

Product Name :
Subsonic Wind Tunnel**Product Code :**
ALABS-A104-546**Description :****Subsonic Wind Tunnel**

Subsonic Wind Tunnel

Specification :

Self-contained wind tunnel for the study of subsonic aerodynamics, complete with two- component balance system and air speed indicator

• Special features:

- Contraction and Diffuser: precision glass fibre mouldings
- Test Section: clear acrylic, which retracts to permit access to the models.
- Adjustment of models can be made with the tunnel in operation.
- Fan: Variable speed motor driven unit downstream of the working

section permitting stepless control of airspeed between 0 and 26ms⁻¹

- Balance: Lift and drag Lift
- 7.0N, Drag
- 2.5N, Sensitivity $\pm 0.01\text{N}$
- Air speed: Indicated on inclined manometer directly calibrated in m/s
- Support structure: A strong steel frame including working surface and fitted with castors for easy movement
- Suitable for undergraduate and simple research work.
- Working section: 304mm wide x 304mm high x 457mm long (octagonal cross- section)
- Contraction area ratio: 3:1
- Motor rating: 1.5kW
- A user instruction manual is supplied
- Optional models and instrumentation allow:
 - Investigation of the development of the boundary layer on a flat plate by measurement of total head distribution
 - Flow visualisation studies around an aerofoil
 - Measurement of pressure distribution around an aerofoil at various angles of attack or around a cylinder
 - Measurement of lift and drag on an aerofoil with leading edge slot and trailing edge flap
 - Velocity and pressure distribution measurements using a pitot static tube and yaw probe
 - Measurement of drag for models of different shapes but common equatorial diameter
 - Demonstration of flutter of an aerofoil
 - Calibration of the wind tunnel velocity indicator using a pitot static tube
 - Investigation of the wake behind a cylinder or aerofoil using a wake survey rake

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