



① Unit: HVAB. Axial Fan Teaching Trainer

② Electronic Console

### SPECIFICATIONS

#### ① HVAB. Unit:

This unit allows the observation and the working process analysis of an axial-folw fan.  
Anodized aluminium structure. Panels and main metallic elements in stainless steel.  
Diagram in the front panel with similar distribution that the elements in the real unit.  
Bench desktop unit.

Transparent straight duct with a diameter of 115 mm with:

A sector rectifier.

Symmetrical seal.

Hole plate with a static pressure taking.

Single stage axial fan, driven by a 12W output AC induction motor.

Adjustable aperture system for varying the air flow rate.

Pressure meters.

Speed meter.

Temperature sensor.

#### ② Electronic Console:

Metallic box.

Fan regulator.

Temperature sensors connections.

Sensor digital display for temperature sensors.

Sensor selector for temperature sensors.

Wattmeter.

#### ③ Cables and accessories for a normal operation.

#### ④ Manuals:

This unit is supplied with the following manuals: Required Services, Assembly and Installation, Starting-up, Safety, Maintenance and Practices Manuals.

### EXERCISES AND PRACTICAL POSSIBILITIES

#### Some Practical Possibilities of the Unit

- 1.- Measurement of overall efficiency and estimation of impeller power efficiency.
- 2.- Measurement of performance at constant speeds.
- 3.- Study of the axial fan regulation varying its turning speed.
- 4.- Measurement of inherent-speed machine performance in terms static and total pressure, rotor speed and motor input power, as an inlet flow function.
- 5.- Introduction to similarity laws for scale-up.
- 6.- Obtaining of the characteristic curves of an axial fan.
- 7.- Calculation of the Flow on a Hole Plate.
- 8.- Calculation of the Flow through a Symmetrical Seal. Test with an Outlet Duct and a Nozzle.
- 9.- Calculation of the Fan Output.
- 10.- Introduction to the Scaling Similitude Law.
- 11.- Flow calculation through a measurement of the static, dynamic and total pressure.
- 12.- Typical curve calculation of a fan with a constant turning speed depending on the flow used by the symmetrical seal.

### ORDER INFORMATION

The supply always includes:

① Unit: HVAB. Axial Fan Teaching Trainer.

② Electronic Console.

③ Cables and Accessories.

④ Manuals.

\* **IMPORTANT:** Under HVAB we always supply all the elements for immediate running as 1, 2, 3 and 4.

### REQUIRED SERVICES

-Electrical supply: 220V./50Hz or 110V./60Hz, directly from the mains.

### DIMENSIONS & WEIGHTS

HVAB Unit: -Dimensions: 1800 x 580 x 700 mm. approx.

-Weight: 50 Kg. approx.

Electronic Console : -Dimensions: 490x330x310 mm. approx.

-Weight: 10 Kg. approx.

\* Specifications subject to change without previous notice, due to the convenience of improvements of the product.

REPRESENTATIVE: