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**Product Name :**  
Fan Test Stand

**Product Code :**  
LBNY-0005-16200020



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#### **Description :**

The centrifugal fan which has a low chord impeller and split volute diffuser casing is directly driven by a DC dynamometer giving a variable speed from 0-4000 rpm, with a swinging stator providing load cell torque measurement and equipped with a toothed wheel for speed measurement. The bench consists of a welded steel frame mounted on castors providing two work surfaces for experiments together with ample storage space for experimental apparatus when not in use. The working surfaces accommodate a control console and a centrifugal fan with variable speed dynamometer drive, to which can be coupled a series of inlet and outlet ducts. The control console houses all electrical components and circuitry associated with the power and speed control, while the instrument panel includes: START/STOP pushbuttons, speed control knob and torque, speed, armature voltage and current displays. The ductwork supplied with the bench is manufactured in aluminium sections assembled by deep spigoted sockets, sealed by O rings. It includes a venturi nozzle, a bell mouthed inlet, flow straighteners, pressure tapping points and disc valves and is designed to allow assembly to various configurations by means of quick release toggle latches. A dual multi-slope manometer scaled 0- 5 and 0-2.5 kPa is supplied for use with the air flow nozzle.

#### **Technical Specification :**

##### **Experimental Capability:**

Measurement of electrical power required by fan  
Fan motor torque  
Fan efficiency at different speeds  
Measurement of temperature rise across fan  
Air flow rate measurement as a function of fan speed  
Flow measurement by pitot static tube traverse and by flow nozzle

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Static pressure measurement and its variation with air flow rate  
Dynamic and total pressure measurement.



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