

## Technological study bench of the industrial valves.

### DESCRIPTION

- The valve maintenance bench MVH 400 allows to visualize the patterns of use as well as the main features of 4 large industrial valves families.
- The didactic interest of MVH 400 is directed towards various levels and fields of study
- Equipment provided with technical documentation of the valves and different components, pedagogical and instruction manual.
- Utility: single phase 230V
- Dimensions (L\*W\*h in mm): 2000\*800\*2000mm
- Weight: 250kg approx



### PEDAGOGICAL APPLICATIONS\*

(\*Depending on kits retained)

- Hydraulic and mechanical study of a ball valve
- Hydraulic and mechanical study of a butterfly valve
- Hydraulic and mechanical study of a diaphragm valve
- Hydraulic and mechanical study of a piston valve
- Identification of the main roles of the valves per family (flow rate regulation / circuit selection)
- Manual settings
- Assisted settings (electrically controlled)
- Settings regulated (controlled by regulator)
- Highlighting of the interest of the regulated valve operation in relation to manual setting
- • ...

## Objective of the application:

The technological study bench of industrial valves is a bench intended for training technicians on the understanding of the operating principle of large industrial valves families, their construction technology, as well as their use in manual or regulated setting.

## Technical description:

### The bench :

- A **metallic structure** of anodized aluminum on braked swivel wheels.
- A **capacity tank** 100L approx with in isolation valve.
- A volumetric **group motor pump 8 bars- 2m3/hr mini**
- Safety **relief valve**
- A transparent PVC **pipe**
- **6 parallel circuits of valves characterization**
- **Insulation of each circuit by ball valves**
- **A membrane valve allows modulation of output pressure of motor pump**
- All the different circuits are collected for a fluid return to the main tank of the machine.
- 1 flowmeter with analog transmitter towards regulator
- 1 manometer for indicating the output pressure of the volumetric pump

### Electrical box:

- Disconnecter
- Circuit breaker with differential
- Protection circuit breakers
- Analog input flow rate regulator 4-20mA- front setpoint, and regulating outlet
- Control pushbutton on /off pump, start stop Regul ...

### Valves :

- A manual ball valve
- A motorized ball valve
- A butterfly valve
- A membrane valve
- A piston valve
- A controlled piston valve for flow rate regulation

All valves are mini sizes DN65, and up to DN 100

### Mechanical construction kit:

A valve kit planned for the study of mechanical engineering technology is provided. Each valve is equipped with a specific aluminum support which can be placed for example on a table. The bodies of the valves as well as some internal parts are modified (cut) to visually comprehend the technological of the valves

- A ball valve
- A butterfly valve
- A membrane valve
- A piston valve

These valves are integrated on aluminum supports for easier manipulation.

**Dimensions (L\*w\*h in mm): 2000\*800\*2000**

**Weight : 250kg approx**

**Utility : Electrical supply 230V single phase – 50Hz**