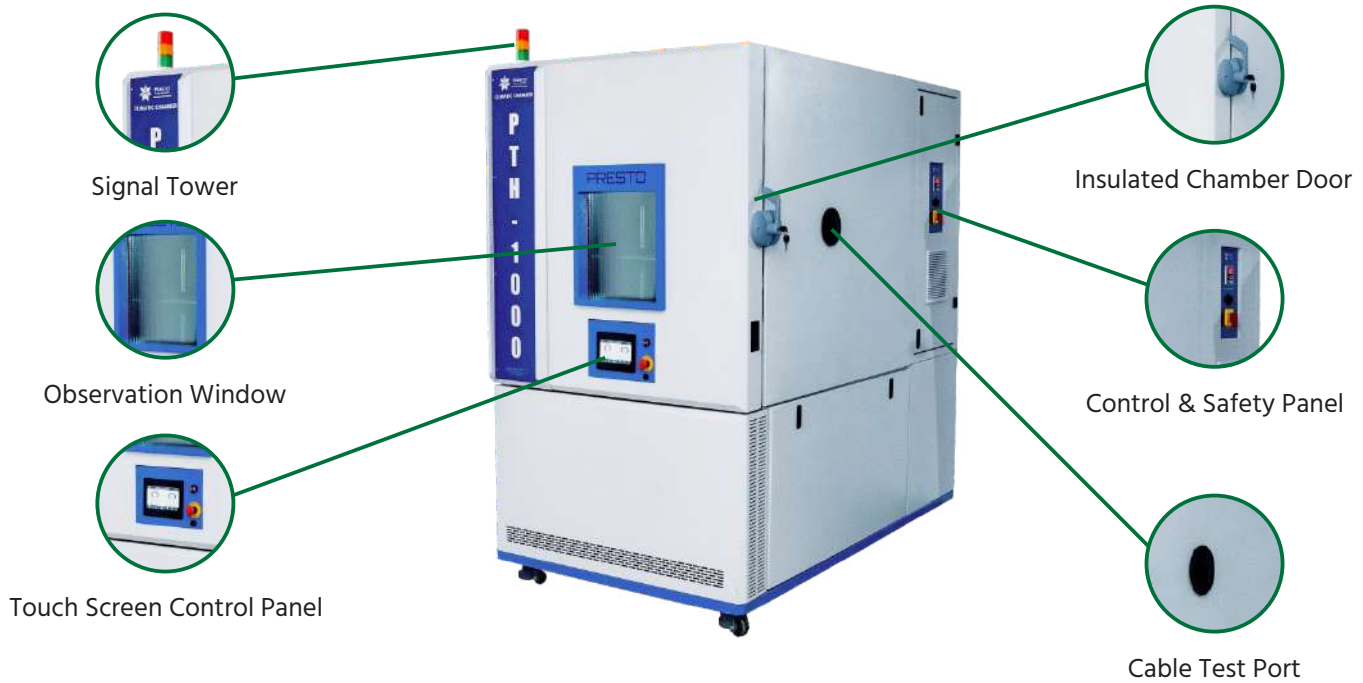


Humidity Chamber | Humidity Test Chamber



Model : PTH Series

Humidity testing machine includes various test cycles, consisting of high- and low-temperature operation, storage tests, temperature cycling, and humidity testing to controlled condensation. These tests can run for multiple hours continuously and are used to simulate environmental stresses to evaluate changes in the product's performance, reliability, and durability.

A humidity climatic chamber can be used to perform tests according to international standards such as IEC, JIS, ASTM, ISO, and DIN, depending on the specific test method being followed.

This environmental chamber, sometimes referred to as a temperature and humidity chamber, is equipped with a humidity control system to expose products to a range of environmental conditions.

After completion of testing, the results allow users to assess potential changes in product performance or identify areas for improvement, which can inform product design updates and reliability improvements. Hence, the humidity environmental chamber plays an important role in accelerated life testing and durability evaluation.

Key Features

- There can be seen no frosting even if the test is conducted for a long duration under Low temperature and low humidity parameters.
- The chamber consists of an Automatic control system refrigerant which improves user experience.
- Able to Set Cyclic Test Functions with user ease.
- A timer would be provided up to 999 hours for auto cut-off
- Safety features would be incorporated to ensure that the temperature does not rise beyond parameters set by the user
- Touch screen HMI Display of parameters with data logging available.
- Compact size with castor wheels to move the chamber in the laboratory
- Thick Tempered glass to ensure zero leakages and maximum thermal insulation
- Multiple samples can be placed inside the chamber with the help of Stainless steel Trays & Racks
- Inside Material of Construction: Corrosion Resistant Stainless steel (SS) Material
- Blower Fans to ensure 360 degree rotation of Temperature & Humidity
- Branded Sensors to ensure the highest level of Accuracy and Precision
- Japanese Technology Insulation material is made of polyurethane foam.
- In-built Advanced Safety Control System
- In-built LED light to ensure easy sample viewing

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	400×500 in mm	400×500 in mm	400×500 in mm
Port hole size	115mm flange type	115mm flange type	115mm flange type
Wheels	Yes	Yes	Yes
Breather	Yes	Yes	Yes