



Presto Stantest Pvt. Ltd.

I-42, DLF Industrial Area Phase-1, Delhi Mathura Road, Faridabad 121003, Haryana, India

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Altitude Test Chamber



Model :PA300-40h-5K

An altitude test chamber is a specialized simulation system engineered to replicate high-altitude, low-atmospheric-pressure environments. By precisely controlling ambient pressure alongside temperature and humidity parameters, an altitude temperature test chamber enables rigorous evaluation of product functionality, structural integrity, and performance under extreme operational conditions.

Equipped with high-precision vacuum pumps, refrigeration circuits, and integrated microprocessor control architectures, Presto Enviro altitude chamber delivers repeatable test environments. Safety interlocks and automated monitoring systems ensure continuous operation and data accuracy across complex flight profiles and transport simulation protocols.





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Technical Specification

Model	PA300-40h-5K	PA600-40h-5K	PA1000-40h-5K
Volume	300l	600l	1000l
Condenser	Water-cooled	Water-cooled	Water-cooled
Ramp rate	5°C/min average	5°C/min average	5°C/min average
Temperature	-40°C to 180°C	-40°C to 180°C	-40°C to 180°C
Temperature sensor	PT 100 class A	PT 100 class A	PT 100 class A
Temperature accuracy	±0.1 to ±1.2°C until 150°C temperature	±0.1 to ±1.2°C until 150°C temperature	±0.1 to ±1.2°C until 150°C temperature
Temperature uniformity	±1.5°C at extreme temperatures	±1.5°C at extreme temperatures	±1.5°C at extreme temperatures
Heater	SS 316 sheathed heaters	SS 316 sheathed heaters	SS 316 sheathed heaters
Test space dimension	650×600×800 (w×d×h) in mm	800×850×900 (w×d×h) in mm	1000×1000×1000 (w×d×h) in mm
Tray	40kg	60kg	80 kg
Floor load	120kg UDL	120kg UDL	120kg UDL
Humidity range	10% to 98%. The temperature range is from 10°C to 95°C.	Same	Same
Humidity fluctuation	±3% RH	±3% RH	±3% RH
Humidity sensor	Capacitive	Capacitive	Capacitive
Humidity type	Boiler tank steam injection	Boiler tank steam injection	Boiler tank steam injection
Humidity heater	Inconel heaters	Inconel heaters	Inconel heaters
Refrigeration system	Mechanical refrigeration	Mechanical refrigeration	Mechanical refrigeration
Refrigerant	R449A & R23	R449A & R23	R449A & R23
Pressure range	Atmospheric pressure to 1 kPa (10 mbar) absolute	Same	Same
Pressure accuracy	±0.5–1 kPa	±0.5–1 kPa	±0.5–1 kPa
Vacuum pump	Oil-sealed Rotary / Dry Screw Vacuum Pump	Oil-sealed Rotary / Dry Screw Vacuum Pump	Oil-sealed Rotary / Dry Screw Vacuum Pump
Noise level	<70 dB	<70 dB	<70 dB
Viewing window	400x500 in mm	400x500 in mm	400x500 in mm
Port hole size	115mm flange type	115mm flange type	115mm flange type
Wheels	Yes	Yes	Yes
Breather	Yes	Yes	Yes





Key Feature

• **Advanced Airflow Management**

Rear-mounted or top mounted high-temperature circulation fan motor
Optimized airflow distribution for superior uniformity
Reduced thermal stratification inside workspace
Air velocity range from 1–3 m/s

High Performance Refrigeration System

Hermetically sealed compressor technology
Energy-efficient refrigeration design
Eco-friendly refrigerants available
Fast pull-down and recovery performance
Low vibration and quiet operation

Robust Chamber Construction

Interior made of 10mm thick metal sheet
The outside of this thing is made with a special powder coating GI or the steel finishing.
It has dense insulation made of polyurethane
Corrosion-resistant construction
Heavy-duty door hinges and locking system

Intelligent Control System

7-inch / 10-inch touchscreen HMI controller
PLC-based automation system
Multi-step programmable profiles
Real-time trend graph display
USB / Ethernet / RS485 communication
Data logging and export capability

Safety Protection System

Over-temperature protection
Compressor overload protection
Refrigeration pressure safety switch
Sensor failure indication
Emergency stop provision
Leakage current protection
Door limit switch provision
MCB & MPCB protection for single and 3 phase devices
SPP protection
EMI filter

