BWT-104™

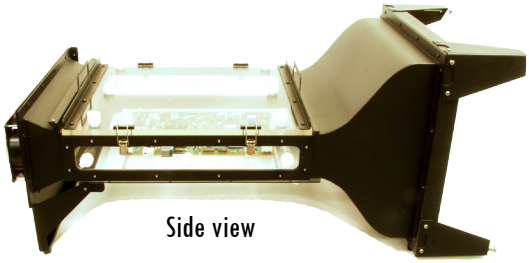
RESEARCH QUALITY BENCHTOP WIND TUNNEL

The **BWT-104™** is a research quality, open loop, benchtop wind tunnel for thermal characterization of components, circuit boards and cooling devices such as heat sinks, heat exchangers and cold plates. The polynomial shape and internal flow management system includes honeycombs and screens to break up turbulence to provide uniform, homogeneous flow, up to 4 m/s (800 ft/min) within the test section.

The **BWT-104™** has 18 ports which allows a variety of probes, such as thermocouples, Pitot tubes, and temperature and velocity sensors, among others, to be inserted throughout the test section. The wind tunnel is made from aluminum and Plexiglas®, to provide a clear view of the test section for flow visualization. Rail guides are provided in the test section so the board (PCB) in the test position can be adjusted. An access panel is conveniently located for mounting boards. The mounting of the boards can be adjusted in three different directions (i.e. spacing from the walls can be adjusted using appropriate stand offs).

The **BWT-104™** weighs only 21 kilograms (47 lbs.) making it ideal for laboratory environments. Each **BWT-104™** fan tray is equipped with three 24-volt DC fans, which can be individually switched on and off through a control unit for simulating fan failure simulation. **BWT-104™** can be equipped with ATS' **WTC-100™** automatic controller to facilitate testing without attendance. The combination of **BWT-104™** and **WTC-100™** can expedite and automate testing programs such as component or heat sink thermal characterization, PCB thermal simulation and others that can be time consuming. ATS also carries a full line of temperature, flow and pressure sensors and scanners that are designed for use with the **BWT-104™**.

* Power supply not included.



Side view

OVERALL DIMENSIONS (L X W X H)
108.2 x 51.8 x 48 cm
(42.61 x 20.42 x 19")

TEST SECTION DIMENSIONS
50.8 x 43.2 x 10.2 cm
(20 x 17 x 4")

NUMBER OF SENSOR PORTS
18

FLOW RANGE
0 to 4 m/s (0 to 800 ft/min)

WEIGHT
21 kg (47 lbs)

POWER SUPPLY REQUIREMENTS
24VDC at 1.5 Amps

RECOMMENDED ACCESSORIES:

WTC-100™
Wind Tunnel Controller

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

RoHS COMPLIANT

FEATURES:

» **Component Temperature Testing**
Evaluate the effects of air flow on an individual or multiple component's 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

» **Aerodynamic & Pressure Drop Measurement**
Measure the effect of air flow on drag and pressure drop for components and boards

» **Multiple PCB Testing**
Test actual or simulated PCBs for thermal and flow distribution

» **Quick Access**
Quickly change the test specimen through the top access test section

» **Sensor Ports**
Measure pressure, velocity and temperature through the sensor ports

» **Variable Speed**
Change flow rates by controlling the fan RPM

» **Flow Visualization**
Observe flow distribution in the tunnel by smoke or buoyant bubbles through the all Plexiglas® test section

» **Easy Mobility & Dual Orientation**
Benchtop wind tunnel can be operated vertically or horizontally and weighs only 21 kg, maximizing lab space.

» **Free Lifetime Tech Support**