Model 1007S Temperature Chamber Specifications

Temperature Range
-35°C to +175°C (optional to +205°C)
Control Tolerance
±0.5°C (Short-term variations measured at the control sensor after stabilization)
Uniformity
±1°C (Variations throughout the chamber after stabilization)

Cool Down Transition Time (empty)*						
	End Temp					
Start Temp	+23°C	0°C	-10°C	-20°C	-30°C	-35°C
+23°C	----	1.5 min	3.5 min	7 min	13 min	Ultimate
+85°C	5 min	10 min	14 min	18 min	26 min	Ultimate
+150°C	12 min	19 min	22 min	26 min	33 min	Ultimate

Cool Down Transition Time (with 25 lb. aluminum load)*						
	End Temp					
Start Temp	+23°C	0°C	-10°C	-20°C	-30°C	-35°C
+85°C	10	18 min	22 min	29 min	41 min	Ultimate
+150°C	21	33 min	38 min	43 min	56 min	Ultimate

Heat Up Transition Time (empty)*						
	End Temp					
Start 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
-10°C	2.2 min	4.2 min	14 min	22 min	25 min	33 min
-35°C	5.5 min	10 min	16 min	23 min	29 min	34 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 -10°C = 95°C / 14 min = 6.8°C/min.
Cool Down Example (with 25 lb. load): From +85°C to -10°C = 95°C / 22 min = 4.3°C/min.
Heat Up Example: From -35°C to +85°C = 120°C / 16 min = 7.5°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**	**-10°C**	**-20°C**	**-30°C**
1,400 Watts	1,000 Watts	850 Watts	625 Watts	300 Watts

Refrigeration and Heating System	
Refrigerant	R-404A (Dupont HP62)
Compressors	1.5 HP Tecumseh hermetic
Condenser	Air Cooled
Heat of Rejection	15,200 BTUH (maximum rated chamber load at maximum cooling rate from high temperature soak)
Heater Power	2,000 Watts
Air Flow	450 cfm

Instrumentation		
Temperature Controller	**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.	
Limit Controller	Independent high and low temperature limits. Triggers an audible alarm and shuts down the chamber. Relay contacts provide a safety npower interlock for test sample.	
Chart Recorder	(Optional) Honeywell DR4300 Series. One pen, 10" circular chart. Mounts in lower front door.	

Input Power Requirements	
230 V ±10%, 60 Hz, 1 PH	Max Current Draw 22 A; Recommended Service 30 A
208 V -5/+10%, 60 Hz, 1 PH	Max Current Draw 22 A; Recommended Service 30 A
Input may be configured for 230 V or 208 V in the field by changing jumpers. Single phase input only. Call for other voltages or 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 are not included.	

Physical Characteristics and Safety	
Inside Dimensions	24" W x 21" H x 24" D (7 cubic feet) 609 mm W x 533 mm H x 609 mm D (198 liters)
Outside Dimensions*	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.	

Minimum Installed Clearance	18" from the left and right side 24" from the rear
Window Viewing Area	13.375" W x 9" H
Access Ports	4" Port on left and right side (two total) Supplied with foam plugs
Weight	Chamber Weight: 755 pounds Shipping Weight: 916 pounds
Sound Level	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.