

## FILTER PRESS



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### Experimental capabilities

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- Identification of the components of a filter press operation
- Commissioning and adjustment
- Filtration and clarification
- Study of pressure versus time at constant flow
- Study of the flow as a function of time at constant pressure
- Recirculation of treated water to improve filtration
- Study of the resistance of the support and the filter
- Determination of the clogging point
- Circulate a fluid containing solid particles through a support (filter, felt, membrane, ...)

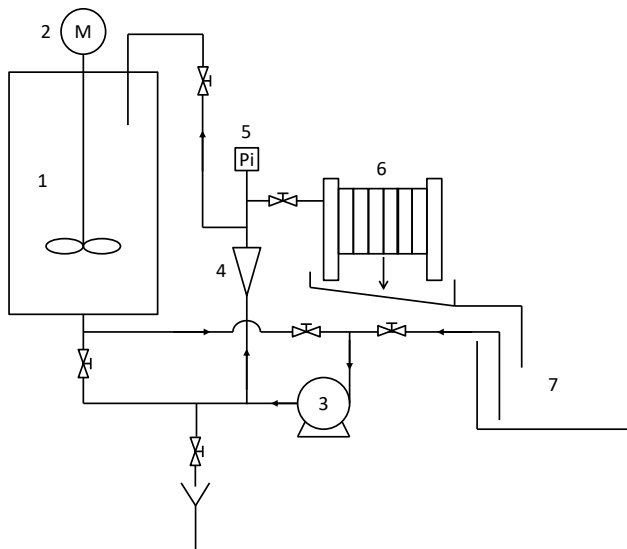
## Operating principle

The GPBF11 bench allows the study of a filter press. A pump circulates raw water previously prepared in the filter press. The filter will retain impurities and the water at the outlet will be clear. The flow rate and filter feed pressure will be adjusted manually to visualize the different filter behaviors.

The robust design of this device makes it suitable for use in schools.

The equipment is set up on an Anodized aluminium frame on casters wheels. This gives it great strength and a flexibility of integration into your premises. The manufacture of this equipment complies with the European standard for machinery manufacturing.

## Illustrations



The bench is mounted on a screwed anodized aluminum profile structure equipped with 4 directional wheels with brake.

It includes a power supply box complying with European electrical standards with main power disconnector, white light for presence of voltage, emergency stop button, earth connection and differential protection.

The cabinet includes the start button of the machine and two potentiometers to adjust the speed of the pump and the speed of the agitator.

The bench is supplied with a bag of fine soil to test the filtration.

## Technical details

1. Feed tank
  - High density polyethylene
  - Volume: 300 L
  - Lateral graduation
2. Propeller mixer
  - motor power 0.25 kW
  - variable speed 0 to 1500 rpm
  - marine style propeller D80mm
3. Feed pump
  - Flexible impeller pump
  - motor power 0,55 kW
  - variable speed
4. Float flowmeter
  - material: PVC
  - scale: 50 - 500 L / h
5. Pressure gauge 0 - 1.6 bar
6. Filter press
  - 6 trays and 7 PVC frames
  - Capstan, screws and plate made of stainless steel for tightening
  - Stainless steel retention tank with drain point
  - set of ten 50µm coated filters
7. Recovery tray
  - High density polyethylene
  - Volume 100L with overflow

## Services required

- Electrical supply : 230 Vac – 50 Hz – 10 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Water supply : filling of the tank
- Water drain : on the floor
- Dimensions: (LxWxH mm): 2420 x 800 x 1740
- weight (Kg): 210

## Documentation

- User's manual
- Technical documentation of the components
- Lab exercises
- Wiring diagram
- Hydraulic diagram
- Certificate of conformity CE

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