# humidity chamber with uv sterilization for mold cultures

Humidity chamber is a kind of experimental equipment with temperature and humidity control function, widely used in pharmaceutical, food, cosmetics and other industries for stability testing.

## Humidity Chamber

Humidity chamber can provide a stable and constant temperature and humidity environment for the cultivation of microorganisms, molds, etc. It is an instrument for researching microbial growth, product stability, packaging performance and life span.

## Main Features of the Humidity Chamber

1. **High-quality material construction:** the studio is made of 304 stainless steel, with corrosion resistance, acid resistance, and good cleanliness. The shell is made of cold rolled steel plate and electrostatic spraying treatment, which enhances the corrosion resistance and anti-pollution ability of the equipment. The four corners of the arc design is easy to clean and maintain.
2. **Double-door structure:** the equipment is equipped with a double-door structure, the inner door is made of high-quality tempered glass, allowing real-time observation of the experimental situation inside the box without interfering with the internal temperature and humidity.

3. **Air duct design:** air duct system to ensure uniform distribution of temperature and humidity inside the box, avoiding the traditional equipment due to uneven temperature and humidity and affect the experiment.
4. **Intelligent control system:** the use of fuzzy PID intelligent control system, according to different experimental requirements for fixed value or program multi-run settings, accurate and stable temperature and humidity control.
5. **LCD touch screen:** equipped with true-color LCD touch screen, temperature and humidity, time and other information at a glance, and support the operation record view. Interface is simple and intuitive, easy to operate.
6. **High-precision sensors:** the use of imported high-precision temperature and humidity sensors to ensure stability and accuracy in long-term use, reducing the frequency of maintenance and calibration.
7. **Frequency conversion refrigeration system:** the use of environmentally friendly non-fluorocarbon refrigerant, equipped with a well-known brand of compressor, to ensure that the equipment for a long time frost-free operation and temperature and humidity fluctuations are small, energy saving and water saving.
8. **Ultraviolet germicidal lamp:** disinfection of the interior of the studio to prevent contamination of the experimental samples.
9. **Box side with 50mm test holes,** convenient for data verification.
10. **Convection type:** with fan forced air convection.

## Advantages of Humidity Chamber

1. **High efficiency and energy saving:** frequency conversion type refrigeration system energy saving, open the door to recover quickly, temperature and humidity fluctuations are smaller, reducing energy consumption and operating costs, suitable for long time continuous operation.
2. **Precise control:** through the PID intelligent control system and high-precision sensors, to ensure that the box environment (temperature, humidity) to maintain a stable, suitable for the experimental environment requires high microbial and mold culture.
3. **Remote monitoring:** optional WiFi or 4G intelligent Internet of things off, to realize 7×24 hours remote intelligent monitoring, check the running status of the equipment at any time, to protect the continuity and safety of the experiment.
4. **High security:** multiple protection measures (such as temperature and humidity deviation alarm, sensor failure alarm, etc.), to ensure that the equipment can automatically cut off the source of danger in the event of failure, reducing the risk of human operation.
5. **Verification services:** support for the provision of 3Q, IQ, OQ, PQ verification documents and services.
6. **Data recording ability:** support the storage of 250,000 operating data and 16,000 event records. U disk can be exported through the original data or non-tampering PDF format report.
7. **Hierarchical management of rights:** the administrator can create five sub-accounts, giving different operating privileges.

8. **Screen lock function:** to prevent unauthorized personnel from misuse.

## Working Principle

Humidity chamber utilizes the built-in intelligent temperature and humidity control system to accurately regulate the temperature and humidity in the working chamber by means of frequency conversion cooling, heating and humidification. The high-precision sensor inside the equipment monitors the temperature and humidity parameters in real time, and the control system automatically adjusts the working status of heating, cooling and humidifying according to the set value. The built-in air duct system makes the temperature and humidity in the working chamber evenly distributed, avoiding the situation that the temperature difference is too large and affects the experiment. At the same time, the temperature control instrument also has PID automatic adjustment function to ensure the high stability of the environment.

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| **Model** | **VH10-160** | **VH10-250** | **VH10-350** | **VH10-510** |
|---|---|---|---|---|
| Volume | 160L | 250L | 350L | 510L |
| Convection type | with fan forced air convection | | | |
| Temperature control method | PID | | | |

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| **Model** | **VH10-160** | **VH10-250** | **VH10-350** | **VH10-510** |
|---|---|---|---|---|
| Temperature Control Range | 0°C to 70°C, 10°C to 70°C when humidifying, -20°C to 100°C customizable | | | |
| Temperature Resolution | 0.1°C | | | |
| Temperature Accuracy | ≤±0.3°C | | | |
| Temperature Uniformity | ≤±0.8°C | | | |
| Humidity Control Range | 15%RH to 98%RH | | | |
| Humidity Accuracy | ≤±1.5%RH | | | |
| Humidification method | Water tank electric heating | | | |

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| **Model** | **VH10-160** | **VH10-250** | **VH10-350** | **VH10-510** |
|---|---|---|---|---|
| Sterilization function | UV germicidal lamp | | | |
| Total Heating and Humidifying Power | 1600W | 1950W | 2350W | 2750W |
| Compressor Power | 250W | 280W | 315W | 385W |
| Number of Stainless Steel Shelves | Standard with 3 layers, additional layers can be added | | | |
| External Water Tank Capacity | 12L | | | |
| Chamber Dimensions | 505x420x785mm | 565x485x920mm | 615x585x980mm | 715x665x1070mm |
| External Dimensions | 640x745x1470mm | 700x810x1600mm | 750x970x1660mm | 850x990x1810mm |