



MODULAR AIR FLOW BENCH

AF10

This is a small-scale wind tunnel with an electric fan and adjustable air flow control, with eight different experiment modules that demonstrate key principles and phenomena of air flow.



KEY FEATURES

- The base unit for a comprehensive system for teaching aerodynamic principles.
- Works with eight different interchangeable experiment modules each designed to convincingly demonstrate a particular air flow principle or phenomena
- Easy setup, all the experiment modules can be fitted and removed in minutes.
- Simple and safe to use allowing students to gain hands-on practical experience with minimal supervision
- Compact, mobile and simple to install



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DESCRIPTION

The AF10 is a small-scale wind tunnel with an electric fan and adjustable air flow control. It is the essential base unit for eight different experiment modules that demonstrate key principles and phenomena of air flow.

The unit consists of a sturdy steel framework on which is mounted a fan which supplies air via a flow-control valve to a specially designed plenum chamber and aerodynamically shaped contraction.

Each of the experiment modules fits either to the plenum chamber or to the contraction. The air then exits the experiment module through the bench top and emerges at an exhaust at the rear of the unit. When smoke is used in experiments for visualisation purposes users can fit flexible ducting to the exhaust to direct waste smoke safely away.

Toggle clamps hold the experiment modules, reducing the need for tools. Pressure measurement connections use reliable quick-release couplings. Both of these features make the changeover from one experiment to another simple and quick.

The bench format of the equipment makes it compact, easy to move and store. The unit also has handy shelves and storage space which is ideal to store experiment modules when they are not in use.

The minimum requirement is the AF10 and one of the experiment modules, plus the AF10a manometer as required. Other experiments can be purchased at a later date allowing a complete system to be built up as time and budgets allow.



AVAILABLE EXPERIMENT MODULES

- Bernoulli's Equation (AF11)
- Drag Force (AF12)
- Round Turbulent Jet (AF13)
- Boundary Layer (AF14)
- Flow Around a Bend (AF15)
- Coandă Effect and Jet Flow (AF16)
- Flow Visualisation (AF17)
- Tapped Aerofoil (AF18)

RECOMMENDED ANCILLARY

- Multi-Tube Manometer (AF10A)

STANDARD FEATURES

- Supplied with a comprehensive user guide
- Five-year warranty
- Manufactured in accordance with the latest European Union directives
- An ISO 9001 certified company

ESSENTIAL SERVICES

FLOOR SPACE NEEDED:

1.5 m x 1.5 m

ELECTRICAL SUPPLY (SPECIFY ON ORDER):

Single phase, 220 - 240 VAC, 50 Hz, 15 A **OR**

Two phase, 220 - 240 VAC, 60 Hz, 15A

SPECIFICATIONS

TecEquipment is committed to a programme of continuous improvement; hence we reserve the right to alter the design and product specification without prior notice.

NETT DIMENSIONS:

740 mm front to back x 950 mm wide x 1900 mm high and 125 kg

APPROXIMATE PACKED DIMENSIONS:

2.37 m³ and 150 kg

OPERATING CONDITIONS

OPERATING ENVIRONMENT:

Laboratory

STORAGE TEMPERATURE RANGE:

-25°C to +55°C (when packed for transport)

OPERATING TEMPERATURE RANGE:

+5°C to +40°C

OPERATING RELATIVE HUMIDITY RANGE:

80% at temperatures < 31°C decreasing linearly to 50% at 40°C