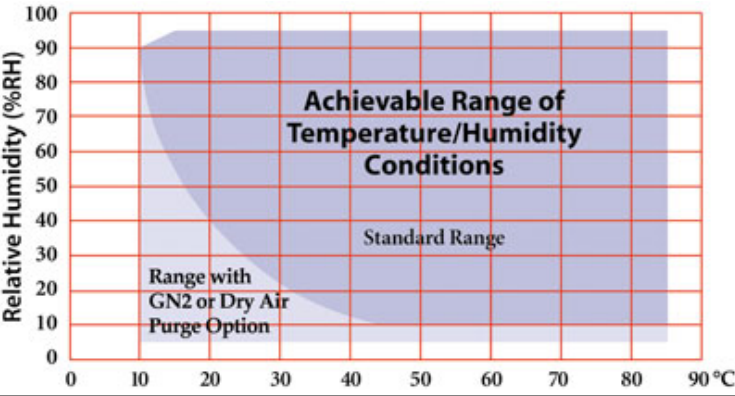


TESTEQUITY® Environmental Chambers

TestEquity Model 123HS Temperature/Humidity Chamber - Specifications

[<< Back to Product Page](#) [Outline Drawing](#)

Temperature Range	-35°C to +175°C
Control Tolerance	±0.5°C (Measured at the control sensor after stabilization)
Uniformity	±1°C (Variations throughout the chamber after stabilization)
Humidity Range	<p>Standard Range: 10% to 95% (limited by a minimum 6°C dewpoint and maximum dry bulb of +85°C)</p> <p>With optional GN2 Purge or Dry Air Purge: 5% to 95% (Dry bulb range of +10°C to +85°C)</p> 
Control Tolerance	±3% RH
Display Resolution	0.1%RH
Humidity Sensor	Dynamic capacitive type (no wet wicks required)

Cool Down Transition Time* (uncontrolled humidity mode)							
Start Temp	End Temp						
	+23°C	0°C	-10°C	-20°C	-30°C	-35°C	
+23°C	-----	4 min	8 min	15 min	25 min		Ultimate
+50°C	5 min	10 min	16 min	24 min	36 min		Ultimate
+85°C	10 min	19 min	25 min	33 min	45 min		Ultimate
+150°C	22 min	33 min	40 min	48 min	63 min		Ultimate

Heat Up Transition Time* (uncontrolled humidity mode)							
Start Temp	End Temp						
	+23°C	+50°C	+85°C	+125°C	+150°C	+175°C	
+23°C	-----	2 min	12 min	24 min	33 min		Ultimate
0°C	1.5 min	3.5 min	13 min	20 min	23 min		Ultimate
-30°C	8 min	14 min	23 min	27 min	45 min		Ultimate

Rate Of Change

To calculate rate of change for a particular condition, take the difference between the Start Temp and End Temp and divide by the Transition Time.

Cool Down Example: From +85°C to -20°C = 105 °C / 33 min = 3.18°C/min.

Heat Up Example: From 0°C to +85°C = 85 °C / 18 min = 4.72 °C/min.

***Note:** Transition times are measured after a 2 hour soak at the respective start temperature with an empty chamber. Measured with setpoint beyond the start and end temperatures. Does not include the effect of proportional band when approaching setpoint.


Live Load Capacity (uncontrolled humidity mode)

+23°C	0°C	-10°C	-20°C	-30°C
500 Watts	400 Watts	300 Watts	200 Watts	100 Watts



Refrigeration and Heating System

Refrigerant	R-404A (Dupont HP-62)
Compressors	1/2 HP Tecumseh hermetic compressor
Condenser	Air Cooled
Heat of Rejection	5,000 BTUH (maximum rated chamber load at maximum cooling rate from high temperature soak)
Air Heater Power	1,000 Watts (500 Watts when compressors are running)
Humidifier Heater Power	750 Watts

Instrumentation

Temp/Humidity Controller	Watlow F4 Controller with RS-232 interface, LED readout of temperature, LCD display of humidity and other parameters (standard). Watlow F4T Touch Screen Controller with RS-232, Ethernet interface, 4.3" color graphic touch screen (optional).	
Limit Controller	Independent high and low temperature limits. Triggers an audible alarm and shuts down the chamber. Relay contacts provide a safety power interlock for test sample.	
Chart Recorder	(Optional) Honeywell DR4300 Series. Two pen, 10" circular chart. Mounts in lower front door.	

Input Power Requirements

Input Voltage	120 V nominal (110 to 126 VAC), 60 Hz, 1 PH Max Current Draw 18 A, Recommended Minimum Service 20 A	
Power Cord and Plug	6' Power cord supplied with a molded NEMA 5-20P plug.	
	Plugs into a standard NEMA 5-20R receptacle. Use of an extension cord is not recommended.	

Humidity Water Requirements

Supply and Drain	Must be provided with a water line and floor drain or optional Water Recirculation System. Negligible consumption.
Water Recirculation System (optional)	Provides a reliable supply of filtered water for the humidity system. Perfect for installations where a water line and drain are not available.

Physical Characteristics

Inside Dimensions	18" W x 16.5" H x 13.5" D (2.3 cubic feet)
Outside Dimensions	26" W x 63" H x 36.5" D (nominal) Vent tube adds 3" to height.

Minimum Installed Clearance	6" from the left and right side 12 " from the rear
Window Viewing Area	7" W x 12" H
Access Ports	4" Port on left and right side (two total) Supplied with foam plugs
Weight	Chamber Weight: 520 pounds Shipping Weight: 635 pounds
Sound Level	58 dBA in cooling mode (A-weighted, measured 3" from the front or side surface, 63" from the floor, in a free-standing environment)

NOTE: Performance is typical and based on operation at 23°C (73°F) ambient and nominal input voltage. Designed for use in a normal conditioned laboratory. Operation at higher ambient temperatures may result in decreased cooling performance. Additional ports and shelves will also affect performance. Operation above 30°C (85°F) or below 16°C (60°F) ambient is not recommended.

Due to continuous product development, specifications are subject to change without notice.

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