

# AIR TRACE VISUALISATION

F1AT001000


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Compact design



Clean, safe and easy to operate



Aerodynamic testing

## An essential part of the design, test and make process

This system is designed to visualize how air flows over and around a race car during motion. It typically uses smoke, coloured threads, digital simulation, or particle tracking to create visible air "traces" that reveal aerodynamic behaviour, such as drag, lift, and turbulence.

The data gathered helps in:

- Teaching students about fluid dynamics and aerodynamics
- Optimizing car design for better performance and fuel efficiency
- Demonstrating real-world physics concepts in a visual and interactive way
- Modern systems may include wind tunnels, sensors, and computational fluid dynamics (CFD) simulations to enhance accuracy and educational value



## AIR TRACE VISUALISATION SYSTEM

### FEATURES



#### ➤ Visualisation Tunnel

Featuring variable wind speeds, the Air Trace Visualisation Tunnel is simple to use, compact in design and easy to set up.

Use the tunnel with the Air Trace Smoke Generator to run smoke-like vapour over your STEM Racing Car to demonstrate its aerodynamic capabilities.

#### ➤ Smoke Generator

The Air Trace Smoke Generator will produce a steady stream of smoke-like vapour, continuously when connected to a mains adaptor.

Vapour will disperse quickly, so you can clearly see the air flow pattern without flooding the tunnel with thick fog. The generator comes complete with a robust carry case.

Smoke Generator supplied as standard with Air Trace Visualisation System.



### Technical Information

#### Equipment as Standard:

- STEM Racing branded Air Trace Visualisation Tunnel
- Smoke Generator
- 2 x Smoke Generator nozzles
- 1 x Extension tube
- Smoke Generating Fluid (500ml bottle)
- Region-specific mains adaptor for Air Trace Smoke Generator and Tunnel
- Carry case for Air Trace Smoke Generator
- Instruction manual

#### Dimensions:

L665mm W200mm H230mm

#### Optional Extras:

- Additional Smoke Generating Fluid (500ml bottle) **N56806**