

# VARIABLE SPEED PISTON COMPRESSORS STUDY UNIT

## Mod. VC-P/EV

### INTRODUCTION

The unit allows to study the main features of single-stage air compressor.

The wheeled bench is equipped with a front panel, on which are placed the devices and all necessary tools to carry out the tests.

### TRAINING PROGRAM

- System start up
- Inlet and Outlet compression temperatures measurement
- Inlet Compressor air flow rate measurement
- Power and efficiency of an alternative compressor
- Air flow rates with unified throttling devices measurements
- Compressor performance at variable speed

### TECHNICAL SPECIFICATIONS

**Two-cylinder reciprocating single stage compressor**, driven by a belt drive from an electric motor c.a. with frequency variator:

- Vacuum gear and pilot valve
- Supply check valve
- Flow rate: 260 l/min (referred to the suction conditions)
- Max delivery pressure: 9 bar
- Rpm sensor

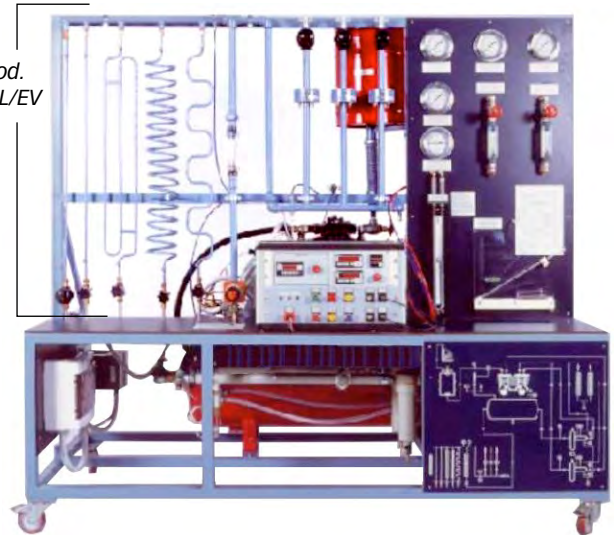
#### Air tank:

- Capacity: 100 l
- 0÷10 bar dial gauge
- 1÷9 bar adjustable pressure switch, for compressor insertion and deactivation
- Safety valve
- Exhaust valve

**Device for measuring the air flow aspirated by the compressor:**

- Calibrated flange mounted on damping vessel
- Differential micromanometer with inclined scale for measuring the differential pressure at the flange

mod.  
ACPL/EV



#### Electric control panel:

- Digital multimeter to measure: voltage, current and power drive motor
- N. 2 digital thermometers for instant reading of the temperature
- Differential magnetothermal switch
- Voltage presence warning lamp

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

**Dimensions:** 2100 x 950 x 2000 (h) mm

**Net weight:** about 100 kg

### REQUIRED

#### UTILITIES (PROVIDED BY THE CUSTOMER)

- Tap water: 600 l/h, 2÷3 bar

### SUPPLIED WITH

THEORETICAL - EXPERIMENTAL  
HANDBOOK



### OPTIONAL

UNIT FOR THE STUDY OF PRESSURE  
LOSSES IN COMPRESSED AIR CIRCUITS  
Mod. ACPL/EV

