# **GPBFS1**



### DEEP BED SAND FILTER



#### **Experimental capabilities**

- Study of a porous medium (sand)
- Pressure measurement in the column during the filtration
- Study and visualization of the filter clogging
- Study of the regeneration of the sand

## GPBFS1



#### Operating principle

The GPBFS1 bench allows the filtration study on sand.

In a first stage, we supply the column with polluted water with the aid of a pump. The sand will retain the impurities contained in the water.

In a second step, we will supply the column from below with the system water to clean the sand of the column.

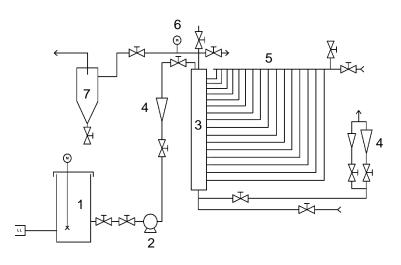
The robust design of this equipment makes it perfectly suited for school use.

Its anodized aluminum structure on wheels makes it very robust as well as a great flexibility of integration into your premises.

The manufacture of this equipment meets European machine directive.

#### Illustrations

#### Technical specifications



The bench is installed on an aluminum profile frame equipped with four directional brake castors.

It includes an electrical box with main power disconnector, emergency stop and 30mA GFCI.

The piping is made of PVC pipes.

#### 1. Supply tray

- Material: Polyethylene
- volume: 200 L
- Low level detector
- Independent chassis on wheels

#### 2. Centrifugal pump

- maximum flow rate: 7m3/h - maximum pressure: 2 bars

#### 3. Filtration column

- Material: PVC
- Diameter: 110mm +/- 5mm
- Length: 1200mm +/-100mm
- Piping from the bottom of column: output towards the evacuation, outlet for the draining of the column
- Piping from top of column: supply,
- output towards the evacuation, the air vent valve
- Sand: granulometry = 0.4 to 0.8 mm and
- 2 to 5mm

#### 4. Float flowmeters

- Material: PVC
- Two flowmeters 30-300L / h
- A 10-100L /h flowmeter

#### 5. Multi manometer with transparent tubes

- Measuring sockets distributed over the column
- 16 transparent tubes
- 16 valves + drainage valve and evacuation valve

#### 6. Manometer 0-2.5 bars

#### 7. Centrifugal separator made of PVC

#### Services required

- Electrical supply: 230 V 50 Hz 10 A
- Electrical supply type: 1-Phase + Neutral + Earth.
- Water supply: filling of the supply tray 100L
- Water evacuation: at ground level
- Dimensions: (LxWxH mm): 1800 x 600 x 1950
- weight (Kg): 130

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
- Technical documentation of the components
- Lab exercises
- Hydraulic diagram
- Wiring diagram
- Certificate of conformity CE