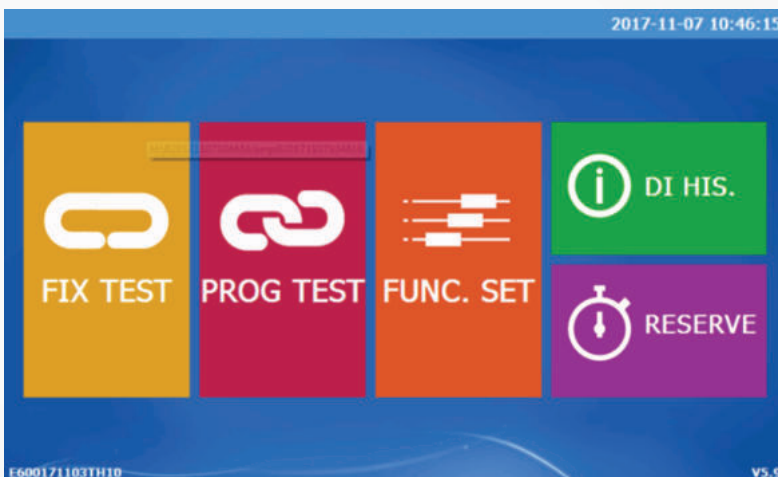


Climate Chamber Model: ADL-CHT-408L

Application

Climate chamber (also known as temperature and humidity test chamber) provides a wide temperature and humidity control range. It is used to simulate severe high temperature, low temperature or damp heat environment. Customer can select suitable models based on performance and test area capacity.

It is widely used in various industries, such as electronic instruments and meters, new materials, electricians, vehicles, metals, electronic products, aerospace materials, which may encounter environmental conditions during transportation, storage, and in-use.



Temp. Humid. Programmable Controller



French Tecumseh Compressor

Structure

Cooling System

- The refrigerating system equips French Tecumseh, and uses environmentally friendly refrigerant (R404a). Adopting binary low temperature circuit system design, it is convenient to use different compressors for work in different temperature regions.
- Temperature and humidity control using P.I.D + S.S.R system coordinated control with the same channel. It has the function of automatic calculation, which can immediately modify the temperature and humidity change conditions to make the temperature and humidity control more accurate and stable.
- High-precision controllers of temperature and humidity. The relative temperature and humidity performance is accurately set and displayed with a resolution of 0.1 °C.

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Climate Chamber Model: ADL-CHT-408L

Temperature & Humidification System

- Temperature system using Nickel-chromium alloy high-speed heating electric wire;
- High temperature system is completely independent;
- The humidity system using stainless steel tube built-in nickel-chromium alloy high-speed heating electric wire and high-temperature magnesium oxide powder, which has fast response and long life;
- The temperature and humidification system is completely independent, and humidity has automatic water supplement device.

Control System

- Temp. & Humid. Sensor
 - Electronic Sensor
- Controller
 - UE/TATO
- Display Function
 - Temp. & humid. Setting (SV) Practical (PV) value can be displayed directly
 - Display numbers, paragraphs, remaining time and cycles, running time
 - Program editing and graphic curve display,
 - Fixed or program operation status display,
- Interfacet
 - RS-232 or R485 port design
 - Connected to computer
 - Monitor and remote control by computer and Ethernet optional

Protection System

- Protection for Electrical leakage
- Over-temperature
- Compressor overvoltage and overload
- Heater short circuit
- Water shortage

Main Technical Parameters

Capacity & Material

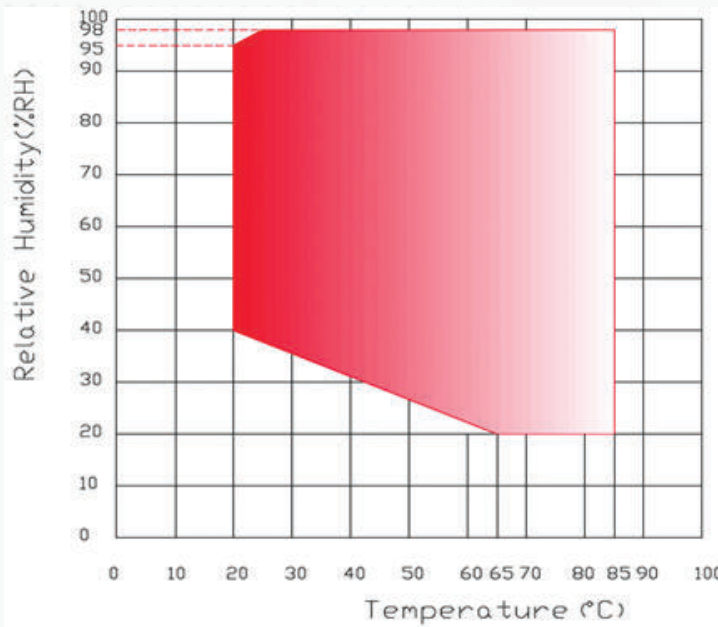
- Internal dimension(W*D*H) : 600*800*850mm; 408 liter
- External dimension(W*D*H) : Approx.: 1100*1970*2000mm
- Internal material : SUS#304 stainless steel, mirror finished;
- External material : Cold-rolled steel plate baking

Temperature

- Temperature Range : -20°C ~ + 150°C
- Temperature fluctuation : ±0.5°C
- Temperature uniformity : ≤2°C
- Temperature Rate : 1°C/min in average (without loading), 3°C/min in average (without loading)

Humidity

- Humidity Range : 20%~98%RH
- Humidity fluctuation : ±3%RH
- Humidity uniformity : ±2%RH
- Temp. &Humid. Chart :



Power Supply

- Power Source : Three-phase, 380V, 50Hz
- Power : 9kw
- Current : 12A
- Weight : Approx. 360kg

Cooling System & Others

- Compressor : Hermetically Sealed French Tecumseh compressor
- Test Condition : Temp.: 35C; Humid.: 40%RH;
Temp.:20C ; Humid.:65%RH;
Temp.:10C; Humid.:65%RH
- Refrigerant : R404A/R23
- Cooling method : Single-stage compression
- Cooling method : Air-cooled flake condenser, cooling fan for heat dissipation

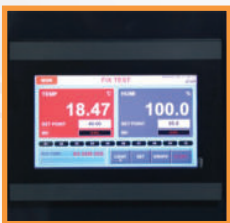
Climate Chamber Model: ADL-CHT-408L

- Humidification system : Stainless steel humidifier
- Water Supply : Front-mounted water tank, automatic water supply system
- Heating System : Nichrome stainless steel heater
- Sample tray : SUS#304 stainless steel 2 pieces
- Testing hole : Diameter 100mm*2, for cable routing
- Evaporator : Finned tube heat exchanger
- Dry filter : Absorb the residual moisture and acidic substances in the refrigerant of the refrigeration system, and filter out solid particles, copper shavings, etc. in the system to protect the normal operation of the expansion valve and capillary tube, and prevent ice blocking and dirty blocking.
- Door handle : Non-reaction, explosion-proof door handle, easy to operate, safe and reliable
- Insulation : 100mm polyurethane rigid foam and 100mm high density glass fiber cotton
- Insulation system : Filling the insulation area with ultra-fine glass fiber;
Machine connection parts are made of non-metal resistant high and low temperature materials, which effectively reduces the temperature conduction;
Door seal is made of refined silicone rubber, which is more reliable seal;
Using isolated humidification method
- Observation window : Double-layer vacuum-strengthened glass;
Heat-resistant defrosting on the inside with adhesive sheet conductive film, which can clearly observe inner chamber.

Test Standard

- IEC6008-2-1 Cold
- IEC6008-2-2 Dry Heat
- IEC60068-2-38 Damp Heat, Cyclic

Detailed Images



Pre-Operation



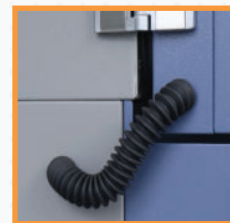
Internal Chamber



Testing Hole for Cable Routing



Machine Door



Cable Protection



Water Tank

**Technical Data Subject to change without notice.*

AdLab is a globally recognized brand specializing in the manufacturing and supply of high-quality laboratory equipment and textile testing instruments. With over 15 years of experience, we are committed to delivering precision-engineered solutions that meet the needs of industries such as textiles, pharmaceuticals, research laboratories, and educational institutions. Our products are designed to enhance efficiency, accuracy, and reliability in scientific and industrial applications.

Our Skill

At AdLab, we combine expertise in precision engineering with advanced laboratory technology to create innovative and reliable testing instruments. Our team of skilled professionals continuously works on improving product designs, integrating the latest advancements in technology, and ensuring compliance with international quality standards. With a strong focus on research and development, we provide customized solutions that cater to the unique needs of our customers worldwide.

Our Products

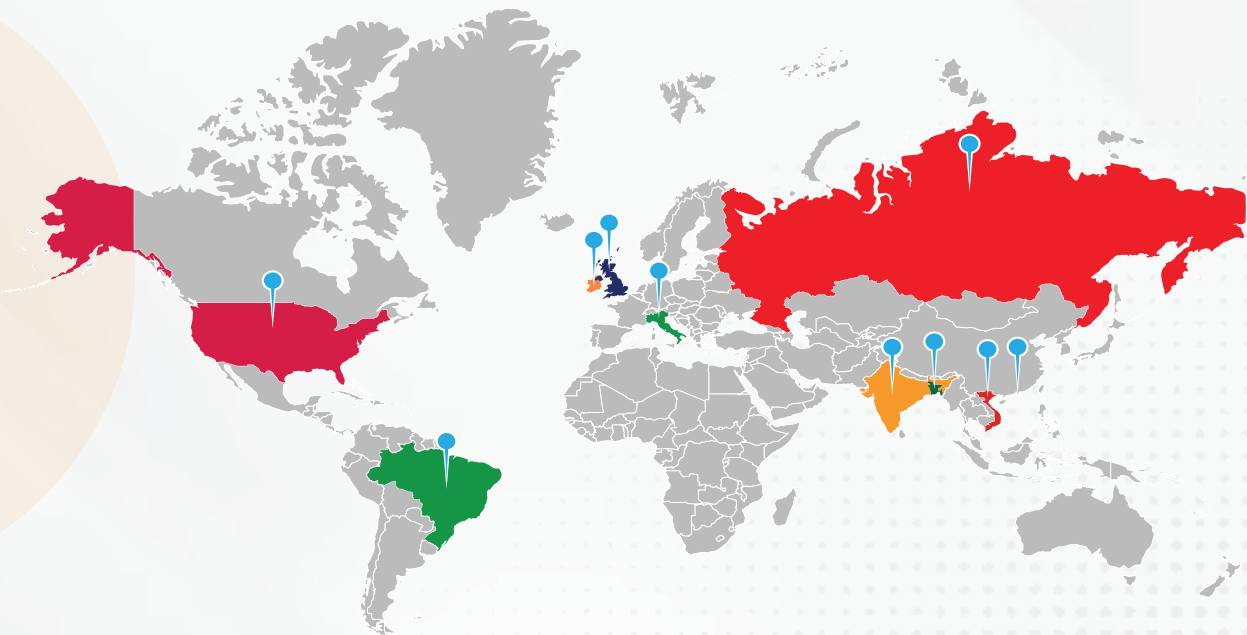
AdLab offers a wide range of high-quality laboratory and textile testing instruments, including Yarn & Fiber Testing Instruments, Laboratory Fume Hood Chambers, Ovens & Incubators, Water Baths, Textile Testing Instruments, Dyeing & Finishing Machines, Ceramic Testing, Tensile Testing, Washers & Dryers, Needle Detectors, and In-House Testing Equipment. Designed for precision and efficiency, our products ensure accurate testing and reliable performance across various industries.

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At AdLab, customer satisfaction is our top priority. We provide comprehensive support services to ensure the smooth operation of our equipment, including:

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- ✓ Installation & Training – We offer professional installation services and hands-on training to help users operate our equipment efficiently.
- ✓ Calibration & Maintenance – Regular calibration and maintenance services ensure that your laboratory instruments remain accurate and in optimal working condition.
- ✓ Customized Solutions – We provide tailored solutions to meet specific industry requirements, helping our clients achieve maximum efficiency in their operations.

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