



## CHAMBER *TYPHOON 3.0*



The Typhoon 3.0 is the latest addition to the Qualmark chamber line, specifically designed to help the customer who is performing low volume HASS and needs a chamber with a 36" x 36" vibration table. It is also ideal for performing 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.

PART NUMBER: 971- 4030

### CONFIGURABLE FEATURES

MAIN SUPPLY VOLTAGE  
VIBRATION TABLE  
COMPUTER  
SOFTWARE

### WORK SPACE

UPPER TABLE POSITION  
44.1"w x 45"d x 25"h  
(1120 x 1143 x 635mm)

LOWER TABLE POSITION  
44.1"w x 45"d x 35"h  
(1120 x 1140 x 889mm)

### OUTER DIMENSIONS

55.9"w x 69.2"d x 84.0"h  
(1420 x 1760 x 2134mm)

### TEMP RANGE

+ 200°C to -100° C

### 10 ACTUATORS

### TABLE SIZE

36" x 36"  
(914 x 914mm)

### ACCELERATION

Over 50 G

### POWER REQUIREMENTS

380V, 400V, 440V, 480V  
3Φ  
50/60Hz,  
80A

## ACCESSORIES

CE KIT (INTERNATIONAL)  
HALT FIXTURE KIT  
MULTIPLE DEWAR KIT  
CALIBRATION KIT  
OXYGEN SENSORS  
ELEVATION STAND  
CABLE NOTCHES  
Q-LINK SOFTWARE  
AIR PURGE DOOR LOCK KIT  
DUAL WINDOW PORT ADAPTOR  
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-3.0 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	36" x 36" (914mm x 914mm)
Table Top Hardware	(81) threaded holes 3/8-16 on 4" centers
Actuators	10 pneumatic, impulse-type actuators
Vibration	Six degree of freedom, random, Onmi-Axial™ broadband excitation
Modulation	ASX Actuators (204kg)
Table Product Capacity	Recommended 450 lbs. (204.12kg) Maximum* 900lbs (408.23kg) *may require custom options
Vibration/Temperature	PLC based, PC
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	table in lower position: 44.1" w x 45" d x 35" h (1120mm x 1143mm x 889mm) table in upper position: 44.1" w x 45" d x 25" h (1120mm x 1143mm x 635mm)
Interior Construction	304 Stainless Steel
Side Plenum	Adjustable airflow to direct the air to the product
Lighting	Recessed ceiling lights

## Exterior Features

Exterior Dimensions	55.9" x 69.2" x 84.0" (1420mm x 1760mm x 2134mm)
Doors	(2) doors, one each side, doors open 95° for easy product access
External Construction	Painted stainless steel construction with stainless steel trim
Windows	(2) 19" x 19" (482mm x 482mm) multi-pane windows (1 in each door) (1) 11" x 17" (280mm x 432mm) multi-pane window in the front wall
Access Ports	(2) 4" round ports (102mm) with phenolic cover in the front wall (1) 6" (152mm) round port with phenolic cover in the front wall
Door Interlocks	Prohibit thermal and vibration system when any door is ajar
Electrical Requirements	380V, 400V, 440V, 480V, 3Φ, 60 Hz, 80A
Air Requirements	80 SCFM Max @ 80 PSI (2.27 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	PLC based, PC
Control	Controller
User Interface	OVS Manager
Operating System	Microsoft Windows
Safety	Eurotherm Temperature