SERIES AND PARALLEL CENTRIFUGAL PUMPS APPARATUS

Mod. SPCP/EV manual
Mod. SPCPc/EV manual with data logging

INTRODUCTION

This unit has been designed to experience with the main equations correlating power, head, number of r.p.m. and flow rate of a centrifugal pump and to show the advantages of operating in series and in parallel.

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 revolutions
- Operations in series, in parallel and with only one pump

TECHNICAL SPECIFICATIONS:

- Framework of AISI 304 stainless steel with castors
- Water tank of AISI 304 stainless steel with capacity of 70 litres
- 2 centrifugal pumps of AISI 304 stainless steel, Q_{max} = 80 l/min (4.8 m^3/h), H_{max} = 22 mH_2O
- 2 electronic flowmeters with 4 - 20 mA output and with range of 0 to 90 l/min
- 2 pressure transmitters of AISI 304 stainless steel with 4 - 20 mA output and range of -1 to 0.6 bar
- Pressure transmitter of AISI 304 stainless steel with 4 - 20 mA output and range of 0 to 2.5 bar
- Pressure transmitter of AISI 304 stainless steel with 4 - 20 mA output and range of 0 to 6 bar
- 2 electronic inverters for the control of the number of revolutions of pumps
- Switchboard of painted carbon steel with ELCB
- Piping and valves of AISI 304 and AISI 316 stainless steel

Mod. SPCPc/EV

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

- Interface (included in the switchboard) for the connection with a PC
- Data acquisition software for Windows

Power supply: 230 Vac 50 Hz single-phase - 3 kVA
(Other voltage and frequency on request)
Dimensions: 850 × 600 × 1500 mm
Weight: 60 kg

REQUIRED

UTILITIES (PROVIDED BY THE CUSTOMER)

- Tap water

ACCESSORIES (NOT INCLUDED)

- Personal Computer running Windows (for mod. SPCPc/EV only)

SUPPLIED WITH

THEORETICAL – EXPERIMENTAL HANDBOOK