



# CWT-106™

## CUSTOMIZED RESEARCH QUALITY WIND TUNNEL

The **CWT-106™** is a research quality wind tunnel designed for multiple PCB and component level testing. It is used in air flow characterization and flow visualization, thermal resistance measurements and generation of P-Q curves. The large test section (24 x 24 x 6") is designed to accommodate multiple PCBs as seen in a typical ATCA chassis.

The wind tunnel can also be used to characterize different heat sink sizes for natural and forced convection cooling. Multiple heat sinks can be tested side by side to determine their thermal performance in the same environment.

The **CWT-106™** produces uniform air flows of up to 6 m/s (1200 ft/min). Air is drawn into the tunnel with up to five variable DC fans mounted at the exhaust section of the tunnel. These fans are mounted on a tray and can be easily replaced with another tray to accommodate larger or smaller fans, should different air flow ranges be required.

An internal flow management system, with honeycombs and screens, breaks up turbulence and provides uniform and homogeneous flow in the test section.

The **CWT-106™** can be operated both vertically and horizontally and features a Plexiglas™ test section for ease of flow visualization.

The **CWT-106™** includes 18 sensor ports in front and on the sides of the test section for the insertion of a variety of probes, such as thermocouples, Pitot tubes, velocity measuring sensors, etc.

PCBs are mounted on a flexible railing in the test section. The flexibility of the movable mounting plate allows users to design and build their own modifications to suit specific needs. The mounting plate can be adjusted in two directions using appropriate length standoffs.

\* Power supply not included.



### FEATURES:

- » **Multiple PCB Testing**  
Test actual or simulated PCBs for thermal and flow distribution
- » **Flow Visualization**  
Observe air flow distribution in the tunnel by smoke or buoyant bubbles through the all Plexiglas™ test section
- » **Flow Characteristics**  
High quality flow with very low turbulence intensity
- » **Heat Sink Characterization**  
Characterize a variety of heat sink sizes for natural and forced convection cooling
- » **Heat Sink Comparison**  
Test two heat sinks side by side and compare their thermal performance in the same environment
- » **Component Testing**  
Utilize for individual or multiple component testing
- » **Variable Speed**  
Change air flow rates by controlling the fan RPM
- » **Quick Access**  
Quickly change the test specimen through the test section cover
- » **Sensor Ports**  
Measure pressure, velocity and temperature through the sensor ports
- » **Sensor Calibration**  
Uniform velocity profile at the testing section allows accurate calibration of sensors
- » **Free Lifetime Tech Support**

### RECOMMENDED ACCESSORIES:

	<b>Candlestick Sensor</b>		<b>WTC-100™</b> Wind Tunnel Controller
	<b>HP-97™</b> Component Simulator		<b>ATVS-NxT™</b> Hot Wire Anemometer

### OVERALL DIMENSIONS (L X W X D)

195.6 x 101.6 x 84.8 cm  
76.9 x 40 x 33.4"

### TEST SECTION

61 x 61 x 15.2 cm  
24 x 24 x 6"

### NUMBER OF SENSOR PORTS

18

### FLOW RANGE

0 to 6 m/s (0 to 1200 ft/min)

### WEIGHT

72 kg (159 lbs.)

### POWER SUPPLY REQUIREMENTS

24VDC at 5.4 Amps

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

### APPLICATIONS:

- » **Telecommunications**
- » **Thermal Management**
- » **Medical Instrumentation**
- » **Automotive**
- » **Chemical**
- » **University Research**

