

D - AERODYNAMICS



AD 01.1 - AERODYNAMICS BENCH (pag. D - 1)



FL 07.1 - AXIAL FAN (pag. D - 1)



FL 07.2 - CENTRIFUGAL FAN (pag. D - 1)

AD 01.1 - AERODYNAMICS BENCH



The aerodynamics bench is designed to perform a variety of experiences in the field of fluid mechanics, using a controlled airstream for it.

It has a frequency shifter, which regulates the rotational speed of the fan, and therefore, the airflow in the test zone.

The bench has a system of fast connections, which facilitates and speeds up the installation of the different work equipments.

INCLUDED ACCESSORIES

- Apparatus for the study of the Bernoulli equation.
- Apparatus for the study of the elbow flow.
- Multiple tube manometer.
- Apparatus for the study of the boundary layer.
- Apparatus for the study of the drag coefficient.
- Cylinder Ø50mm.
- Cylinder Ø50mm, with making radial pressure.
- Sphere of Ø50mm.
- Naca profile with 14 pressure ports.
- A nozzle exit for the study of the jet.

FL 07.1 - AXIAL FAN



This equipment has been developed for the study of the characteristics of an axial fan, performing a range of **experiments** and experiences.

The unit has a digital display of revolutions that lets us know the working speed of the fan at all times in a simple manner. This speed is regulated by the control.

Similarly pressure transducers measure the working pressure in each tapping under study through its digital displays and boosting practical experience.

Pressure taps are sealed to prevent leaks that distort the readings taken.

Besides using the speed regulation for modifying the flow of work equipment also it has an IRIS type valve that can vary the airflow through the conduit.

FL 07.2 - CENTRIFUGAL FAN



This equipment has been developed for the study of the characteristics of a centrifugal fan, through the realization of a wide range of **experiments** and experiences.

A pitot tube allows the measurement of air velocity at any diametral point of the tube, measuring the position of the tube through a digital display.

The vertical and inclined manometers allow a correct reading of the pressures.

The equipment is supplied with 2 different impellers (blades tilted forward and backward), which can be exchanged in a very simple way. Through a control of 3 positions we control the direction of rotation of the motor.

The frequency shifter allows the variation of the speed of rotation, while we observe the consumed electrical power in a wattmeter.

Through a conical cap in the air outlet we can cause an adjustable pressure drop, and study the operating points of the fan.