



CHAMBER TYPHOON 4.0



PART NUMBER: 971-4001

CONFIGURABLE FEATURES

MAIN SUPPLY VOLTAGE

VIBRATION TABLE

COMPUTER

SOFTWARE

WORK SPACE

UPPER TABLE POSITION

53.7" w x 53.3" d x 36" h
(1364 x 1353 x 914mm)

LOWER TABLE POSITION

53.7" w x 53.3" d x 55" h
(1364 x 1353 x 1397mm)

TABLE SIZE

48" x 48"
(1220 x 1220mm)

OUTER DIMENSIONS

80.1" w x 69.6" d x 109" h
(2035 x 1768 x 2768mm)

ACCELERATION

Over 50 G

TEMP RANGE

+ 200°C to -100°C

POWER REQUIREMENTS

380V, 400V, 440V, 480V
3Φ
50/60Hz,
100A

12 ACTUATORS

The Typhoon 4.0 is the largest standard chamber in the Qualmark line. It is designed specifically for the task of performing Highly Accelerated Stress Screening (HASS) and for HALT on large products. Its 48" x 48" vibration table is capable of supporting hundreds of pounds of products and fixturing and mounts at two different heights.

ACCESSORIES

CE KIT (INTERNATIONAL)

HALT FIXTURE KIT

MULTIPLE DEWAR KIT

CALIBRATION KIT

OXYGEN SENSORS

LAY-DOWN CRATING

Q-LINK SOFTWARE

AIR PURGE KIT

QUALMARK SPECTRUM ANALYZER

REDUNDANT VIBRATION ACCELEROMETER KIT

SEISMIC HOLD DOWN CHANNEL KIT

AUXILIARY THERMOCOUPLES

GHI SPECTRUM & FATIGUE ANALYZER

KEEPFUL VACUUM INSULATED LIQUID LEVEL

PCBV ADHESIVE-MOUNT ACCELEROMETER KIT

PCA QUICK RELEASE FIXTURE

Typhoon-4.0 Features

Included

- 1 year warranty
- Start-up and check out of complete system by a factory trained field service engineer
- Customer training on using the PC control system
- Operations & Maintenance Manual
- Table Control Accelerometer and Cable
- 2 Thermocouples Provided
- Product and air chamber control thermocouples
- (8) user controllable solid state relays
- (4) auxiliary thermocouple input channels
- (3) auxiliary vibration input channels
- Control PC with Windows operating system
- 17" Monitor



Vibration Features

Table Top	48" x 48" (1220mm x 1220mm)
Table Top Hardware	(144) threaded holes 3/8-16 on 4" centers
Actuators	12 pneumatic, impulse-type actuators
Vibration	Six degree of freedom, random, Omni-Axial™ broadband excitation
Modulation	ASX Actuators (272kg)
Table Product Capacity	Recommended 600 lbs. (272.16kg) Maximum* 1200lbs (544.31kg) *may require custom options
Vibration Range	50 Grms (10Hz to 5kHz) 60 Grms (10 HZ to 1kHz)

Thermal Features

Heating System	Open-element NiChrome type
Cooling System	Liquid Nitrogen Injection
Temperature Range	+200°C to design limit -100°C to design limit (+392°F to -148°F)
Temperature Change Rate	200°C/min (max ramp rate) 70°C/min from -50°C to +150°C (typical HALT range) 60°C/min from -50°C to +120°C (example range)

Internal Features

Interior Dimensions	53.7" w x 53.3" d x 36" h, upper position (1364mm x 1353mm x 914mm) 53.7" w x 53.3" d x 55" h, lower position (1364mm x 1353mm x 1397mm)
Interior Construction	304 Stainless Steel
Side Plenum	Adjustable airflow to direct the air to the product
Lighting	Recessed ceiling lights and a fiber-optic wand

Exterior Features

Exterior Dimensions	80.1" w x 69.6" d x 109" h (2035mm x 1768mm x 2768mm)
Doors	(4) automated locking doors two on each side, open 95° for easy access to product under stimulation
External Construction	Painted cold rolled steel construction with Stainless steel trim
Windows	(4) 18" x 18" (457mm x 457mm) multi-pane windows (one window on each door)
Access Ports	(4) 6" x 10" (152mm x 254mm) ports with phenolic covers 2 on front & 2 on back
Door Interlocks	Inhibit thermal and vibration system when any door is ajar
Electrical Requirements	380V, 400V, 440V, 480V, 3Φ, 60 Hz, 100A
Air Requirements	96 SCFM Max @ 80 PSI (2.72 m3/min. at 5.52 bar)
Sound Level	Nominally 73 dB (A) at 1 meter

Control

Thermocouples	Additional 6 Auxiliary Thermocouples input channels
Vibration/Temperature Control	PLC based, PC Controller
User Interface	OVS Manager
Operating System	Microsoft Windows
Safety	Eurotherm Temperature