



## Model 107 Benchtop Temperature Chamber Specifications

**Temperature Range:** -42°C to +130°C

**Control Tolerance :** ±0.5°C (±0.2°C Typical) (Short-term variations measured at the control sensor after stabilization)

**Uniformity:** ±1.0°C (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	
+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	
+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	

### 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.

**\*Note:** Transition times are measured after a 30 minute soak at the respective start temperature with an empty chamber, as indicated on the temperature controller, 23°C ambient. Measured with setpoint beyond the start and end temperatures. Does not include the effect of proportional band when approaching setpoint.

### Live Load Capacity

+23°C	0°C	-30°C	-40°C
200 Watts	155 Watts	100 Watts	35 Watts

### Refrigeration and Heating System

<b>Compressor</b>	1/3 HP Copeland hermetic
<b>Condenser</b>	Air Cooled
<b>Heat of Rejection</b>	3,000 BTUH (maximum rated chamber load at maximum cooling rate from high temperature soak)
<b>Heater Power</b>	500 Watts

### Instrumentation

<b>Temperature Controller</b>	Watlow F4T Touch Screen Controller with RS-232, Ethernet interface, 4.3" color graphic touch screen. OR... Watlow F4 Controller with RS-232 interface, LED readout of temperature, LCD display of other parameters.
<b>Limit Controller</b>	Independent of temperature controller. User adjustable high and low temperature limits. Shuts down the chamber if limits are exceeded. Watlow EZ-Zone Series.

### Power Requirements

<b>Input Voltage</b>	<b>Standard Model 107</b> 120 V nominal (110 to 126 VAC), 60 Hz, 1 PH Max Current Draw 10 A, Recommended Minimum Service 15 A
	<b>Export Model 107-EX</b> 230 V nominal (209 to 253 VAC), 50 Hz, 1 PH Max Current Draw 5 A, Recommended Minimum Service 10 A

Physical Characteristics	
<b>Inside Dimensions</b>	12" W x 9" H x 11.25" D, 0.7 cubic feet (305 x 229 x 288 mm, 20 liters)
<b>Outside Dimensions</b> (nominal)	16.5" W x 26" H x 25.25" D (419 x 660 x 641 mm) Door latch adds 2" (51 mm) to width.
<b>Minimum Installed Clearance</b>	12" (304 mm) from the rear
<b>Access Ports</b>	3" (2.83" inside diameter) Port on left and right side (two total) Supplied with silicone foam plugs
<b>Weight</b>	Chamber Weight: 124 pounds (56 kg) Shipping Weight: 164 pounds (74 kg)
<b>Sound Level</b>	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.

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