

Part Number: 971-4250

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

Typhoon 4.0+ Inferno

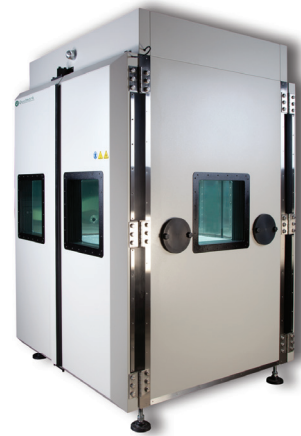
ESPEC’s Qualmark Inferno series has been specifically designed for accelerated testing of sophisticated devices that are destined for harsh operating environments. Our Infernos combine extreme thermal capability (+250°C to -100°C) with 6 degree of freedom random vibration to provide the stimulation necessary to analyze design weaknesses and extend operational margins for mechanisms expected to withstand severe conditions.

Work Space	Lower Table Position 53.8" w x 54.0" d x 53.6" h (1367 mm x 1372 mm x 1362 mm) Upper Table Position 53.8" w x 54.0" d x 34.6" h (1367 mm x 1372 mm x 879 mm)
Outer Dimensions	69.8" w x 78.3" d x 108.4" h (1772 mm x 1989 mm x 2753 mm)
Table Size	48" x 48" (1219 mm x 1219 mm)
Actuators	12 Actuators Lubricant-free
Table Capacity¹	600 lb (272 kg)
Acceleration²	5 – 75 gRMS
Temp Range	+250°C to -100°C
Thermal Ramp Rate³	70°C/min
Power Requirements	380V, 400V, 440V 3Φ 50/60Hz, 150A (Service Rating) 480V 3Φ 50/60Hz 125A (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 4.0+ Inferno System includes:

- Two (2) year warranty
- Operations & Maintenance manual
- One (1) accelerometer for table control
Three (3) additional accelerometer input channels available
- Two 72" high temperature thermocouples - one (1) for product, one (1) for air;
Four (4) additional thermocouple input channels available
- One (1) 20 ft armored accelerometer cable
- Eight (8) User State Relays (USR)
- Control PC with Windows® operating system and flat panel monitor
- Air purge system
- Table control accelerometer cooling system



Vibration Features	Table Top	48" x 48" (1219 mm x 1219 mm)
	Table Top Hardware	144 threaded holes 3/8-16 on 4" centers; M10 optional
	Actuators	12 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	600 lb (272 kg)
	Vibration Range ²	5 - 75 gRMS (10 Hz to 5000 Hz)
Thermal Features	Heating System	Open-element nichrome type
	Cooling System	Vacuum jacketed liquid nitrogen injection
	Temperature Range	+250°C to -100°C (+482°F to -148°F)
	Thermal Ramp Rate ³	70°C/min
Internal Features	Interior Dimension	Table in Lower Position: 53.8" w x 54.0" d x 53.6" h (1367 mm x 1372 mm x 1362 mm) Table in Upper Position: 53.8" w x 54.0" d x 34.6" h (1367 mm x 1372 mm x 879 mm)
	Interior Construction	Stainless steel
	Plenum Exit	Flexible aluminum ducting directs air to the product
	Lighting	2 fiber optic lights
Exterior Features	Exterior Dimensions	69.8" w x 78.3" d x 108.4" h (1772 mm x 1989 mm x 2753 mm)
	Doors	4 automated locking doors, two on each side; each door opens 150°
	External Construction	Painted steel construction with stainless steel trim
	Windows	(4) 17" x 17" (432 mm x 432 mm) multi-pane windows, 1 in each door (1) 17" x 17" (432 mm x 432 mm) multi-pane window in the front wall (4) 6" (152 mm) round ports with phenolic covers, 2 in front and 2 in back
	Access Ports	Interlocking system prohibits system operation when any door is ajar
	Door Lock	73 dBA at 50 gRMS (at 1 meter)
Control	Vibration/Temperature	PLC based, PC
	PLC Based, PC	Typhoon Manager
	Operating System	Microsoft Windows
	Safety	Eurotherm temperature (independent safety) Thermal safety system prevents doors from opening during thermal extremes
Utilities	Electrical	380V, 400V, 440V, 3Φ, 50/60 Hz, 150A; 480V, 3Φ, 50/60Hz, 125A
	Air	96 SCFM Max @ 85 psi (2.7 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.