TestEquity® Environmental Chambers

TestEquity Model 107 Benchtop Temperature Chamber - Detailed Specifications

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Temperature Range	-42°C to +130°C
Control Tolerance	±0.5°C (±0.2°C Typical) (Measured at the control sensor after stabilization)
Uniformity	±1.0°C (±0.5°C Typical) (Variations throughout the chamber after stabilization)

Heat Up Transition Time (empty)* 8.5°C/minute typical

Cool Down Transition Time (empty)*

Start Temp		End Temp +23°C	0°C	-10°C	-20°C	-30°C	-35°C	-40°C	-42°C
+23°C	Standard	----	7 min	11 min	15 min	19 min	23 min	30 min	Ultimate
	50 Hz Export Version	----	8 min	13 min	18 min	23 min	28 min	36 min	Ultimate
+85°C	Standard	13 min	20 min	24 min	28 min	32 min	36 min	45 min	Ultimate
	50 Hz Export Version	16 min	24 min	29 min	33 min	38 min	43 min	54 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 (empty): From +85°C to -20°C = 105°C / 28 min = 3.75°C/min.
Heat Up Example: From -40°C to +85°C = 125°C / 11 min = 11.36°C/min.

***Note:** Transition times are measured after a 30 minute soak at the respective start temperature.

Live Load Capacity			
+23°C	**0°C**	**-30°C**	**-40°C**
200 Watts	155 Watts	100 Watts	35 Watts

Refrigeration and Heating System	
Compressor	1/3 HP Copeland hermetic
Condenser	Air Cooled
Heat of Rejection	3,000 BTUH (maximum rated chamber load at maximum cooling rate from high temperature soak)
Heater Power	500 Watts
Instrumentation	
Temperature Controller	Watlow F4 Controller with RS-232 interface, LED readout of temperature, LCD display of other parameters (standard). Watlow F4T Touch Screen Controller with RS-232, Ethernet interface, 4.3" color graphic touch screen (optional).
Limit Controller	Independent of temperature controller. User adjustable high and low temperature limits. Shuts down the chamber if limits are exceeded. Watlow EZ-Zone.
Power Requirements	
Input Voltage	**Standard Model 107**

	120 V nominal (110 to 126 VAC), 60 Hz, 1 PH Max Current Draw 10 A, Recommended Minimum Service 15 A **Export Model 107-EX** 230 V nominal (209 to 253 VAC), 50 Hz, 1 PH Max Current Draw 5 A, Recommended Minimum Service 10 A
Physical Characteristics	
Inside Dimensions	12" W x 9" H x 11.25 " D, 0.7 cubic feet (305 x 229 x 288 mm, 20 liters)
Outside Dimensions (nominal)	16.5" W x 26" H x 25.25" D (419 x 660 x 641 mm) Door latch adds 2" to width.
Minimum Installed Clearance	12" from the rear
Access Ports	3" ports (2.83" inside diameter) on left and right side (two total). Supplied with silicone foam port plugs
Weight	Chamber Weight: 124 pounds (56 kg) Shipping Weight: 158 pounds (71 kg)
Sound Level	52 dBA in cooling mode (A-weighted, measured 36" from the front 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 will result in decreased cooling performance. Low end limit derates to -38°C when operating above 27°C (80°F) ambient. Operation above 30°C (85°F) or below 16°C (60°F) ambient is not recommended.

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