Constant Temperature And Humidity Chamber

Constant temperature and humidity test chamber is aviation, automotive, home appliances, scientific research and other fields of essential test equipment for testing and determining electrical, electronic and other products and materials for high temperature, low temperature, alternating humidity and heat or constant test of the temperature environment after the change of parameters and performance.

Specification:

Effective Volume: 225L
Inner Box Size: W(Wide)600mm*H(High)750mm*D(Deep)500mm
Outer Box Size: W(Wide)850mm*H(High)1850mm*D(Deep)1600mm
Ambient Temperature： 5～30℃
Ambient Humidity：20%～98%RH
Sample Weight：20kg（Customizable）
Temperature Range：-20℃～+150℃(Fully controllable, adjustable control accuracy ±0.1℃)
Temperature Overshoot ：≤±2℃（Within 100℃）
Temperature Stability： ≤±0.5℃
Temperature Deviation：≤±2℃
Temperature Uniformity：≤±2℃
Heating rate：3~5℃/min； Cooling rate：1℃/min （Average for the whole journey)
Humidity Range：20%RH～98%RH(Fully controllable, adjustable control accuracy ±0.1RH%)
Humidity Fluctuation Degree：≤±2.0%RH (The magnitude of humidity change at any point in the test chamber within the specified time after humidity stabilization)
Humidity Uniformity：≤±2.0%RH
Relative Humidity Deviation：At ＞75%RH，≤+2～-3%RH；≤75%RH，≤±5%；(After humidity stabilization, the difference between the highest humidity, lowest humidity and the nominal humidity in any time)
Equipment Weight：350KG
Maximum Power：≤7KW (AC 220V/380V±10%, 50Hz)

Implementation and Acceptance Criteria：

Manufacturing Standards：
GB/T11158-2008 Technical Conditions Of High-Temperature Test Chamber
GB/T10589-2008 Low Temperature Test Chamber Technical Conditions
GB/T10592-2008 High And Low Temperature Test Chamber Technical Conditions
Calibration Standards：
GB/T 5170.2-2008 Temperature Test Equipment

Features:

Intelligent control of temperature and humidity, safe and reliable：
The central control system can intelligently identify the environmental conditions outside the test chamber, the test conditions inside the test chamber, and the current temperature inside the test chamber, and automatically turn on or off the corresponding work unit to achieve precise control of various temperatures and humidity. Multi-layer password protection can be set to prevent unauthorised use and change of internal parameters by non-operators.

Durable, long service life：
Adopting high-quality copper pipe nitrogen protection welding method, so that the copper pipe internal smooth without oxidation, to avoid the copper pipe wall oxidation impurities into the refrigeration system damage to the compressor. The refrigeration system piping adopts the method of adding vibration-proof hose and C-type elbow to avoid the rupture of copper pipe due to vibration and temperature change, which leads to the leakage of refrigerant and thus affects the overall performance of the system.

Humanised design, user-friendly：
Fault display 16 groups of fault alarm output, Chinese and English, humanised publicity of fault causes and troubleshooting methods. Regular pop-up list of routine and periodic maintenance items. Through the programme setting advance output on, refrigerant flow control function, control compressor delay, water shortage advance, automatic light switch off and many other

Precise control of temperature and humidity uniformity and low noise：
Adopting shell-and-tube water-cooled high-efficiency condenser and adding wave-type sound-absorbing sponges around the refrigeration unit to achieve the effect of noise reduction. Adopting multi-channel airflow balanced sink pressure circulation air supply in the air-conditioning box. Effectively prevent moisture condensation, can better control temperature and humidity uniformity, reduce fan noise. The controller output signal regulates the fan speed through frequency conversion control, so as to control the fluctuation and uniformity of temperature and humidity in the box in a better, more accurate and more stable way.

Remote monitoring, data collection is fast and convenient：
Built-in recording programme, the memory ROM in the controller can store 350 days of 24-hour operation data. Unaffected by internal battery failure and data loss. External connection supports R232, LAN , GPRS and other communication methods, up to 254 devices can be connected, communication speed: up to 115,200bps (optional)

humanised controls, no need for extra time relay. With power failure memory auto-recovery function, you can set the choice to continue to complete the set test or start a new test. The power failure time and number of times will automatically generate a report record storage, convenient for staff to investigate and evaluate.

ChiuVention INSTRUMENT LTD

As one of the climate chamber manufacturers, we are confident that we can solve various things for our customers. Please feel free to purchase our environmental test chamber or connect with us.

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