Part Number: 971-4250

Standard Features

High Rate, High Flow Typhoon Thermal System

xLF2 Vibration Table with PSD Management

Vacuum Jacketed Manifold

Industrial PLC Control

Desktop PC with Flat Panel Monitor
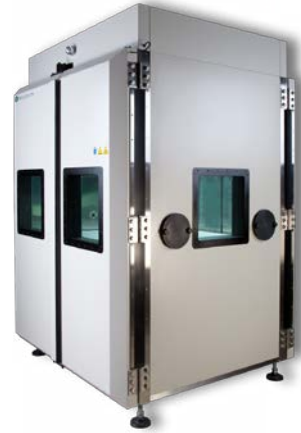
Typhoon Manager Software

Typhoon 4.0+ Inferno

Qualmark's 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 physical hardships.

Work Space	Lower Table Position 53.8"w x 54.0"d x 53.6"h (1367 x 1372 x 1362mm) Upper Table Position 53.8"w x 54.0"d x 34.6"h (1367 x 1372 x 879mm)
Outer Dimensions	69.8"w x 78.3"d x 108.4"h (1772 x 1989 x 2753mm)
Table Size	48" x 48" (1219 x 1219mm)
Actuators	12 Actuators Lubricant-free
Table Capacity[1]	600 lb (272 kg)
Acceleration[2]	5 – 75 gRMS
Temp Range	+250°C to -100°C
Thermal Ramp Rate[3]	70°C/min average
Power Requirements	380V, 400V, 440V 3Φ 50/60Hz, 150A (Service Rating) 480V 3Φ 50/60Hz 125A (Service Rating)

See Qualmark product catalog 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" (1220 x 1220mm)
	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 average

Internal Features		
	Interior Dimension	Table in Lower Position: 53.8"w x 54.0"d x 53.6"h (1367 x 1372 x 1362mm)
		Table in Upper Position: 53.8"w x 54.0"d x 34.6"h (1367 x 1372 x 879mm)
	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 x 1989 x 2753mm)
	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 x 432mm) multi-pane windows, 1 in each door
		(1) 17" x 17" (432 x 432mm) multi-pane window in the front wall
	Access Ports	(4) 6" (152mm) round ports with phenolic covers, 2 in front and 2 in back
	Door Lock	Interlocking system prohibits system operation when any door is ajar
	Sound	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 (2.72 m³/min. at 5.59 bar)

1. *Greater load capacities can be designed; contact Qualmark for custom options.*
2. *Measured on bare table; maximum gRMS level dependent on table configuration.*
3. *Measured -65°C to 85°C in open air 3" above table center; levels vary by make and model.*

920-0294_04

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