

Typhoon 3.0



Part Number: 971-4030

Standard Features

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

ESPEC's Qualmark Typhoon™ 3.0 is specifically designed to help the customer who is performing low volume Highly Accelerated Stress Screens (HASS) and needs a chamber with a 36" x 36" vibration table. It is also ideal for performing Highly Accelerated Life Tests (HALT) on mid-sized and larger products. The Typhoon 3.0 vibration table mounts at two different heights, so the interior chamber volume can be adjusted for the needs of the product.

Work Space	Lower Table Position
	44.0"w x 45.0"d x 35.0"h (1118 mm x 1143 mm x 889 mm)
	Upper Table Position
	44.0"w x 45.0"d x 25.0"h (1118 mm x 1143 mm x 635 mm)
Outer Dimensions	56.1"w x 69.6"d x 88.1"h (1425 mm x 1768 mm x 2237 mm)
Table Size	36" x 36" (914 mm x 914 mm)
Actuators	10 Actuators Lubricant-free
Table Capacity¹	450 lb (204 kg)
Acceleration²	5 – 70 gRMS
Temp Range	+200°C to -100°C
Thermal Ramp Rate³	70°C/min
Power Requirements	380V, 400V, 440V, 480V 3Φ 50/60Hz, 80A (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 3.0 System includes:

- Two (2) year warranty
- 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) 20 ft accelerometer cable
- Eight (8) User State Relays (USR)
- Control PC with Windows® operating system and monitor



Vibration Features	Table Top	36" x 36" (914 mm x 914 mm)
	Table Top Hardware	81 threaded holes 3/8-16 on 4" centers (M10 optional)
	Actuators	10 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	450 lb (204 kg)
	Vibration Range ²	5 - 70 gRMS (10 Hz to 5000 Hz)
Thermal Features	Heating System	Open-element nichrome type
	Cooling System	Vacuum jacketed liquid nitrogen injection
	Temperature Range	+200°C to -100°C (+392°F to -148°F)
	Thermal Ramp Rate ³	70°C/min
Internal Features	Interior Dimension	Table in Lower Position: 44.0" w x 45.0"d x 35.0"h (1118 mm x 1143 mm x 889 mm) Table in Upper Position: 44.0" w x 45.0"d x 25.0"h (1118 mm x 1143 mm x 635 mm)
	Interior Construction	Stainless steel
	Lighting	2 recessed ceiling lights
Exterior Features	Exterior Dimensions	56.1" w x 69.6" d x 88.1" h (1425 mm x 1768 mm x 2237 mm)
	Doors	2 doors, one on each side; each door opens 135°
	External Construction	Painted steel construction with stainless steel trim
	Windows	(2) 19" x 19" (483 mm x 483 mm) multi-pane windows; 1 in each door (1) 11" x 17" (280 mm x 432 mm) multi-pane window in the front wall
	Access Ports	(2) 4" (102 mm) round ports with phenolic cover in the front wall (1) 6" (152 mm) round port with phenolic cover in the front wall
	Door Lock	Interlocking system prohibits system operation when any door is ajar
	Sound	73 dBA at 40 gRMS (at 1 meter)
Control	Vibration/Temperature Interface	PLC based, PC Typhoon Manager
	Operating System	Microsoft Windows
	Safety	Eurotherm temperature (independent safety)
Utilities	Electrical	380V, 400V, 440V, 480V, 3Φ, 50/60 Hz, 80A
	Air	80 SCFM Max @ 85 psi (2.3 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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