



# Endurance<sup>®</sup>

Full Feature Temperature & Humidity  
Chambers For Maximum Quality Assurance

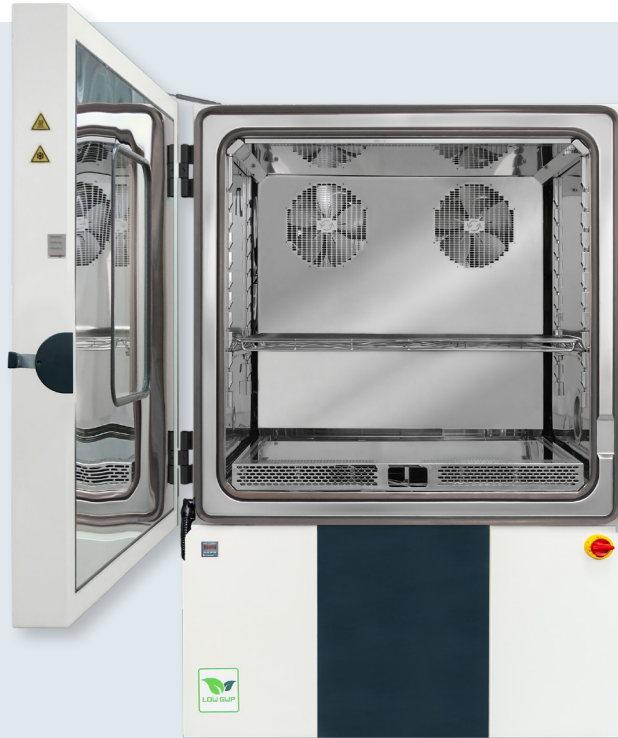
Stand the test of time:



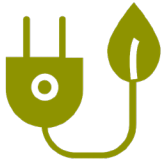
[www.weiss-na.com](http://www.weiss-na.com)

# Impressive Technology

The Endurance® Series from Weiss Technik: the Temperature & Humidity chamber that stands alone. Designed and engineered to give you lasting value, performance and reliability for all your testing applications. The intelligently engineered test space design allows for maximum airflow coverage and accurate gradients. Many popular sizes are available that allow you to choose the chamber that best fits your needs. The mobile design allows for greater flexibility.



## Performance Features



### Energy Savings

- Up to 20% in energy savings



### Tight Temperature Control & Uniformity

- $\leq \pm 0.5^{\circ}\text{C}$  Control and  $\leq 2.0^{\circ}\text{C}$  Uniformity



### Quiet Operation

- Ideal for laboratory testing



### Small Footprint

- Ideal for customers with limited floor space

- Energy Efficient
- Ability to reach 98% RH @ 95°C
- Quiet Operation
- Mobile Design

- Easy Fill Water Reservoir
- Multi-Level High/Low Temperature Protection Feature
- Anti-Condensation Feature - Keep your product protected
- $-70^{\circ}\text{C}$  to  $180^{\circ}\text{C}$  and  $-40^{\circ}\text{C}$  to  $180^{\circ}\text{C}$

# Endurance Features



Tight Seal Double Gasket



Intelligently Engineered Test Space Design for Accurate Airflow Gradients



Slide Out Shelves



5-Pane Heated Window



Two 5" Access Ports



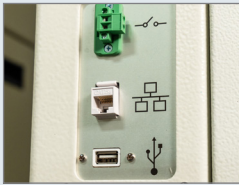
Easy Open, Lockable Door Handle



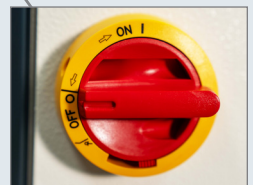
Water Reservoir Fill



WEBSeason® Larger 10" Adjustable Touchscreen Controller



Connectivity



Main Power Switch



R-449A Refrigerant

# Technical Data

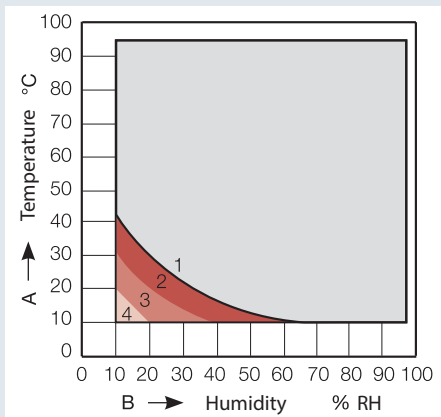
| 3.0°C - 4.0°C/min                      |                                       |              |              |              |              |                                   |              |              |              |              |
|--|---------------------------------------|--------------|--------------|--------------|--------------|-----------------------------------|--------------|--------------|--------------|--------------|
| Model                                  | ENDH-7/40                             | ENDH-12/40   | ENDH-21/40   | ENDH-35/40   | ENDH-54/40   | ENDH-12/70                        | ENDH-21/70   | ENDH-35/70   | ENDH-54/70   |              |
| Old Endurance Comparable Model Number  | ENDH180/40                            | ENDH340/40   | ENDH600/40   | ENDH1000/40  | ENDH1500/40  | ENDH340/70                        | ENDH600/70   | ENDH1000/70  | ENDH1500/70  |              |
| Test Space Volume (Cu. ft/Liters)      | 7 / 195                               | 12 / 331     | 21 / 609     | 35 / 991     | 54 / 1540    | 12 / 331                          | 21 / 609     | 35 / 991     | 54 / 1540    |              |
| Test Space Dimensions (mm)             | Width (W)                             | 22.8" (579)  | 22.8" (579)  | 31.5" (800)  | 43.3" (1100) | 43.3" (1100)                      | 22.8" (579)  | 31.5" (800)  | 43.3" (1100) | 43.3" (1100) |
|  | Depth (D)                             | 17.7" (450)  | 30.1" (765)  | 31.5" (800)  | 37.4" (950)  | 58" (1473)                        | 30.1" (765)  | 31.5" (800)  | 37.4" (950)  | 58" (1473)   |
|  | Height (H)                            | 29.5" (749)  | 29.5" (749)  | 37.4" (950)  | 37.4" (950)  | 37.4" (950)                       | 29.5" (749)  | 37.4" (950)  | 37.4" (950)  | 37.4" (950)  |
| External Dimensions (mm)               | Width (W)                             | 36.0" (914)  | 36.0" (914)  | 44.8" (1138) | 56.1" (1425) | 56.1" (1425)                      | 36.0" (914)  | 44.8" (1138) | 56.1" (1425) | 56.1" (1425) |
|  | Depth (D)                             | 59.7" (1516) | 65.3" (1659) | 66.7" (1694) | 72.6" (1849) | 93.4" (2370)                      | 65.3" (1659) | 66.7" (1694) | 72.6" (1844) | 93.4" (2370) |
|  | Height (H)                            | 78.8" (2002) | 78.8" (2002) | 86.7" (2202) | 86.7" (2202) | 86.7" (2202)                      | 78.8" (2002) | 86.7" (2202) | 86.7" (2202) | 86.7" (2202) |
| Temperature Range (°C/°F)              | +180°C to -40°C (+356°F to -40°F)     |              |              |              |              | +180°C to -70°C (+356°F to -94°F) |              |              |              |              |
| Humidity Range (%RH)                   | 10% to 98%                            |              |              |              |              |                                   |              |              |              |              |
| Temperature Change Rate Heating °C/min | 4.5                                   | 4.0          | 4.0          | 4.5          | 3.5          | 4.5                               | 4.0          | 4.5          | 3.5          |              |
| Temperature Change Rate Cooling °C/min | 5.5                                   | 3.5          | 3.5          | 3.5          | 3.0          | 3.0                               | 3.0          | 3.5          | 2.5          |              |
| Live Load Capacity -20°C (W)           | 750                                   | 750          | 900          | 900          | 900          | 1500                              | 2000         | 2500         | 2500         |              |
| Refrigeration Type                     | Air-cooled                            |              |              |              |              |                                   |              |              |              |              |
| Input Power Volt,Phase,Hertz           | Configurable for 208-3-60 or 230-3-60 |              |              |              |              |                                   |              |              |              |              |

**Notes:**

- Additional heating/cooling rates, voltage and options are available. Consult your local Account Manager.
- Temperature and humidity performance data are taken at the control sensor with an empty test space.
- Average temperature change rates are measured at supply air in a +25°C ambient environment.
- Heating/cooling rates are evaluated according to IEC 60068-3-5.
- This literature is for general guidance only. It does not constitute recommendations, representations or advice and nor is it part of any contract. Our policy is one of continuous product improvement and the right is reserved to modify the specifications contained herein without notice.

## Humidity Diagram

Get the most out of your testing.



- A Test space temperature in °C
- B Relative humidity in % RH
- 1 Standard humidity range
- 2 Range with intermittent operation - (dew point +4 °C to -3 °C)
- 3 Extended humidity range with optional accessory compressed air dryer, dew point down to -12 °C controlled
- 4 Extended humidity range with additional equipment compressed air dryer (optional accessory) and capacitive humidity measuring system (optional accessory), dew point down to approx. -20 °C controlled

Ability to reach 98% RH @ 95 °C

# Technical Data

|  |                           | 5.0°C/min                         |              |               | 10.0°C/min   |              | 8.0°C/min    |
|--|---------------------------|-----------------------------------|--------------|---------------|--------------|--------------|--------------|
| <b>Model</b>                                 |                           | ENDH-12/70                        | ENDH-21/70   | ENDH-35/70    | ENDH-21/70   | ENDH-35/70   | ENDH-54/70   |
| <b>Old Endurance Comparable Model Number</b> |                           | ENDH340/70/5                      | ENDH600/70/5 | ENDH1000/70/5 | N/A          | N/A          | N/A          |
| <b>Test Space Volume</b>                     | <b>(Cu. ft/ Liters)</b>   | 12 / 331                          | 21 / 609     | 35 / 991      | 21.5/609     | 35 / 991     | 54.4 / 1540  |
| <b>Test Space Dimensions (mm)</b>            | <b>Width (W)</b>          | 22.8" (579)                       | 31.5" (800)  | 43.3" (1100)  | 31.5" (800)  | 43.3" (1100) | 43.3" (1100) |
|  | <b>Depth (D)</b>          | 30.1" (765)                       | 31.5" (800)  | 37.4" (950)   | 31.5" (800)  | 37.4" (950)  | 58.0" (1473) |
|  | <b>Height (H)</b>         | 29.5" (749)                       | 37.4" (950)  | 37.4" (950)   | 37.4" (950)  | 37.4" (950)  | 37.4" (950)  |
| <b>External Dimensions (mm)</b>              | <b>Width (W)</b>          | 36.0" (914)                       | 44.8" (1138) | 56.1" (1425)  | 44.8" (1138) | 56.1" (1425) | 56.1" (1425) |
|  | <b>Depth (D)</b>          | 65.3" (1659)                      | 66.7" (1694) | 72.6" (1844)  | 66.7" (1694) | 72.6" (1844) | 93.3" (2370) |
|  | <b>Height (H)</b>         | 78.8" (2002)                      | 86.7" (2202) | 86.7" (2202)  | 86.7" (2202) | 86.7" (2202) | 86.7" (2202) |
| <b>Temperature Range</b>                     | <b>(°C/°F)</b>            | +180°C to -70°C (+356°F to -94°F) |              |               |              |              |              |
| <b>Humidity Range</b>                        | <b>(%RH)</b>              | 10% to 98%                        |              |               |              |              |              |
| <b>Temperature Change Rate Heating</b>       | <b>°C/min</b>             | 6.5                               | 7            | 9.5           | 10.0         | 10.0         | 8.0          |
| <b>Temperature Change Rate Cooling</b>       | <b>°C/min</b>             | 7                                 | 5.5          | 5.5           | 10.0         | 10.0         | 8.0          |
| <b>Live Load Capacity</b>                    | <b>-20°C (W)</b>          | 3000                              | 5000         | 5000          | 6500         | 8000         | 8000         |
| <b>Refrigeration Type</b>                    |                           | Water-cooled                      |              |               |              |              |              |
| <b>Input Power</b>                           | <b>Volt, Phase, Hertz</b> | Configurable for 460-3-60         |              |               |              |              |              |

**Notes:**

- Additional heating/cooling rates, voltage and options are available. Consult your local Account Manager.
- Temperature and humidity performance data are taken at the control sensor with an empty test space.
- Average temperature change rates are measured at supply air in a +25°C ambient environment.
- Heating/cooling rates are evaluated according to IEC 60068-3-5.
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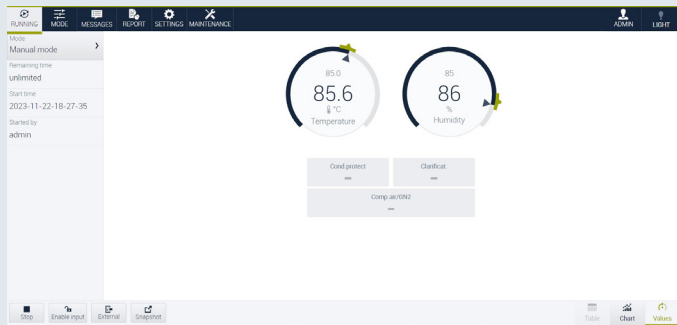
# Smart Programming

## The Latest Technology in Controllers & Software



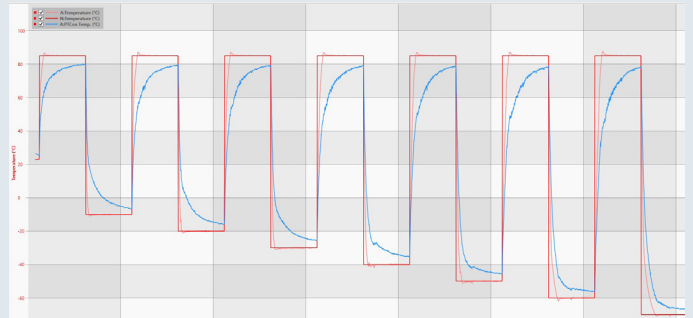
### The Latest Technology

The WEBSeason® control system is the latest technology in digital chamber control and programming. With the simple, easy to use touchscreen and menu-guided user interface, no programming knowledge is necessary. WEBSeason® offers many features including USB and Ethernet interfaces, remote control and remote monitoring, networking with other test systems, and a 32-bit control and monitoring system to ensure accurate control of temperature and humidity.



### Simulation Package for Test System Integration

SIMPATI System Control Software enables complete chamber control and remote operation. With its user-friendly profile entry and table-based editor, the operation and monitoring of test systems is seamless and time-saving. The software's full-featured graphic chart allows for easy performance measurement, annotations, ramp rate calculations, and more. Experience enhanced reliability through integrated monitoring features. With a straightforward menu-guided interface, user training is unnecessary. SIMPATI gives users simultaneous control of up to 99 chambers, making it a comprehensive solution for streamlined testing processes.



## Impact Your Business More... and the Environment Less.



### Customer Benefits

- Utilizes R-449A Low GWP Refrigerant
- Lower Carbon Footprint
- Supports Corporate & Federal Sustainability Programs
- R-449A supports the EPA's hydrofluorocarbon (HFC) phasedown, Docket ID: EPA-HQ-OAR-2021-0044, as part of the American Innovation and Manufacturing (AIM) Act
- Avoids availability and pricing issues of high GWP HFC refrigerants expected in the United States per the AIM Act

# Service & Quality

## Providing Peace of Mind for Your Chamber Operation

### Service Support

Weiss Technik products are backed by our global factory trained service department. With over 400 service technicians located throughout the globe, we offer our customers a wide variety of services from preventive maintenance, calibration, retrofits, start-up & training, technical support and more.

### Quality - Count on Weiss Technik

Weiss Technik helps make the task of compliance much simpler. There is no need for you to take the time to actively seek an accredited laboratory. Weiss Technik, certified ISO9001 in 1997, can provide the latest required ISO/IEC 17025 (A2LA accredited) calibration services at your facility. These services meet 17025 requirements and ensure that your company is in compliance with the most recent changes in the QS9000 3rd Edition mandate.





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