

Typhoon 2.0



Part Number: 971-4020 (Single Phase)
971-4022 (3 Phase)

Standard Features

- High Rate, High Flow Typhoon Thermal System
- xLF2 Vibration Table with PSD Management
- PLC Control
- Desktop PC with Monitor
- Typhoon Manager Software

The Typhoon™ 2.0, with its 24" x 24" 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 Typhoon system technology which delivers impressive thermal performance and six-degree-of-freedom repetitive-shock vibration. The Typhoon 2.0 is a practical addition to any company's product reliability program.

Work Space	27.0" w x 27.0" d x 19.5" h (686 mm x 686 mm x 494 mm)
Outer Dimensions	38.8" w x 47.0" d x 80.9" h (985 mm x 1194 mm x 2055 mm)
Table Size	24" x 24" (610 mm x 610 mm)
Actuators	5 Actuators Lubricant-free
Table Capacity¹	100 lb (45 kg)
Acceleration²	5 – 75 gRMS
Temp Range	+200°C to -100°C
Thermal Ramp Rate³	60°C/min (Single Phase) 70°C/min (3 Phase)
Power Requirements	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.

Typhoon 2.0 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



Vibration Features	Table Top	24" x 24" (610 mm x 610 mm)
	Table Top Hardware	36 threaded holes 3/8-16 on 4" centers (M10 optional)
	Actuators	5 pneumatic, impulse-type, lubricant-free actuators
	Vibration	Six degree of freedom, random, OmniAxial™ broadband excitation
	PSD Management	Monitor and reset to factory specification for Power Spectral Density (PSD)
	Table Product Capacity ¹	100 lb (45 kg)
	Vibration Range ²	5 - 75 gRMS (10 Hz to 5000 Hz)
Thermal Features	Heating System	Open-element nichrome type
	Cooling System	Liquid nitrogen - insulated solenoid valve
	Temperature Range	+200°C to -100°C (+392°F to -148°F)
	Thermal Ramp Rate ³	208V/230V Single Phase: 60°C/min 380V, 400V, 440V, 480V 3 Phase: 70°C/min
Internal Features	Interior Dimension	27.0"w x 27.0"d x 19.5"h (686 mm x 686 mm x 494 mm)
	Interior Construction	Stainless steel
	Lighting	1 recessed ceiling light
Exterior Features	Exterior Dimensions	38.8"w x 47.0"d x 80.9"h (985 mm x 1194 mm x 2055 mm)
	Doors	1 door, opens approximately 130°
	External Construction	Painted steel construction with stainless steel trim
	Windows	(1) 15" x 15" (381 mm x 381 mm) multi-pane window in the door
	Access Ports	(1) 4" (102 mm) port with phenolic cover, on side
	Door Lock	Sensor-activated shut down if door opens during operation
	Sound	73 dBA at 50 gRMS (at 1 meter)
Control	Vibration/Temperature Interface	PLC based, PC Typhoon Manager
	Operating System	Microsoft Windows
	Safety	Eurotherm temperature (independent safety)
Utilities	Electrical	208V, 1Φ, 50/60 Hz, 70A -- 230V, 1Φ, 50/60 Hz, 70A 400V, 3Φ, 50/60 Hz, 35A -- 480V, 3Φ, 50/60 Hz, 35A
	Air	40 SCFM @ 85 psi (1.1 m ³ /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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