

# AEROBIC WATER TREATMENT PILOT PLANT

## Mod. FA1c/EV



ECOLOGY

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36B-E-BT-FA1C-0

## INTRODUCTION

The activated sludge pilot plant consists of an oxidation reactor and of a settler according to the traditional diagram of single-stage sewage treatment process.

Biomass is oxidized in a reactor with agitator by the air blown by a compressor. The processed liquid is then sent to the settler.

The sludges settling on settler bottom are recycled by a recirculation pump into the oxidation tank.

The water flowing out of the settler is conveyed to a drain.

Data acquisition is carried out by a specific software.

## TRAINING PROGRAM:

The process unit enables to develop and analyze the following issues:

- Purification efficiency versus the following parameters:
  - composition of water to be treated
  - residence time
  - organic load
  - pH in oxidation tank
  - concentration of dissolved oxygen

## TECHNICAL CHARACTERISTICS:

- AISI 304 stainless steel framework with castors
- Feed tank, 300 l capacity
- Cylindrical oxidation reactor of transparent methacrylate, 60 l capacity, including an AISI 304 stainless steel agitator with motor and air diffuser
- Settler of transparent methacrylate, 30 l capacity
- Peristaltic feed pump
- Sludge recirculation peristaltic pump
- Diaphragm compressor with body of stainless steel
- Microprocessor-controlled board-type pH-meter, with range of 2 to 12 pH, 4 to 20 mA output signal
- Microprocessor-controlled board-type rH-meter, with range of -1500 and +1500 mV, 4 to 20 mA output signal
- Microprocessor-controlled board-type dissolved oxygen meter, with range of 0 and 20 ppm, 4 to 20 mA output signal
- Electronic flowmeter for measuring air flow rate to reactor
- Switchboard IP55, complying with EC conformity mark, including plant synoptic and ELCB
- Data acquisition software for Windows

**Power supply:** 230 Vac 50 Hz single-phase - 1 KVA  
(Other voltage and frequency under request)

**Dimensions:** 1700 x 700 x 1900 mm

**Weight:** 280 kg

### REQUIRED

#### UTILITIES (PROVIDED BY THE CUSTOMER)

- Tap water (valve with ½" hose connector)
- Water floor drain

#### ACCESSORIES (NOT INCLUDED)

- Personal Computer running a recent version of MS Windows

### SUPPLIED WITH

#### THEORETICAL – PRACTICAL – EXPERIMENTAL HANDBOOK



### VARIATIONS OF THE PLANT UPON REQUEST:

This equipment can be modified upon specific request of the Customer.