

ELH Series

Calibration Chambers with Precise Controls and Primary Method Chilled Mirror Accuracy

The ELH Series is a group of precision calibration chambers incorporating a programmable controller for constant parameter control and uniformity plus a primary method DewMaster chilled mirror hygrometer for highly accurate temperature and humidity measurements. The ELH Series is very similar in performance to devices using the two-pressure method but the ELH Series is available at a significantly more economical price and it reaches soak conditions more rapidly than other techniques. The ELH Series is delivered with multi-point, NIST traceable, ISO/IEC 17025:2017 accredited certification as standard.

The ELH Series consists of various sized, bench mount calibration chambers having 304 stainless steel interiors. Each is delivered complete with an integrally mounted DewMaster chilled mirror hygrometer, a programmable controller for temperature and dew/frost point or relative humidity control plus automatic ramping, soaking and alarming. Each chamber has a 2 inch access port and a demineralization cartridge system, and uses an environmentally safe non-depleting refrigerant.

Features :

- Primary method measurement technique
- Precise chamber controls
- Hygrometer utilizes primary method technique
- Historically proven and unsurpassed humidity control system
- NIST traceable, ISO/IEC 17025:2017 certification
- Sensing system discriminates between dew/frost and contaminants
- Programmable controller for automatic ramping, soaking and alarming
- Fully Adjustable Shelf
- Demineralizer Cartridge System
- 2 inch Access Port
- Hard piped drain

Benefits :

- Reduces uncertainty
- Easy to provide NIST recertification
- Proven methodology
- Reliable data
- Extremely stable and uniform environment
- Worry-free operation



The ELH Calibration Chamber with DewMaster Chilled Mirror Hygrometer

Applications :

- Atmospheric sciences
- Automotive testing
- Educational institution research
- Government agencies testing
- Medical Research
- Metrology
- Pharmaceuticals research
- R&D test & measurement
- Dynamometer testing
- Engine test cells
- Simulations of climatic conditions
- Packaging testing
- Materials testing
- Instrumentation test and calibrations



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ISO/IEC 17025:2017 Accredited
ISO 9001:2015 Registered

Technical Specifications

Temperature Range:

7 to 85°C

Temperature Uniformity:

±0.3°C

Temperature Control:

±0.3°C

Relative Humidity Range:

10 to 95% at temperature range from 50°C to 85°C; 20% RH at 35°C

For lower humidity ranges, consult factory

Relative Humidity Uniformity:

±0.5%

RH Control:

±0.4%

Models:**ELH-1.5:**

Bench mount

1.5cu.ft. calibration chamber

Internal dimensions: 13" x 14" x 13"
(33cm x 35.5cm x 33cm)

External dimensions: 33" x 27" x 26"
(85cm x 69cm x 66cm)

Power requirements: 110Vac/60Hz or
220Vac/50Hz 20A single phase

Weight: 192lbs (87kg)

ELH-6:

Bench mount

5.8cu.ft. calibration chamber

Internal dimensions: 24" x 20" x 18"
(61cm x 51cm x 46cm)

External dimensions: 46" x 33" x 31"
(117cm x 84cm x 79cm)

Power requirements: 110Vac/60Hz or
220Vac/50Hz 20A single phase

Weight: 280lbs (127kg)

ELH-10:

Bench mount

10cu.ft. calibration chamber

Internal dimensions: 30" x 24" x 24"
(76cm x 61cm x 61cm)

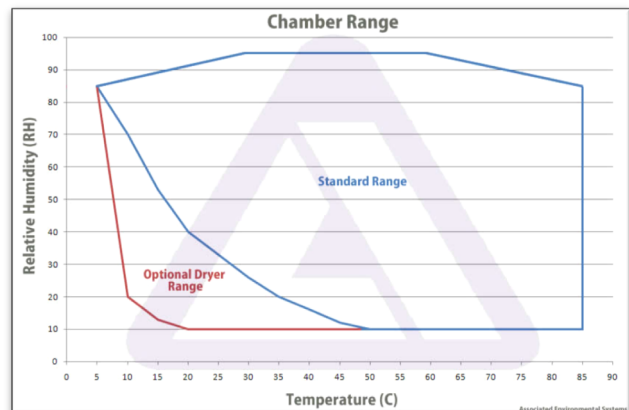
External dimensions: 52" x 36" x 37"
(132cm x 91cm x 94cm)

Power requirements: 110Vac/60Hz or
220Vac/50Hz 20A single phase

Weight: 310lbs (140kg)



The ELH Calibration Chamber with probes inserted through access port.



Calibration Chamber standard and optional ranges.

Options:

- Additional stainless steel shelf
- 8" x 8" (203cm x 203cm) window
- Internal light with external switch
- Demineralizer replacement cartridges
- Extended temperature range to -20°C
- 2 pen, 10 inch chart recorder
- Self-contained recirculating humidity system with 6 gallon reservoir



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Rev v4

EHD Series

Calibration Chambers with Precise Controls and Primary Method Chilled Mirror Accuracy

The EHD is a series of floor mount, 304 stainless steel, NIST traceable, calibration chambers while the BHD is a series of bench mounted chambers. Both series have the same features and come complete with integrally mounted DewMaster chilled mirror hygrometer, Model DM-DS2-RC, a programmable controller for temperature and dew/frost point or humidity control. The EHD and BHD Series are delivered with multi-point, NIST traceable, ISO/IEC 17025:2017 accredited certification as standard.

The EHD and BHD Series feature measurements in °C/°F or % RH. Voltage, current and serial outputs, a 3 inch access port, a demineralization cartridge system, instruction manual and one year warranty are standard. All chambers use an environmentally safe non-depleting refrigerant.

Included are RS232, Internet, IEEE488 interface options.



The EHD Calibration Chamber

Features:

- Primary method measurement technique
- NIST traceable standard sensors
- 7-inch touch screen controller
- Historically proven and unsurpassed humidity Control System
- Programmable controller for automatic ramp
- Soak and alarm with 40 program profiles
- Full stainless steel interior.
- 12 x 12-inch multi-pane viewing window
- Internal light and light switch
- Adjustable digital high temperature safety
- Range of chamber sizes from 5 to 64 cubic feet
- Heavy duty steel with powered coated exterior
- Casters on floor mounter units
- 3-inch access port and plug

Benefits:

- Primary method of measurement
- Reaches soak conditions rapidly
- Economical to own and operate
- Reduces uncertainty
- Easy to provide NIST recertification
- Proven methodology
- Reliable data
- Extremely stable and uniform environment
- Worry-free operation



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Technical Specifications

Temperature Range:

-65 to 200 °C

Temperature Uniformity:

±0.5 °C

Temperature Control:

±0.3 °C

Relative Humidity Range:

10 to 95% at temperature range from 50°C to 85°C; 20% RH at 35°C

For lower humidity ranges, consult factory

Relative Humidity Uniformity:

±0.5 to ±1% dependent on chamber size

For higher RH uniformity, consult factory

Relative Humidity Control:

±0.4%

Dimensions and Power:

Model Designation	Chamber Size Cubic Feet	Internal Dimensions L x H x D, Inches	External Dimensions L x H x D, Inches	Power Vac
EHD/BHD 5	5	20 x 22 x 20	69 x 31 x 44	220 1ph 50/60 Hz
EHD/BHD 8	8	24 x 24 x 24	70 x 33 x 48	220 1ph 50/60 Hz
EHD/BHD 10	10	28 x 24 x 27	71 x 33 x 52	220 1ph 50/60 Hz
EHD/BHD 13	13	28 x 28 x 28	71 x 37 x 52	220 3ph 50/60 Hz
EHD/BHD 21	21	32 x 32 x 32	72 x 41 x 54	220 3ph 50/60 Hz
EHD/BHD 27	27	36 x 36 x 36	81 x 54 x 74	220 3ph 50/60 Hz
EHD/BHD 32	32	38 x 38 x 38	83 x 56 x 76	220 3ph 50/60 Hz
EHD/BHD 49	49	42 x 42 x 44	87 x 60 x 82	220 3ph 50/60 Hz
EHD/BHD 64	64	48 x 48 x 48	95 x 70 x 85	220 3ph 50/60 Hz

Options:

- Additional stainless steel shelf
- LN₂ cooling
- CO₂ scrubber system
- Internet interface
- Water cooled cooling system
- Demineralizer replacement cartridges
- Touch screen controller
- Honeywell digital chart recorder
- Self-contained, re-circulating humidity system with 6 gallon reservoir
- Noise reduction package

Selectable Temperature Ranges:

0 to 94 °C

-20 to 94 °C

-17 to 200 °C

-37 to 200 °C

-65 to 200 °C

Accuracy:

Relative humidity (±0.5% typical),

Temperature (±0.3 °C)

Dew/frost point (±0.2 °C)



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