



# CLWT-067™

## BENCHTOP CLOSED LOOP WIND TUNNEL FOR ELEVATED TEMPERATURE TESTING OF BOARDS AND COMPONENTS

The **CLWT-067™** is a research-quality closed loop wind tunnel that provides a convenient, accurate system for thermally characterizing PCBs and individual components at controlled temperatures from ambient to 85°C.

The **CLWT-067™** wind tunnel produces air flows from 1 to 7 m/s (1,400 ft/min). With customization, it can generate flows up to 50 m/s (10,000 ft/min) using orifice plates (available optionally). The clear Lexan test section lets the user view the test specimen and allows for ease of flow visualization.

Unlike open loop wind tunnels, the **CLWT-067™** recirculates internal air. This allows the system heater to quickly warm the air to a specific temperature. The testing of boards and components in hot air is a requirement in many electric systems such as components and power supplies. The precise controls of air temperature and velocity along with the board temperature range of the **CLWT-067™** wind tunnel make it a versatile test instrument for a variety of applications.

The complete wind tunnel fits on most lab benches and is powered from the **CLWTC-1000™** (purchased separately). The **CLWTC-1000™** requires 220 VAC at 20 Amps. It has a smaller footprint than traditional, closed loop wind tunnels or environmental test chambers.

The wind tunnel's test section can be accessed from the top door for mounting and repositioning of devices under test and sensors. Optional internal rail guides provide an easy mechanism to install test specimens of different sizes (e.g., PCB, heat sink).

Instrument ports (6) are provided in the side walls of the test section for placing temperature and velocity sensors, such as thermocouples, Pitot tubes and hot-wire anemometers.

### RECOMMENDED ACCESSORIES:



**CLWTC-1000™**  
Wind Tunnel Controller

Custom options are also available. Contact ATS for details.



**OVERALL DIMENSIONS (L X W X H)**  
143.6 x 49.3 x 67.7 cm  
(56.5 x 19.4 x 26.6")

**TEST SECTION DIMENSIONS**  
41.8 x 22.5 x 8.9 cm  
(16.4 x 8.9 x 3.5")

**NUMBER OF INSTRUMENT PORTS**  
6

**FLOW RANGE**  
1 to 7 m/s (200 to 1400 ft/min)

**TEMPERATURE RANGE**  
Ambient to 85°C (Ambient to 185°F)

**WEIGHT**  
70.7 kg (156 lbs.)

### FEATURES:

- » **High Temperature Testing**  
Evaluate the effects of elevated temperatures on components and power supplies at different velocity
- » **Aerodynamic & Pressure Drop Measurement**  
Measure the effect of air flow on drag and pressure drop for components and boards
- » **Flow Characteristics**  
High quality flow with very low turbulence intensity
- » **Wind Tunnel Controller**  
Control flow and temperatures while viewing data and monitoring events with **CLWTC-1000™**
- » **Component Testing**  
Evaluate the effects of air flow on an individual or multiple component's temperature and PCB response and reliability
- » **Quick Access**  
Quickly change the test specimen through the top access test section
- » **Sensor Ports**  
Measure pressure, velocity and temperature through sensor ports
- » **Heat Sink Characterization**  
Characterize a variety of heat sink sizes for natural and forced convection cooling
- » **Sensor Calibration**  
Precision temperature and velocity controls allow accurate calibration of sensors
- » **Multiple PCB Testing**  
Test actual or simulated PCBs for thermal and air flow distribution

For further technical information, please contact Advanced Thermal Solutions, Inc. at **1-781-769-2800** or **ats-hq@qats.com**.

