

Model 105A *Half Cube*™

World's Smallest Temperature Chamber



- ◆ 1/2 Cu Ft Workspace
- ◆ -40°C to +130°C Temperature Range
- ◆ 256-Step Programmable Temperature Controller
- ◆ High/Low Limit Controller
- ◆ RS-232 interface, optional GPIB
- ◆ LabVIEW Drivers
- ◆ Compact Size for Benchtop or Rackmount Use
- ◆ Low Audible Noise
- ◆ Non-CFC Single-Stage Refrigeration
- ◆ 120V Input - Plugs Into Any Outlet
- ◆ Fast Delivery from Stock

Ideal for temperature testing of...

- ◆ Fiber Optic Components
- ◆ Handheld Devices
- ◆ Small Circuit Boards
- ◆ Disk Drives

Compact Size

The TestEquity Half Cube™ temperature chamber is small enough to fit on your bench with plenty of room to spare. It's 40% smaller and uses 33% less power than the typical "benchtop" chamber. Put it on a cart, and you can roll it into even the smallest work cubicle.

Programmable Temperature Controller

Easy to use microprocessor-based controller stores 256 steps in up to 40 profiles. Includes an RS-232C interface. Optional GPIB interface is available.

High/Low Limit Control

Provides user-adjustable independent protection against excess temperatures.

Low-Noise Operation

The Half Cube's refrigeration system generates a low level of audible noise and vibration. You'll be able to work close to the chamber with minimum discomfort and distraction.

120 Volt Input

Plugs into any standard 120 Volt wall receptacle.

Two 2" Access Ports

Lets you attach wires and sensors to your test sample through both the left and right side of the chamber.

Shelf

A stainless steel wire shelf ensures proper airflow around your test sample for uniform temperature distribution.

World's Best Chamber Warranty

Only TestEquity offers a 3-year warranty on parts and 1-year warranty on labor at your domestic site. Our nationwide service network is qualified to do the job right. And we always have replacement parts in stock for immediate shipment.



TESTEQUITY

Programmable Controller

Up to 256 steps can be programmed into as many as 40 nameable profiles. The context sensitive information key and guided steps make profile programming fast and easy. A four-line backlit LCD displays programming, setup, operating and help information. A large LED readout indicates the actual chamber temperature with 0.1° resolution. Internal logic provides refrigeration compressor control for responsive and reliable performance. Includes an RS-232 interface. Optional GPIB interface is available.

High/Low Limit Controller

Provides independent protection against excess temperatures. Both high and low limits can be set. The limit controller will shut down the chamber in the event of an out of limit condition.

Chamber Performance

Temperature Range	-40°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)					
Live Load Capacity	+23°C	0°C	-10°C	-20°C	-30°C	-40°C
	200 Watts	175 Watts	165 Watts	145 Watts	90 Watts	10 Watts

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	-----	3 min	5 min	7 min	10 min	13 min	22 min
+85°C	8 min	13 min	15 min	17 min	20 min	23 min	31 min

Heat Up Transition Time (empty)*

Start Temp	End Temp		
	+23°C	+50°C	+85°C
+23°C	-----	1.5 min	6 min
0°C	2 min	4 min	7.5 min
-20°C	3 min	5 min	8 min
-40°C	4.5 min	7.5 min	11 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 / 17 min = 6.18°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.

Refrigeration and Heating System

Compressor	1/3 HP Copeland hermetic
Condenser	Air Cooled
Heater Power	500 Watts

©TestEquity 8.06

Plugs Into Any 120V Outlet

The Half Cube draws only 10 Amps maximum at 120 Volts. You can plug it into any standard wall receptacle, with plenty of power to spare for other equipment.

Reversible Chamber Door

You won't need to rearrange your whole bench or workflow to accommodate the Half Cube. The chamber door is reversible, allowing the door to open from the left or right side. This is also useful when placing two Half Cube chambers side-by-side.

Available Options

- ◆ GPIB Interface
- ◆ Extra Shelf
- ◆ Rackmount Adapter
- ◆ 50 Hz Export Version
- ◆ Cart

Shown on optional cart.



Instrumentation

Temperature Controller 256 steps, 40 profiles, ramp and soak programmable memory. RS-232C interface.

Limit Controller Independent high and low temperature limits, user adjustable.

Power Requirements

Input Voltage 120 V nominal (110 to 126 VAC), 60 Hz, 1 PH
Current Draw Max Current Draw 10 A, Recommended Service 15 A.

Physical Characteristics and Safety

Inside Dimensions 12" W x 9" H x 8" D (0.5 cubic feet)

Outside Dimensions 16.5" W x 26" H x 20" D (nominal)
 Door latch adds 2" to width.
 Circulator motor housing adds 1" to depth in rear.

Min. Installed Clearance 12" from the rear.

Access Ports 2" Port on left and right side (two total)
 Supplied with silicone foam plugs

Weight Chamber Weight: 114 pounds
 Shipping Weight: 140 pounds

Safety Designed to meet UL STD 3101-1 and CAN/CSA STD C22.2 No. 1010.1

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.

Also Available for Rent

TestEquity LLC
 2450 Turquoise Circle
 Thousand Oaks, CA 91320

800-732-3457
 805-498-9933
www.testequity.com