

WATER TREATMENT PILOT IN AN AEROBIC ENVIRONMENT



Experimental capabilities

- Study of the water purification process by aerobic treatment
- Process management and installation preparation
- Process monitoring
- Search for optimal treatment conditions
- Parameter regulation

Operating principle

The purpose of this bench is to treat water with activated sludge in aerobic mode. The basic solution is prepared in a supply tank and then sent through the various treatment tanks. The various parameters are measured in order to control the processing.

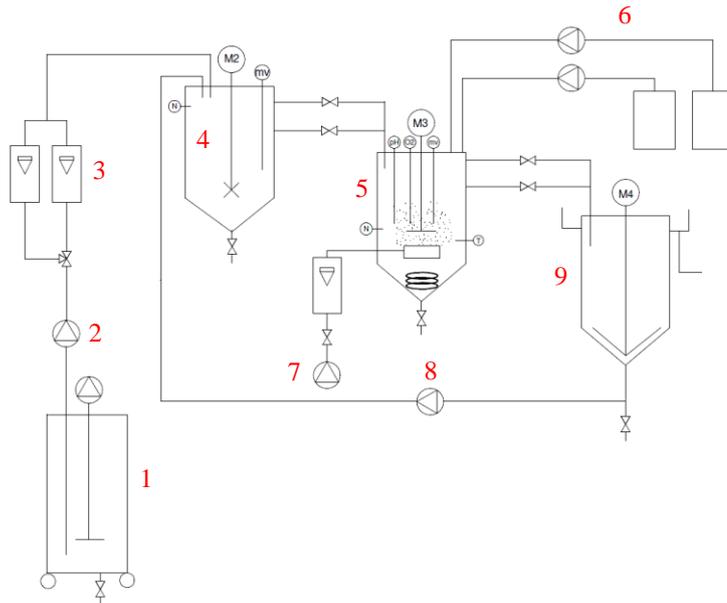
The robust design of this device makes it suitable for use in schools.

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

Technical details



1- Supply tray in polyethylene

- Independent tray on wheels multidirectional brake
- Minimum volume: 200L
- Agitation motor with agitation propeller
- Drain valve in the lower part

2- Supply pump

- Peristaltic pump with high performance head
- Variable speed motor
- Pump tube suitable for products used in the process

3- Flowmeters

- Stainless steel floater
- A flowmeter 900L/h for the air
- Two flowmeters 1-16L/h and 2-46L/h for the feed fluid

4- Anoxic treatment tank PVC

- Volume: 40L
- Agitator at variable speed
- Measurement of redox potential
- Drain valve in the lower part

5- Aerobic treatment tank PETG

- 2 tapping of overflow or more
- Volume: 40L
- Agitator at variable speed
- Blade of agitation of type Rushton adapted to the size of the tank
- Air diffuser for aeration at bottom part (stainless steel material)
- 4 analyzers of measurement: oxygen, pH meter, redox potential, temperature
- An immersion heater to maintain the temperature for microorganisms
- pH and temperature regulation (TOR)
- Drain valve in the lower part

6. pH dosing station

- Two pumps with tank (volume 10L)

7- Air compressor

- Adjustable air flow rate

8- Recycling pump

- Peristaltic pump
- Variable speed motor
- Pump tube suitable for products used in the process

9- Decantation tank in PVC

- Minimum volume: 30L
- Conical bottom
- Agitator with variator
- Agitation blade with wiper
- Circular overflow
- Drain valve in the lower part

Services required

Documentation

GPBT10



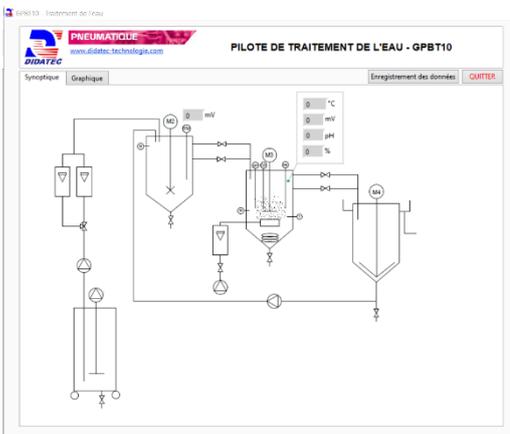
- Electrical supply: 230 Vac – 50 Hz – 20 A
- Electrical network: 1 phase(s) + Neutral + Earth.
- Water supply: filling 200L
- Water drain: on the floor
- Dimensions: (LxWxH mm): 2100 x 750 x 2000
- weight (Kg): 250
- User's manual
- Technical documentation of the components
- Lab exercises
- Wiring 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

Data acquisition system

The bench is also equipped with supervision. The connection to the PC is made via Wi-Fi. The software is divided into two parts:

Diagram:



machine with the location of the various measures of the process and

Graph:

In this graphic window, we find the possibility of drawing measurement curves as a function of time by selecting the desired magnitudes and saving the measurements.

