

Wind Tunnel

SKU# AV5289



This compact open circuit sub-sonic wind tunnel training equipment is designed for benchtop use.

The wind tunnel is designed for teaching aerodynamic principles and exploration of fluid flow. Suitable for college to undergraduate teaching, it features a computer controlled fan, data acquisition and multiple experimental setups, controlled by a touch screen interface and also includes LED flow visualisation.

The wind tunnel has a 125mm transparent test section and over 35m/s wind speed.

The wind tunnel has a honeycomb structure built into the contraction nozzle (ratio 9.2:1) which ensures uniform flow through the test section. The clear test section allows for visibility and clear understanding of the experimental behaviour. The air exits through a variable speed controlled fan, with a finger guard covering the back.

Built in data acquisition allows users to have direct output of pressure readings from pitot static tube and pressure tapping's. It also allows for real time lift and drag force components to be logged. Different drag shapes are provided along with multiple NACA profile aerofoils. Simple thread attachment allows students to design their own test pieces for analysis.

A smoke generator (provided) can be used to create streamline smoke trails over the test objects for visualisation of flow patterns.

The wind tunnel teaches many aerodynamic principles such as:

- Bernoulli's equation
- Air flow over aerofoils
- Air flows around blunt and streamlined shapes
- Pressure distribution around a cylinder and aerofoil.
- Lift and drag forces for blunt and streamlined shapes
- Flow visualisation
- Manometers