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Product Name :
Flow through a Bend Apparatus

Product Code :
LBNY-0005-16100011



Description :

The module consists of two parts, a straight section followed by a regular 90° elbow. The lower and upper parts are made of black acrylic plastic while the sides are transparent. The velocity of the air is measured by a Pitot tube, supplied with the bench, connected to the double pipe manometer inclined. Curves representing typical results can be obtained and are presented in the graph cidessus. The conduit measures 60 mm height for 50 mm depth. Several measuring points are located both in the parts. The top and bottom of the elbow joint to connection with multi-tube manometer, device necessary for the use of this module. However, it can be used separately in connecting to a suitable fan an air flow of about 500 liter / sec for 600 Pa and using the manometer. The appliance is designed for use on the basic air flow bench and connected by pipes twisted to the experimental duct 'blown' at the exit of the fan.

Experimental Ability:

Study of the flow around the elbow fitting.

Comparison with theory and actual readings of Pressure coefficients as well as the pressure loss at Through the elbow.

Theoretical test on the effects of the boundary layer, Turbulence and on a single whirlwind.

Definition of the dimensionless pressure coefficient.

Calculation of the volumetric flow around the elbow ratio.

Calculation of the Bernoulli equation between the upstream sector Duct and any point in the report elbow.

Technical Specification :

Functionalities:

Coupled to an elbow fitting with many points of static pressure on the two inner walls and Outside.

Consists in studying the distribution of pressure along of the inner and outer walls of a duct Rectangular shape.
Transparent acrylic conduit for observation of air flow
Static pitot tube mounted in a rectilinear duct
Several measuring points on the side of the wall Immediately connected to the front of the elbow report.



Laboratory Instrument India