

# FAN STUDY UNIT

## Mod. FUN/EV

FM

CHEMICAL ENGINEERING

www.elettronicaveneta.com

24B-E-FM-FUN-2

### INTRODUCTION

This unit consists of a centrifugal fan equipped with cylindrical suction and discharge ducts. The suction duct is provided with a static pressure tap connected with a differential pressure gauge, besides including a temperature sensor and an air damper (for varying the duct characteristic). The discharge pipe is provided with a static pressure tap connected with a differential pressure gauge, besides including a Pitot tube connected with a micromanometer, a temperature sensor and an air damper.

Motor r.p.m. can vary continuously thanks to a digital inverter that also indicates the number of r.p.m. and the absorbed power.

### TRAINING PROGRAM

**This unit enables to deepen the following issues:**

- Determining flow rate with Pitot tube
- Plotting the characteristic curve of a fan at different r.p.m. values
- Checking the laws of similarity (rpm vs m/s, rpm<sup>2</sup> vs mmH<sub>2</sub>O, etc...)
- Determining the power absorbed by the motor versus r.p.m. and flow rate

### TECHNICAL SPECIFICATIONS:

- Bench-type framework of AISI 304 stainless steel
- Centrifugal fan, P = 950 W, Q<sub>max</sub> = 1340 m<sup>3</sup>/h, H = 80 mmH<sub>2</sub>O
- Suction and discharge ducts of transparent Perspex
- 2 temperature sensors with digital display
- 2 pressure gauges of glass, with range of 200 to 0 to 200 mm
- Micromanometer of glass, with range of 0 to 100 mm
- Portable digital anemometer, with range of 0.4 to 30 m/s
- 2 adjustable air dampers of AISI 304 stainless steel
- Digital inverter with digital display and possibility of indicating the number of r.p.m. and the powers
- Switchboard IP55 complying with EC standards and including ELCB

**Power supply:** 230 Vac 50 Hz single-phase - 2 kVA  
(Other voltage and frequency on request)

**Dimensions:** 1000 × 600 × 1300 mm

**Weight:** 80 kg



### SUPPLIED WITH

**THEORETICAL – EXPERIMENTAL  
HANDBOOK**

