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Product Name :
Air Flow Bench

Product Code :
LBNY-0005-16100013



Description :

The Air Flow Bench consists of a welded steel frame, Air Flow Bench - General assembly with accessories mounted on castors, and provides two work surfaces for experiments and integral storage space. The ductwork supplied with the Air Flow Bench is manufactured in aluminium sections assembled by deep spigoted sockets, sealed by O rings and clamped by quickrelease over-centre toggle latches. The duct work includes flow straighteners and an adjustable discharge valve. A tangential fan (i.e. fitted with a narrow chord centrifugal impellor), directly driven from a single phase induction motor, provides the necessary air flow for experiments. The fan is capable of providing a flow of 500 litres/second at a static pressure rise of 800 Pascals. The instrumentation supplied with the Air Flow Bench comprises a digital manometer, barometer, conical inlet flow measuring device, and pitot static tube for traversing the duct. An electrical enclosure is mounted on the upper work surface and contains the fan contactor, fan start and stop pushbuttons, and provides electrical power for optional additional equipment. An optional data logging system with various modules is available to provide 0-10V dc analogue outputs of all measurements for interfacing to a computer system.

Technical Specification :

Experimental Capability:

- Tube wall to air convective heat transfer
- Heat transfer in a shell and tube heat exchanger
- Fan characteristics
- Air flow in ducts
- Flow around a bend
- Lift and drag of an aerofoil
- Flow visualization

Boundary layer growth
Free jet studies
Flow around a cylinder
Air flow measurement
Bernoullis experiment.



Laboratory Instrument India