

## 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  
Allen-Bradley PLC Control  
Desktop PC with a 17" Monitor  
Typhoon Manager Software

The 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. Like our Typhoon 4.0, 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.

<b>Work Space</b>	Lower Table Position 44" w x 45" d x 35" h (1118 x 1143 x 889mm) Upper Table Position 44" w x 45" d x 25" h (1118 x 1143 x 635mm)
<b>Outer Dimensions</b>	56.1" w x 68.8" d x 84" h (1425 x 1748 x 2134mm)
<b>Table Size</b>	36" x 36" (914 x 914mm)
<b>Actuators</b>	10 Actuators Lubricant-free
<b>Table Capacity<sup>1</sup></b>	450lbs (204 kg)
<b>Acceleration<sup>2</sup></b>	5 – 70 gRMS typical >100 gRMS special order
<b>Temp Range</b>	+200°C to -100°C
<b>Thermal Ramp Rate<sup>3</sup></b>	70°C – 100°C/min average
<b>Power Requirements</b>	380V, 400V, 440V, 480V 3Φ 50/60Hz, 80A (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 3.0 System includes:

- One (1) year warranty
- System start-up by a Qualmark certified service engineer
- System and software orientation
- Operations & Maintenance manual
- One (1) accelerometers 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 17" flat screen monitor



<b>Vibration Features</b>	Table Top	36" X 36" (914 x 914mm)
	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 <sup>1</sup>	450 lbs. (204 kg)
Vibration Range <sup>2</sup>		5 - 70 gRMS (10 Hz to 5000 Hz) typical (>100 gRMS special order)
<b>Thermal Features</b>	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 <sup>3</sup>	70°C - 100°C /minute average
<b>Internal Features</b>	Interior Dimensions	Table in Lower Position: 44"w x 45"d x 35"h (1118 x 1143 x 889mm)
	Table in Upper Position:	44"w x 45"d x 25"h (1118 x 1143 x 635mm)
	Interior Construction	Stainless steel
	Plenum Exit	Adjustable airflow to direct air to product
	Lighting	2 recessed ceiling lights
<b>Exterior Features</b>	Exterior Dimensions	56.1"w x 68.8"d x 84"h (1425 x 1748 x 2134mm)
	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" (482 x 482mm) multi-pane windows; 1 in each door (1) 11" x 17" (280 x 432mm) multi-pane window in the front wall
	Access Ports	(2) 4" (102mm) round ports with phenolic cover in the front wall (1) 6" (152mm) round port with phenolic cover in the front wall
	Door Locks	Interlocking system prohibits system operation when any door is ajar
	Sound	Nominally 73 dB (A) at 1 meter
	<b>Control</b>	Vibration/Temperature
PLC Based, PC		Typhoon Manager
Operating System		Microsoft Windows
Safety		Eurotherm temperature (independent safety)
<b>Utilities</b>	Electrical	380V, 400V, 440V, 480V, 3Φ, 50/60 Hz, 80A
	Air	80 SCFM Max @ 80 PSI (1.70 m3/min at 5.52 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.

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