



*Non contractual photo*

**SERVICE : 220V - 50HZ - 1.5 KW**

**DIMENSIONS : 2200 X 700 X 2000 MM**

## REFERENCE : CP143

This pilot allows the study of the processes implemented in the case of an activated sludge water treatment plant.

This pilot presents the process of elimination of carbon, nitrogen and phosphorus pollution by microbiological route. It works by contacting the water to be purified with a bacterial floc in the presence of O<sub>2</sub> followed by a phase of separation of this floc. The oxidation basin is preceded by a pool of anoxia, which makes it possible to characterize and differentiate the stages of denitrification and nitrification. Treatment continues with dephosphatation by physicochemical treatment.

- Understand the degradation phenomena of chemical and organic pollutants by the action of microorganisms in aerobic environment, followed by physicochemical treatment.
- Driving a station based on daily sampling and analysis.
- Characterization of the stages of nitrification - denitrification - dephosphatation.

## Technical specifications :

### Equipment :

- A feed tray.
- stirring system in the feed tank comprising: a circulator and a level probe.
- A ventilation tank in Altuglas with two levels of overflow
- Variable speed stirrer by electronic dimmer, speed display on the aeration basin
- A compressor regulated by oxygen measurement
- Float gas flowmeter
- An oxygen sensor probe its transmitter with 4-20mA output
- A combined pH / ORP measuring probe and its transmitter with 4-20mA output, the system includes the temperature measurement
- Aeration tank lid has tapings to support pH and oxygen sensors
- A peristaltic pump on a sequencer for feeding the substrate
- sludge recycling by peristaltic pump on sequencer
- A float flowmeter for the substrate
- A clarifying pool in Altuglas.
- A control cabinet and its instrumentation
- The pilot is made of PVC and Altuglass and mounted on a stainless steel frame with aluminum nuts.

### Anoxia :

- A pool of anoxia.
- The lid of the anoxic tank has tapings to support the pH and oxygen probes

- A variable speed stirrer by electronic variator, on the anoxic basin
- A dosing pump of the basic solution regulated by pH measurement
- Peristaltic pump for the recycling of mixed liquor

### **Dephosphatation :**

Physico-chemical dephosphatation unit with lamellar decanter, consisting of 3 compartments that fill by overflow of the clarification basin, a set consisting of:

1 Altuglass flocculator-decanter with lamellar decanter with tilting and retractable plates

2 small reagent tanks (coagulant and flocculant) with 2 peristaltic dosing pumps on sequencer

2 variable speed agitators with speed display.

### **OPTIONS :**

Option 1: scraper in the clarifier. Option 2: Temperature control system of the aeration basin comprising: an immersion heater and a regulator.

Option 3: Data acquisition system including: RS485-ethernet gateway, Ethernet port, acquisition software and laptop PC. Option 4:

Measurement of turbidity at the outlet of the lamellar clarifier (valid with the dephosphatation system)