CWT-107™

OPEN LOOP WIND TUNNEL

The **CWT-107™** 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 7") 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-107™** produces uniform air flows of up to 5.5 m/s (1100 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-107™** can be operated both vertically and horizontally and features a Plexiglas™ test section for ease of flow visualization.

The **CWT-107™** 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.

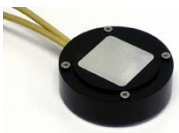
PCBs are mounted on a flexible railing in the test section. The flexibility of the movable mounting plate allows users to design and build their own modifications to suit specific needs. The mounting plate can be adjusted in two directions using appropriate length standoffs.

* Power supply not included.

RECOMMENDED ACCESSORIES:

CLWTC-1000
Wind Tunnel Controller

WTC-100™
Wind Tunnel Controller



HP-97™
High Power Component Simulator

ATVS-NxT™
Hot Wire Anemometer

OVERALL DIMENSIONS (L X W X D)
197.7 x 101.6 x 77.2 cm
(77.8 x 40 x 30.4")

TEST SECTION
61 x 61 x 17.8 cm
(24 x 24 x 7")

NUMBER OF SENSOR PORTS
18

FLOW RANGE
0 to 5.5 m/s (0 to 1100 ft/min)

WEIGHT
70 kg (155 lbs.)

POWER SUPPLY REQUIREMENTS
24VDC at 5.5 Amps

FEATURES:

- **Multiple PCB Testing**
  Test actual or simulated PCBs for thermal and flow distribution
- **Flow Visualization**
  Observe flow distribution in the tunnel by smoke or buoyant bubbles through the all Plexiglas® test section
- **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 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
- **Orientation**
  Wind tunnel can be operated horizontally or vertically

APPLICATIONS:

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

RoHS COMPLIANT

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