construction Windows Access Ports Door Lock Sound	38.8" w x 47.0" d x 80.9" h (985 mm x 1194 mm x 2055 mm) 1 door, opens approximately 130° Painted steel construction with stainless steel trim (1) 15" x 15" (381 mm x 381 mm) multi-pane window in the door (1) 4" (102 mm) port with phenolic cover, on side Sensor-activated shut down if door opens during operation 73 dBA at 50 gRMS (at 1 meter)
<b>Control</b>	Vibration/Temperature Interface Operating System Safety	PLC based, PC Typhoon Manager Microsoft Windows Eurotherm temperature (independent safety)
<b>Utilities</b>	Electrical  Air	208V, 1Φ, 50/60 Hz, 70A -- 230V, 1Φ, 50/60 Hz, 70A 400V, 3Φ, 50/60 Hz, 35A -- 480V, 3Φ, 50/60 Hz, 25A 32 SCFM @ 85 psi (0.9 m <sup>3</sup> /min at 5.9 bar)

1. Greater load capacities can be designed; contact ESPEC for custom options.
2. Measured on bare table; maximum gRMS level dependent on table configuration.
3. Measured as the average rate between -65°C and 85°C in open air 3" above table center (in an empty chamber); levels vary by make and model

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