Model 1016S Temperature Chamber Specifications

Temperature Range	-35°C to +175°C
Control Tolerance	±0.5°C (Short-term variations measured at the control sensor after stabilization)
Uniformity	±1.0°C (Variations throughout the chamber after stabilization, up to +8°C)

Cool Down Transition Time (empty)*

	End Temperature					
	+23°C	**0°C**	**-10°C**	**-20°C**	**-30°C**	**-35°C**
Time from +23°C: **°C/minute:**	—	1 min 23°C/min	2 min 16.5°C/min	4 min 10.8°C/min	8 min 6.6°C/min	Ultimate
Time from +85°C: **°C/minute:**	4 min 15.5°C/min	7 min 12°C/min	9 min 10.6°C/min	12 min 8.8°C/min	17 min 6.8°C/min	Ultimate

Heat Up Transition Time (empty)*

-30°C to +85 °C 13 minutes (8.8°C/minute)

***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 end temperatures with an instantaneous step change in Set Point without a controlled ramp-rate. 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**
4,000 Watts	2,800 Watts	2,300 Watts	1,800 Watts	1,550 Watts

Refrigeration and Heating System

Refrigerant	R-404A (Dupont HP-62)
Compressors	3.5 HP Copeland scroll compressor. **More about Scroll Compressors** >>
Condenser	Air Cooled
Heat of Rejection	30,200 BTUH (maximum rated chamber load at maximum cooling rate from high temperature soak)
Heater Power	4,200 Watts @ 208 V input
Air Flow	830 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 power 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, 3 Phase	Max Current Draw 31 A; Recommended Service 40 A
208 V -5/+10%, 60 Hz, 3 Phase	Max Current Draw 26 A; Recommended Service 35 A
	Input may be configured for 230 V or 208 V in the field by changing jumpers. Three phase load is balanced. Call for other voltages or 50Hz operation. Performance is reduced by 17% with 50Hz 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	
Inside Dimensions	30" W x 30" H x 30" D (15.6 cubic feet) 762 mm W x 762 mm H x 762 mm D (442 liters)
Outside Dimensions	38" W x 78.5" H x 56" D (nominal) 914 mm W x 1994 mm H x 1422 mm D Door latch adds 3" to width on right side.
Minimum Installed Clearance	18" from the left and right side 24" from the rear
Window Viewing Area	18" W x 12" H
Access Ports	4" Port on left and right side (two total). Supplied with foam plugs.
Weight	Chamber Weight: 1,080 pounds Shipping Weight: 1,220 pounds
Sound Level	67 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 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 improvements, specifications subject to change without notice.