



## Model 1007C Temperature Chamber Specifications

<b>Temperature Range</b>	-73°C to +175°C
<b>Control Tolerance</b>	±0.5°C (±0.2°C Typical) (Short-term variations measured at the control sensor after stabilization)
<b>Uniformity</b>	±1°C (Variations throughout the chamber after stabilization)

### Cool Down Transition Time\*

Start Temp	End Temp					
	+23°C	0°C	-40°C	-55°C	-65°C	-73°C
+23°C	-----	4 min	18 min	25 min	33 min	Ultimate
+50°C	5 min	11 min	27 min	36 min	45 min	Ultimate
+85°C	13 min	20 min	37 min	47 min	55 min	Ultimate
+150°C	32 min	39 min	58 min	65 min	76 min	Ultimate

### Heat Up Transition Time\*

Start Temp	End Temp					
	+23°C	+50°C	+85°C	+125°C	+150°C	+175°C
+23°C	-----	1.5 min	7 min	14 min	20 min	25 min
0°C	1.5 min	3.5 min	13 min	20 min	23 min	31 min
-40°C	6 min	11 min	17 min	24 min	30 min	35 min
-55°C	8 min	13 min	19 min	26 min	32 min	37 min
-65°C	10 min	14 min	21 min	28 min	34 min	39 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:** From +50°C to -40°C = 90°C / 27 min = 3.33°C/min.

**Heat Up Example:** From -40°C to +50°C = 90°C / 11 min = 8.18°C/min.

**\*Note:** Transition times are measured after a 2 hour 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. Performance is reduced by 17% with 50 Hz input power.

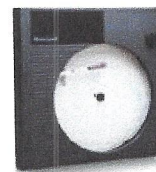
### Live Load Capacity

+23°C	0°C	-40°C	-55°C	-65°C
1,000 Watts	800 Watts	500 Watts	400 Watts	300 Watts

<b>High Stage Refrigerant</b>	R-404A (Dupont HP-62)
<b>Low Stage Refrigerant</b>	R-508B (Dupont SUVA-95)
<b>Compressors</b>	1.5 HP x 1.5 HP Tecumseh hermetic compressors in a cascade configuration.
<b>Condenser</b>	Air Cooled
<b>Heat of Rejection</b>	14,800 BTUH (maximum rated chamber load at maximum cooling rate from high temperature soak)
<b>Heater Power</b>	2,000 Watts
<b>Air Flow</b>	450 cfm

#### Instrumentation

<b>Temperature Controller</b>	<u>Watlow F4T Touch Screen Controller</u> with RS-232, Ethernet interface, 4.3" color graphic touch screen. OR... <u>Watlow F4 Controller</u> with RS-232 interface, LED readout of temperature, LCD display of other parameters.
<b>Limit Controller</b>	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.
<b>Chart Recorder</b>	(Optional) Honeywell DR4300 Series. One pen, 10" circular chart. Mounts in lower front door.



#### Input Power Requirements

	Phase	Current Draw	Minimum Service
<b>230 V ±10%, 60 Hz</b>	1 PH	25 A	30 A
	3 PH	19 A	25 A
<b>208 V -5/+10%, 60 Hz</b>	1 PH	28 A	35 A
	3 PH	21 A	30 A

Input may be configured for single or three phase in the field by changing jumpers. Three phase load is semi-balanced. Call for 50 Hz operation. Performance is reduced by 17% with 50 Hz input power.

Customer power source must be hard-wired to the chamber by a qualified electrician. Power cord and plug is not included.

#### Physical Characteristics and Safety

<b>Inside Dimensions</b>	24" W x 21" H x 24" D (7 cubic feet) 609 mm W x 533 mm H x 609 mm D (198 liters)
<b>Outside Dimensions*</b>	33" W x 67.75" H x 54.25" D (nominal) 838 mm W x 1721 mm H x 1378 mm D

\* Door latch adds 3" to width on right side (may be removed to permit move-in through a 36" doorway). Circulator motor and housing adds 6" to height.

<b>Minimum Installed Clearance</b>	18" from the left and right side 24" from the rear
<b>Window Viewing Area</b>	13.375" W x 9" H

<b>Access Ports</b>	4" Port on left and right side (two total) Supplied with foam plugs
<b>Weight</b>	Chamber Weight: 850 pounds Shipping Weight: 1,011 pounds
<b>Sound Level</b>	62 dBA in cooling mode (A-weighted, measured 36" 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.

<https://www.testequity.com/1007C-specs>

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