WTC-100™

Wind Tunnel Controller

Innovation in Thermal Management™

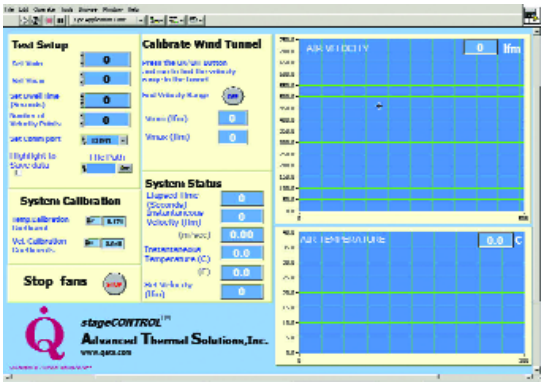
The WTC-100™ is a device to control the air velocity in a chamber-like wind tunnel or card rack.

The WTC-100™ helps automate thermal characterization of heat sinks, boards and components in a wind tunnel or card rack testing for different fan tray configurations. It has two independent sensors for determining air temperature and velocity to facilitate rapid feedback of the airflow inside the test chamber. The controller communicates with a PC through an RS-232 port, enabling the user to fully automate air flow testing. Uni-sensor based control and measurement enables the user to control the air flow anywhere inside the test chamber.

The flow range, step increment and the dwell time are set from the stageCONTROL™ application software by the user.

Front View

Rear View



stageCONTROL™

Technical Data

- **Width** — **10.40" (264 mm)**
- **Length** — **13.80" (350 mm)**
- **Height** — **4.5" (114.6 mm)**
- **115 volt AC input power**
- **Fan operating voltage** — **24 Volts (Can be changed to a different fan voltage)**
- **Velocity range** — **0.2 to 50 m/sec (60 to 10,000 ft/min) DEPENDING on the fan tray**
- **Two independent temperature and velocity sensors**
- **RS232 Connector port**
- **stageCONTROL™ labVIEW™ based application software**

WTC-100™ Features

- Fully automatic controller for components, heat sink and card rack characterization.
- Two independent sensors for measuring air temperature and velocity simultaneously
- Feed back control to maintain air velocity in the test domain within +/- 0.5% of the set velocity.
- Control velocities from 60 to 10,000 ft/min depending on the system fan tray.
- Measures temperatures from -10 ^{o}C to 150 ^{o}C.
- Enables ramping of flow from a set minimum to a set maximum at specified number of points.
- Sets dwell time at each measurement point.
- Standard unit powers up 24 VDC fans (different voltage fans can be used upon request).
- stageCONTROL™, a user friendly labVIEW™ based application software.
- RS232 connection to a PC.
- 115 volt AC input power.
- WTC-100™ saves testing time by facilitating automatic air flow control and measurement.