

CENTRIFUGAL PUMPS IN SERIES AND PARALLEL TEST BENCH

Mod. BP-1S/EV manual

Mod. BP-1Sc/EV manual with data logging

INTRODUCTION

Transfer and circulation of liquids in networks and pipes is a very important problem for both the common civil applications (e.g. aqueducts) and industry.

This unit includes a water feeding tank, two pumps and of a set of instruments suitable to detect the main operating characteristics of the pumps.

TRAINING PROGRAM

This unit enables to deepen the following issues:

- Performance of the pump according to the following parameters:
 - head
 - power absorbed by the motor
 - number of r.p.m.
- Torque measurement and calculation of efficiency
- Operations in series, in parallel and with only one pump

TECHNICAL SPECIFICATIONS:

- Framework of AISI 304 stainless steel with castors
- Feeding tank of AISI 304 stainless steel with capacity of 250 l
- 2 centrifugal open-impeller pumps, with body and impeller of bronze, $Q_{max} = 15 \text{ m}^3/\text{h}$, $H_{max} 19 \text{ m}$
- Motor with load cell for torque measurement system
- Digital torque indicator
- Digital r.p.m. indicator
- Control of pump r.p.m. by electronic frequency inverter
- 2 pressure gauges of AISI 304 stainless steel, with range of 0 to 6 bar
- 2 vacuum gauges of AISI 304 stainless steel, with range of -1 to 3 bar
- Variable area flowmeter with glass tube, range 5 to 15 m^3/h (mod. BP-1S/EV only)
- Piping and valves of AISI 304 and AISI 316 stainless steel
- Switchboard IP55, complying with EC conformity mark, including plant synoptic and ELCB
- Emergency button

Mod. BP-1Sc/EV

Besides being provided with all the characteristics of mod. BP-1S/EV, this model also includes the following additional items:

- Stainless steel variable area flow meter, 4-20 mA, range 1÷16 m^3/h



- 2 pressure transmitters, 0÷6 bar
- 2 pressure transmitters, -1÷3 bar
- Interface (included in the switchboard) for the connection with a PC
- Data acquisition software for Windows

Dimensions: 1700 x 850 x 2300 mm

Weight: 300 kg

REQUIRED

UTILITIES (PROVIDED BY THE CUSTOMER)

- Power supply: 400 Vac 50 Hz three-phase - 9 kVA (Other voltage and frequency on request)
- Tap water

ACCESSORIES (NOT INCLUDED)

- Personal Computer running Windows (for mod. BP-1Sc/EV only)

SUPPLIED WITH

THEORETICAL – EXPERIMENTAL HANDBOOK

