AUTOMATED CENTRIFUGAL PUMP STUDY BENCH WITH FLOW CONTROL

Non contractual photo

SERVICE : POWER SUPPLY: 220V -50 HZ SINGLE PHASE, 1.5 KW COMPRESSED AIR SUPPLY
DIMENSIONS : 1 900 X 800 X 2000 MM

WEIGHT : ~150 KG

REFERENCE : MP74

The MP74 bench, designed to operate in circuit and mounted on a structure, constitutes a complete experimental means for the study of the performances and characteristics of industrial water centrifugal pumps and to manage an automated installation including a control loop.

- Study of the coupling of pumps in series or in parallel
- Plot of the characteristic curve of a centrifugal pump
- Plotting a network graph and determining an operational point

- **In regulation :**

  - Study of a simple closed loop
  - Setting the PID parameters of a controller
  - Identification of the constituents of a control loop

- **In automatism :**

- Using a preprogrammed programmable logic controller
- Identification of the different elements of an automated system (control part, operative part, sensors, actuators).

Technical specifications :

- Two identical pumps mounted on load. The pumps are managed by electronic dimmers that measure and display the torque, frequency, current, voltage and power consumption. The pumps are multicellular with five levels.
- Feed tray
- A set of pneumatic solenoid valves makes it possible to mount the pumps in series or in parallel. These valves are lined with manual valves.
- A pallet flowmeter with analog output measures the output flow of the pumps
- Four manometers
- A PLC can program pump operating cycles to optimize one of the parameters recorded by the drive by maintaining the constant flow rate
- An automatic cycle can be started, making it possible to review the various coupling modes of the pumps, for a requested flow rate setpoint, and to compare the powers absorbed for the different speeds. Finally, the controller will return to the sequence giving the minimum power consumption
- A screen allows dialogue with the PLC.
- Stainless steel frame with aluminum nuts
- Comes with technical and educational documentation.