



**Programmable Temperature and Humidity Test Chamber Vertical Type**

Programmable Temperature and Humidity Test Chamber simulates a full range of temperature and humidity conditions to test reliability, durability, climatic, freezing resistance, quality assurance, thermal endurance etc.

**Features:**

- Chamber exterior material is stainless steel with environmentally baking paint resists corrosion & provides impact resistance. Interior material is SUS304# stainless steel with excellent heat resistance and easy to clean.
- MRC HL-1000 touch screen controller is designed to save chamber programming and setup time with temperature limit and alarm to protect your product.
- Safety relay connection is provided to protect your device under test by removing power to it when the chamber is not running.
- RS-232 communications is for computer connection, programming can be set on computer by software, monitor testing process and automatically execute power on/off functions.
- Fog-free viewing window and interior light makes viewing workspace freely and observe the test under best conditions.
- Adjustable product shelf slides out for easier product access. Shelf design is non-tipping and supports large product loads.
- Left side of chamber with diameter 50mm cable port for power-on test.
- Optional electronic humidity sensor is used on all test chambers for accuracy and minimal maintenance.

**Application:**

- Electronics, electrical appliances, sensors
- Semiconductor, PCB, LCD & LED
- Medicals tests
- Mechanical, Military, aerospace products
- Vehicles, Transport, automobile supply industries
- Chemicals, Petrochemical industries
- Building materials, Plastics, Textile industries
- Testing metal related industries like plating etc.
- Instrumentation.

**Optional Accessories:**

**Cable Port:** Size of cable port is available for Ø100mm

**Water purifier RO 80:** Continuously provide purified water for humidifying heater and wet-bulb

**Dehumidifier:** The rotation regenerating dehumidifier M-120 ensures precise control of low humidity (10C, 15%RH) for electrostatic reliability tests.

**Defrosting Device:** The chamber automatically detects and melts the frost on the evaporator when operating below 0°C in order to allow continuous operation

**Electronic humidity sensor:** Precision Humidity Sensor with stainless steel protection tube.

**Conform standards:**

- IEC68-2-1 (GB-2423.1-2008) Testing A: Low temperature testing method
- IEC68-2-2 (GB-2423.2-2008) Testing B: High temperature testing method
- MIL-STD-202F (GJB360.8-87) High temperature life testing
- MIL-STD-810D (GBJ150.3) High temperature method
- MIL-STD810D (GBJ150.4) Low temperature method
- IEC68-2-3 (GB2423.3-93) Testing Ca: Constant moist heat testing method.
- IEC68-2-30 (GB2423.4-93) Testing Db: Alternate moist heat testing method.
- MIL-STD-810D (GJB150.9-93) Moist heat testing method.

| Model   | Temp./Humid. Ranges           | Internal Dimension (W x H x D) mm | Outer Dimension (W x H x D) mm |
|---------|-------------------------------|-----------------------------------|--------------------------------|
| HP-40V  | 0°C ~ +150°C<br>20% ~ 98%RH   | 500x500x400                       | 700x1640x1067                  |
| HP-50V  |                               | 500x600x500                       | 750x1650x1400                  |
| HP-55V  |                               | 500x750x600                       | 750x1730x1490                  |
| HP-60V  |                               | 700x850x700                       | 950x1860x1550                  |
| HP-80V  |                               | 1000x1000x800                     | 1200x1970x1790                 |
| HP-100V |                               | 1000x1000x1000                    | 1400x1950x2250                 |
| FP-40V  | -20°C ~ +150°C<br>20% ~ 98%RH | 500x500x400                       | 700x1640x1067                  |
| FP-50V  |                               | 500x600x500                       | 750x1650x1400                  |
| FP-55V  |                               | 500x750x600                       | 750x1730x1490                  |
| FP-60V  |                               | 700x850x700                       | 950x1860x1550                  |
| FP-80V  |                               | 1000x1000x800                     | 1200x1970x1790                 |
| FP-100V |                               | 1000x1000x1000                    | 1400x1950x2250                 |
| LP-40V  | -40°C ~ +150°C<br>20% ~ 98%RH | 500x500x400                       | 700x1640x1067                  |
| LP-50V  |                               | 500x600x500                       | 750x1650x1400                  |
| LP-55V  |                               | 500x750x600                       | 750x1730x1490                  |
| LP-60V  |                               | 700x850x700                       | 950x1860x1550                  |
| LP-80V  |                               | 1000x1000x800                     | 1200x1970x1790                 |
| LP-100V |                               | 1000x1000x1000                    | 1400x1950x2250                 |
| TP-40V  | -70°C ~ +150°C<br>20% ~ 98%RH | 500x500x400                       | 700x1640x1067                  |
| TP-50V  |                               | 500x600x500                       | 750x1650x1400                  |
| TP-55V  |                               | 500x750x600                       | 750x1730x1490                  |
| TP-60V  |                               | 700x850x700                       | 950x1860x1550                  |
| TP-80V  |                               | 1000x1000x800                     | 1200x1970x1790                 |
| TP-100V |                               | 1000x1000x1000                    | 1400x1950x2250                 |

**\*For temperature only add suffix-T to model number**

20%~98%RH is standard range, optional customized 10%~98%RH or 5%~98%RH. Dimensions are also available for customized.

|   |   |
|---|---|
| <b>Control Mode</b>                       | Balanced Temperature and Humidity Control System  |
| <b>Operating Temp. &amp; Humid. Range</b> | +5°C ~ +35°C; <85%RH  |
| <b>Temp. range</b>                        | HP=0°C, FP=-20°C, LP=-40°C, TP=-70°C ~ +100°C (150°C)   |
| <b>Humid. range</b>                       | 20% ~ 98%RH (Optional: 5% ~ 98%RH)  |
| <b>Temp. &amp; Humid. fluctuation</b>     | ±0.5°C; ±2.5%RH   |
| <b>Temp. &amp; Humid. uniformity</b>      | ≤2.0°C; ≤3%RH   |
| <b>Temp. &amp; Humid. Deviation</b>       | ≤1.0°C; ≤2%RH   |
| <b>Temp. Heating Time</b>                 | 0°C ~ +100°C within 30min; -20°C ~ +150°C within 45min  |
| <b>Temp. Cooling Time</b>                 | 20°C ~ -40°C within 60min; 20°C ~ -70°C within 85min  |
| <b>Power Supply</b>                       | AC380V, 50/60HZ, Three-phase (Specified by User)  |
| <b>Exterior Material</b>                  | stainless steel with baking paint   |
| <b>Interior material</b>                  | SUS304# Stainless steel   |
| <b>Insulation material</b>                | Rigid Polyurethane foam   |
| <b>Refrigeration system</b>               | Mechanical cascade refrigeration system; Fin type radiator  |
| <b>Circulation system</b>                 | Mechanical convection system  |
| <b>Humidification Water Supply</b>        | Automatic water regulating, recoverable supply system, water shortage alarm system  |
| <b>Water quality</b>                      | Distilled water only, 20L Water tank capacity   |
| <b>Controller</b>                         | Touch Screen Controller   |
| <b>Safety devices</b>                     | Overheat protector Switch, Compressor overload protector Switch<br>water shortage protector Switch, Humidifier protector Switch<br>Fault alarm system |
| <b>Accessories</b>                        | Viewing window, Chamber Illumination, Cable port Ø50mm,<br>Product shelf slides 2 pieces, universal casters<br>HL-1000 touch screen controller        |

## Note:

- The performance values are no specimen inside the test area.
- At 20°C ambient temperature, relative humidity 65%rh, rated voltage
- According to IEC60068-3-5:2001 and IEC60068-3-6:2001
- The above specifications are for reference only.