



CWT Series

CONTROLLED OPEN LOOP WIND TUNNEL

These research quality wind tunnels are designed for PCB and component level testing. They are used in air flow characterization and flow visualization, thermal resistance measurements and generation of P-Q curves.

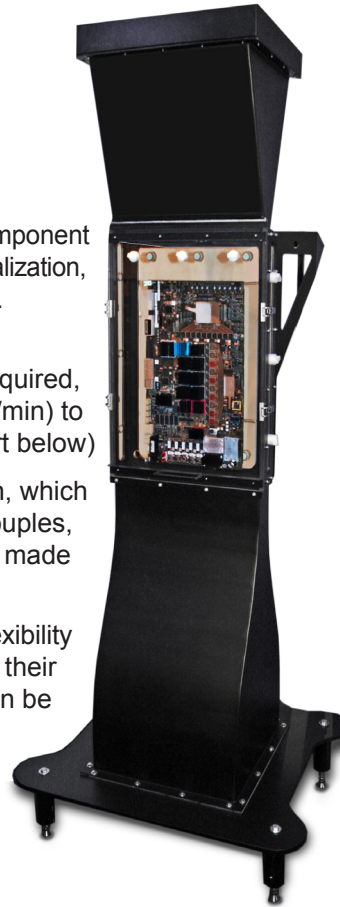
Fans are tray-mounted and easily replaced with another tray to accommodate larger or smaller fans. If other flow ranges are required, the air velocity in the test section can be varied from 0 m/s (0 ft/min) to 10 m/s (2000 ft/min) with the fan tray that is provided. (see chart below)

There are sensor ports on the front and sides of the test section, which allows for the insertion of a variety of probes, such as thermocouples, Pitot tubes, velocity measuring sensors, etc. The test section is made of Plexiglas™ for ease of flow visualization.

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.

The wind tunnel has honeycombs and screens to suppress turbulence and provide uniform and near homogeneous flow at the test section. A mounted diffuser at the exit and before the fans helps with pressure recovery to provide a smooth flow.

* Power supply not included.



FEATURES:

- » **Component Temperature Testing**
Evaluate the effects of airflow on components, temperature and PCB response and reliability
- » **Heat Sink Characterization**
Characterize a variety of heat sink sizes for natural and forced convection cooling
- » **Sensor Calibration**
Uniform velocity profile at the test section allows accurate calibration of sensors
- » **Heat Sink Comparison**
Test two heat sinks side by side and compare their thermal performance in the same environment
- » **Pressure Drop Testing**
Measure pressure drop across components or PCB for a given flow
- » **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
- » **Variable Speed**
Change flow rates by controlling the fan RPM
- » **Quick Access**
Quickly change the test specimen through the front access test section
- » **Sensor Ports**
Measure pressure, velocity and temperature through the sensor ports
- » **Orientation**
Wind tunnel can be operated horizontally or vertically

RECOMMENDED ACCESSORIES:



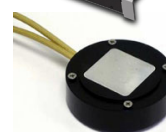
WTC-100™
Wind Tunnel
Controller



CLWTC-1000
Wind Tunnel
Controller



ATVS-NxT™
Hot Wire
Anemometer



HP-97™
High Power
Component
Simulator

Product	Length	Width	Depth	Weight	Test Domain (L x W x D)	Sensor Ports	Velocity Range	Fans
CWT-100	197.6 cm (77.8")	81.3 cm (32")	68.6 cm (27")	51.7 kg (114 lbs)	61 x 40.6 x 8.3 cm (24 x 16 x 3.3")	18	0 to 10 m/s (0 to 2000 fpm)	Four 24 VDC
CWT-104	198 cm (78")	107 cm (42")	86 cm (34")	74 kg (164 lbs)	61 x 61 x 10 cm (24 x 24 x 4")	18	0 to 9 m/s (0 to 1800 fpm)	Five 24 VDC
CWT-105	198 cm (78")	107 cm (42")	86 cm (34")	75 kg (165 lbs)	61 x 61 x 12.7 cm (24 x 24 x 5")	18	0 to 7 m/s (0 to 1400 fpm)	Five 24 VDC
CWT-106	195.6 cm (76.9")	101.6 cm (40")	84.8 cm (33.4")	72 kg (159 lbs)	61 x 61 x 15.2 cm (24 x 24 x 6")	18	0 to 6 m/s (0 to 1200 fpm)	Five 24 VDC
CWT-107	197.7 cm (77.84")	101.6 cm (40")	77.2 cm (30.4")	70 kg (155 lbs)	61 x 61 x 17.8 cm (24 x 24 x 7")	18	0 to 5.5 m/s (0 to 1100 fpm)	Five 24 VDC
CWT-108	195 cm (77")	101 cm (40")	83 cm (33")	88 kg (193 lbs)	61 x 61 x 20.3 cm (24 x 24 x 8")	18	0 to 5.5 m/s (0 to 1100 fpm)	Five 24 VDC
CWT-109	203.2 cm (80")	107 cm (42")	89 cm (35")	88.4 kg (195 lbs)	61 x 61 x 22.9 cm (24 x 24 x 9")	18	0 to 5 m/s (0 to 1000 fpm)	Five 24 VDC
CWT-110	213.4 cm (84")	107 cm (42")	100 cm (40")	90 kg (198 lbs)	61 x 61 x 25.4 cm (24 x 24 x 10")	18	0 to 4.5 m/s (0 to 900 fpm)	Five 24 VDC
CWT-112	223.5 cm (88")	107 cm (42")	114 cm (45")	91 kg (201 lbs)	61 x 61 x 30.5 cm (24 x 24 x 12")	18	0 to 3.2 m/s (0 to 750 fpm)	Five 24 VDC
CWT-125	238.8 cm (94")	107 cm (42")	152 cm (60")	95 kg (210 lbs)	61 x 61 x 63.5 cm (24 x 24 x 25")	18	0 to 2 m/s (0 to 400 fpm)	Six 24 VDC

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