

WIND TUNNEL

SRWT001000


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Official STEM Racing product



Designed for benchtop use



Aerodynamic testing

Everything you need to *test* your car designs

The STEM Racing Wind Tunnel has been designed as a compact open circuit sub-sonic wind tunnel for benchtop use, complete with smoke machine. The Wind Tunnel is designed for teaching aerodynamic principles and exploration of fluid flow...perfect for STEM Racing applications.

The Wind Tunnel features a computer-controlled fan, data acquisition and multiple experimental setups, controlled by a touch screen interface.

The Wind Tunnel has a 125mm sq. transparent test section and over 35m/s wind speed. Created with an optimal sized testing section to house STEM Racing car models, the wind tunnel enables student teams to gather real-time aerodynamic data to inform their car designs.



WIND TUNNEL



Built-in data acquisition

Users have direct output of pressure readings from pitot static tube and pressure tappings. It also allows for real time lift and drag force components to be logged.

A smoke generator which is provided, can be used to create streamline smoke trails over the test objects for visualization of flow patterns.

FEATURES

- › Official STEM Racing Wind Tunnel
- › STEM Racing car testing attachment
- › Smoke machine and smoke fluid
- › Real-time data acquisition capabilities
- › 14+ interchangeable experimental attachments in a storage solution
- › Supported by a wide range of curriculum modules
- › Adaptable to various teaching environments
- › Compatible with 3D printed specimens for aerodynamic testing
- › LED light and smoke visualisation for airflow analysis
- › Integrated touchscreen interface for intuitive control
- › Lightweight and portable for flexible use
- › Low-power, energy-efficient operation

Uniform flow & clear visibility

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 air exits through a variable speed-controlled fan, with a finger guard over the back.



Technical Information

Equipment as Standard:

- › Wind Tunnel workstation
- › U Tube and inclined manometer
- › Drag test pieces (6)
- › Aerofoils (3)
- › 4 Pin male cable for Wind Tunnel
- › 5 Pin male cable for Wind Tunnel
- › Pitot static tube experiment
- › Pressure tapped cylinder
- › 2 Force control box
- › Tubing, 4mm clear, 300mm length
- › Pressure tapped aerofoil
- › Smoke machine with 250ml smoke fluid
- › Lidded Tray for Accessories

Dimensions:

L1690mm W350mm H450mm

Optional Extras:

- › Smoke Generating Fluid (500ml bottle) **N56806**
- › Flight Case on Wheels **SRWFC**
(As standard the Wind Tunnel is delivered in a wooden case)