

Product Name :
Modular Air Flow Bench

Product Code :
NEGEMG112

Description :

Modular Air Flow Bench

Modular Air Flow bench is designed to demonstrate behaviour of bodies during flow around or through bodies with a compressible fluid. The purpose of experiments is familiarisation with and optimisation of drag and the flow field around a body. The trainer consists of a centrifugal fan, which can be used to generate flow velocities up to 40m/s. The fan speed can be changed using Variable Frequency Drive (VFD). A stabilisation tank with flow straightener ensures a consistent, low-turbulence and reproducible flow in the measurement section. A carefully shaped nozzle provides a largely homogeneous velocity distribution of the air flow. The accessory is attached using quick release fasteners and can be interchanged quickly and easily. Measuring points along the measurement section allow pressure and velocity measurements to be taken. The tube manometers are required to be able to show the pressures clearly. Detailed Operation & Maintenance Manual is provided along with the trainer.

Specifications:

- Centrifugal fan: Power consumption: 0.37kW, Max. flow rate: 15 m³/min
- Nozzle exit cross-section: 50x100mm
- Max. flow velocity at the nozzle exit: 40m/s
- Vertical measurement section with flow straightener and nozzle
- Radial fan infinitely variable via frequency converter
- Thermometer for measuring air temperature

Experimental Modules:

- Bernoulli's Equation
- Drag Force
- Round Turbulent Jet
- Boundary Layer
- Flow Around a Bend
- Jet Attachment
- Flow Visualization
- Tapped Aerofoil
- Multi-Tube Manomete

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