FLUID MECHANICS

AXIAL FAN MODULE

DL DKL071

This equipment has been designed for the study of the characteristics of an axial fan granting the possibility to perform wide range of exercises.

The system has a digital speed display to show the working speed of the fan and a control module to regulate the speed.

Moreover, the pressure transducers of the system can sense the working pressure at each observed point and they can show the results in the relevant digital displays improving the practical experience.

TRAINING OBJECTIVES

- Study and obtaining the characteristic curves of an axial fan.
  - Static pressure – flow rate (DPs - Q)
  - Total pressure – flow rate (DPt - Q)
  - Power - flow rate(P - Q)
- Study of regulating an axial fan by varying its rotational speed.
- Pitot tube usage. Difference between static, dynamic and total pressure.
- Obtaining the flow speed profile in the suction pipe.
- Flow measure by the Pitot tube usage.

TECHNICAL DATA

Inner diameters:
- Suction and discharge piping
  - Inner Ø = 114mm
  - Outer Ø = 120mm

Manometers:
- Pressure transducer ±100 Pascal.
- Pressure transducer 0/100 Pascal.

Fan features:
- Pressure increase: 1000Pascal
- Maximum flow volume: 500m³/h
- Motor power rated :90W
- Motor speed: 9.500 rpm -158Hz

Other elements:
- Digital speed display
- Speed adjustment by potentiometer
- Pitot tube Ø 4mm

Dimensions:
- 1100 x 350x 620mm

Requirements:
- Power supply: 230/50Hz