

# RESEARCH QUALITY BENCHTOP WIND TUNNEL



WT-3104



- ✓ Quick Access Panel
- ✓ Sensor Ports (18)
- ✓ Change Flow Rates by Controlling 3 Fans On/Off
- ✓ Operate Vertically or Horizontally
- ✓ Observe Flow Distribution Through the All Plexiglas® Test Section

## Applications

- ✓ **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:** Natural and Forced Convection
- ✓ **Sensor Calibration with Calibrated Flow Sensor (Sold Separately)**
- ✓ **Multiple PCB Testing: Test Actual or Simulated PCBs for Thermal and Flow Distribution\***

\* Visit [omega.com](http://omega.com) for the TVS-1000 Series temperature/velocity profile packages.

The WT-3104 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 and provides uniform, homogeneous flow, up to 4 m/s (800 ft/min) within the test section.

The WT-3104 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® and, provides a clear view of the test section for flow visualization.



WT-3104 shown smaller than actual size.

Rail guides are provided in the test section so the board position can be adjusted. An access panel is conveniently located for mounting boards which can be adjusted in 3 different directions (i.e. the spacing from the walls can be adjusted) using appropriate standoffs.

The WT-3104 weighs only 21 kg (47 lbs) making it ideal for laboratory environments. Each WT-3104 fan tray is equipped with three 24 Vdc fans, which can be individually switched on and off, with an included control box unit, to generate airflow. This control box enables lowest possible air flow. Sensors to measure the flow parameters are also available by OMEGA as optional accessories.

## SPECIFICATIONS

- Wind Tunnel:** 108.2 L x 51.8 W x 48 cm D (42.61 x 20.42 x 19")
- Test Section:** 50.8 L x 43.2 W x 10.2 cm D (20 x 17 x 4")
- Number of Sensor Ports:** 18
- Flow Range:** 0 to 4 m/s (0 to 800 ft/min)
- Flow Uniformity:** ±1%
- Weight:** 21 kg (47 lb)
- Power Supply Requirements:** 24 Vdc at 1.5 Amps (Power supply provided by customer)

To Order	
Model No.	Description
WT-3104	Research quality benchtop wind tunnel

Comes complete with (18) sensor ports, fan control box and operator's manual.  
**Ordering Example:** WT-3104, research quality benchtop wind tunnel.

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