

## UNIT FOR MAINTENANCE OF PUMPS



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### Experimental capabilities

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- Study of centrifugal / Positive displacement pumps
- Terms of use
- In charge or in suction
- Physical characteristics of pumps
- Maintenance of a pump
- Assembly, disassembly, parts replacement
- Replacement of a gasket, of a braid, of bearing, of a gear, of a vane ...
- Wiring
- Wiring of electrical power components in a cabinet
- Component selection
- Intervention on group of filtration
- Handling of load
- Mechanical construction

## PRINCIPE DE FONCTIONNEMENT

The bench allows you to make the maintenance of two types of pumps: centrifugal pumps and positive displacement pump with their components

Maintenance intervention with change of the different components

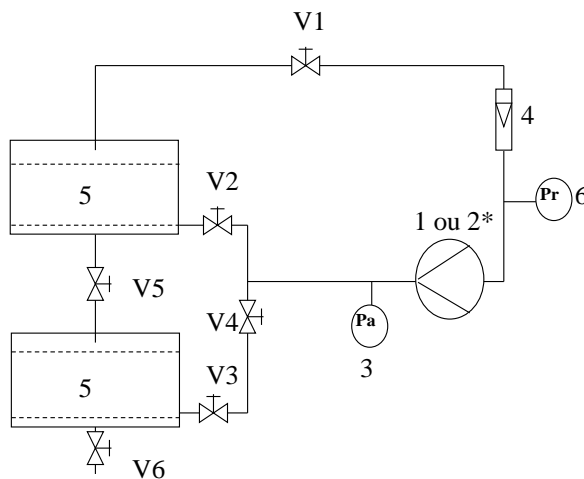
The robust design of this equipment makes it perfectly suited for use in schools.

Its anodized aluminum structure on wheels gives it a very robust and a highly flexible integration into your premises.

The manufacture of this equipment meets the European machine directive

This equipment can be used alone or with other compatible equipments in our range (see last section of this document).

## Illustrations



## Spécifications techniques

### Structure

- In anodized aluminum on wheels with brakes
- Stainless steel bin in lower part with drain valve

### Hydraulic circuit:

- 2 cylindrical tanks in polyethylene of high density (ref 5) (1 tank for charge pumping and the other for pumping in suction)
- Volume of each tank: 100 l
- Drain system and level gauge
- Transparent pipes PVC
- V1: Flow rate diaphragm valve
- V2, V3, V5: Ball valve ¼ turn
- V4: Ball valve ¼ turn drilled for generation of pressure losses
- 1 float flowmeter
- 2 manometers to measure the suction and discharge pressures

### Electrical box n° 1 :

- Key lock to open the box
- Lockable disconnect switch
- Circuit breaker and differential
- Key emergency stop
- Control pushbuttons
- Tachometric display
- Operating direction selector
- Luminous beacons

### Electrical box n° 2 :

- Transparent cover
- Safety contact on door opening
- Breadboard support and connectors
- Compatible for use of wiring breadboards or pre-wired proposed

### Storage :

- 4 shelves

For storage of motor control breadboards

# MBP101



## Positive displacement pumps

- **Positive displacement motor pump unit with mechanical seal** in cast iron / gear technology (**included in MBP 101 / Ref MBP 111**)
  - Flow rate 2.4m<sup>3</sup>/Hr approximately at 150rev/min
  - Motor 0.75kW-1400rev/min
- **Positive displacement pump** in spare parts **without constraints** for disassembly assembly operations / mechanical seal (**optional / ref MBP 112**)
- **Positive displacement sealing pump by mechanical seal** for exchange of the pump on motor pump unit and / or various maintenance activities (**optional / ref MBP 113**)
- **Set of defective parts** and of replacement for positive displacement pump with mechanical seal (**Included in MBP 101/ ref MBP 114**)



## Centrifugal pumps

- **Centrifugal pump unit with cable glands** (**included in MBP 121**)
  - in cast iron / closed turbine technology
  - flow rate 12m<sup>3</sup>/Hr at 2800rev/min
  - motor 0.75kW-2800rev/min
- **Centrifugal motor pump unit with mechanical seal** (**optional / ref MBP 122**)
  - in cast iron / closed turbine technology
  - flow rate 12m<sup>3</sup>/Hr at 2800rev/min
  - motor 0.75kW-2800rev/min
- **Centrifugal pump without constraints** (in spare parts for mounting activities disassembly / **cable glands. (optional / ref MBP 123)**)
- **Centrifugal pump with no constraints** in spare parts for mounting activities disassembly / **mechanical seal (optional / ref MBP 124)**
- **Centrifugal pump with sealing by cable gland** for exchange of pump on motor pump unit and / or activities of various maintenance (**optional / ref MBP 125**)
- **Centrifugal sealing pump with mechanical seal** for exchange of the pump on motor pump unit and / or various maintenance activities (**optional / ref MBP 126**)
- **Set of defective parts** and of replacement for centrifugal pump with mechanical seal and cable gland (**included in MBP 101 / Ref MBP 127**)



- **Kit for bearings maintenance:**  
Kit of 2 bearings + centrifugal pump shaft with specific heat treatment (quenching + cementation) especially designed to support the assembly / disassembly operations of repeated bearings (**optional / Ref MBP 128**)



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version : FT-MBP101-STD-B

# MBP101



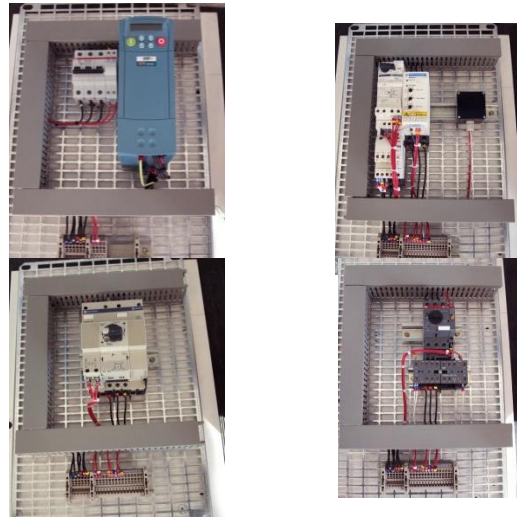
## Motor control breadboard (pre-wired or to wire):

### Prewired Version :

- Reversing contactor technology (included on MBP 101 / MBP ref 130)
- Integral direct start technology (optional / ref MBP 131)
- Progressive start technology (optional / ref MBP 132)
- Technology with inverter (optional / ref MBP 133)

### Version to wire:

- Reversing contactor technology (optional / ref MBP 140)
- Integral direct start technology (optional / ref MBP 141)
- Progressive start technology (optional / ref MBP 142)
- Technology with inverter (optional / ref MBP 143)



## Services required

- Electrical supply : 400Vac – 50 Hz – 16 A
- Dimensions: (LxWxH mm): 2000 x 1400 x 2000
- weight (Kg): 230

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

## Documentation

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Certificate of conformity CE

## Options

- Reducer-pump-motor unit for vibration analysis
- Kit of shaft lineage with comparator
- Lineage kit of laser shaft
- Bearings maintenance tool
- Ref : MBP011
- Ref: MBP020
- Ref : MBP021
- Ref : MBP030