



Innovation in Thermal Management™

CWT-106™

Innovative Construction Allows You To Design Your Research Quality Wind Tunnels

The CWT-106™ is a research quality wind tunnel designed for PCB and component level testing. It can be used for flow characterization, flow visualization and thermal resistance measurements. Air is drawn into the tunnel with 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. The air velocity in the test section through the system can be varied from 0.5 m/s (100 ft/min) to 10 m/s (2000 ft/min). The wind tunnel has an internal flow management system, with honeycombs and screens to break up the turbulence and provide uniform and homogeneous flow in the test section.

The CWT-106™ can be operated both vertically and horizontally. The test section is made of Plexiglas™ for ease of flow visualization. There are 8 sensor ports in front and on the sides of the test section for inserting a variety of probes, such as thermocouples, Pitot tubes, velocity measuring sensors, etc. At the center of this plate, and flush with the surface, is a specially designed housing with a heat slug (optional) that can heat up the devices or heat sinks for thermal analysis (optimal accuracy). The flexibility of the movable plate and housing provides the users with a high degree of latitude to design and build their own setup to suit their needs.



CWT-106™ Features

- **Customizable Research Quality Wind Tunnel**
- **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**
An ideal test vehicle for component characterization.
- **PCB Testing** Single or Multiple
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.
- **Variable Speed**
Change flow rate by controlling the fan RPM.
- **Flow Direction**
Test the effect of flow direction by controlling the fan operation.
- **Quick Access**
Quickly change the test specimen through the front access test section.
- **Sensor Ports**
Measure pressure, velocity and temperature through the sensor ports.
- **Data Center**
View data and monitor events at the data center. (optional accessories not shown in the picture)
- **Flow Characteristics**
High quality flow with very low turbulence intensity.

Technical Data

- Length: 84"
- Width: 17.75"
- Flow range: Up to 2,000 ft/min (10 m/s)
- Wall-to-Wall spacing: 6"
- Test plate: 17.75" x 17.50"
- Power required: Dependent on fan tray.
- Number of Sensor Ports: 18
- Depth: 8"
- Weight: 118 lbs.



WTC-100 Front View

Accessories

- WTC-100™ Air Flow Controller.
- Heat Slug Single Plate: Dual element for side-by-side testing of components or heat sinks.*
- Highly customizable for your application.

**Power supply not included*