

ORELIS Env. is active in membrane manufacturing for more than 30 years. ORELIS Environnement is manufacturing and supplying membranes, modules, skids which will be integrated in waste water treatment plant or recycling installations. Our company is dedicated to environmental applications in various markets as Automotive, Chemistry, Metal Working, Pharmacy, Agro-Food, Paper, and Small Collectivities...

## PICTURES OF OUR REALISATION

### Kleansep™ ceramics membranes



### Pleiade® and MP4® polymeric membranes



### Persep™ spiral wound membranes



### Flosep hollow fibers membranes



# Poly Pilot



**VERSATILE PILOT**  
**UF/NF ceramic tubular KLEANSEP™**  
**UF/NF/RO polymeric spiral wound PERSEP™**

Poly Pilot (Product might be slightly different from picture)

**Perfect for feasibility semi-industrials studies**

1 pilot 2 membranes technologies:

- Module Kleansep™ K01 equipped with ceramic membrane
- Persep™ 2,5" spiral wound membrane supports any brand

## Technical description

### Filtration module Kleansep™:

One tubular module K01type  
 Material: stainless steel 316L  
 One ceramic membrane, diameter 25 mm  
 Membrane area: from 0,16 to 0,5 m<sup>2</sup>  
 Maximum temperature: 70°C

### Kleansep™ system:

High pressure centrifugal pump inverter, maximum pressure 13 bar.  
 Control valves.  
 Three analog pressure measurements inlet / outlet, and the permeate.  
 Backpulse possible option.

### Filtration module Persep™:

Module 2,5''  
 Material: stainless steel 316L  
 One polymeric spiral wound membrane 2,5''  
 Membrane area: from 18 to 22 m<sup>2</sup>  
 Maximum temperature: 40°C

### Persep™ system:

Volumetric pump inverter, maximum pressure 60 bar.  
 Control valves.  
 Two analog pressure measurements inlet / outlet.

Tank launch and washing capacity of 40 liters, removable cover and immersion heater.

Analog temperature measurement.

Analog flow measurement permeate and retentate flow.

### Electrical box includes:

Data Acquisition (pressure, flow, temperature) archived on SD card and usable Excel spreadsheet.  
 Adjusting the settings backpulse option.  
 Adjusting traffic speeds of the volumetric or centrifugal pump.  
 Adjusting the launch tank temperature setpoint.

## Functioning principle

Test the efficiency of different filtration membranes on volume 40 liters.

The liquid is driven from the feeding tank to the filtration modules by the pump. The liquid is flowing in the module (Kleansep™ or Persep™) in a parallel direction to the membrane. This flow will wash the membrane during the filtration.

With a pressure, the liquid is divided in 2 parts. Those which goes through the membrane : the filtrate, and those which is retained by the membrane : retentate. According to the application, the collected liquid will be the filtrate or the retentate, collected on the point PE (Sample).

If you close in part the valve, the pressure will increase so you can change the functioning parameters.

## Technical description

### Frame:

Aluminium self-supported frame with four feet on self-locking wheels.

### Control unit:

General switch.  
 Frequency inverter 0-50 Hz, On/Off integrated.  
 Differential circuit-breaker: 25 A

### Optional services:

Formation of trainers on site.  
 Connecting on-site by our technicians

### Overall dimensions:

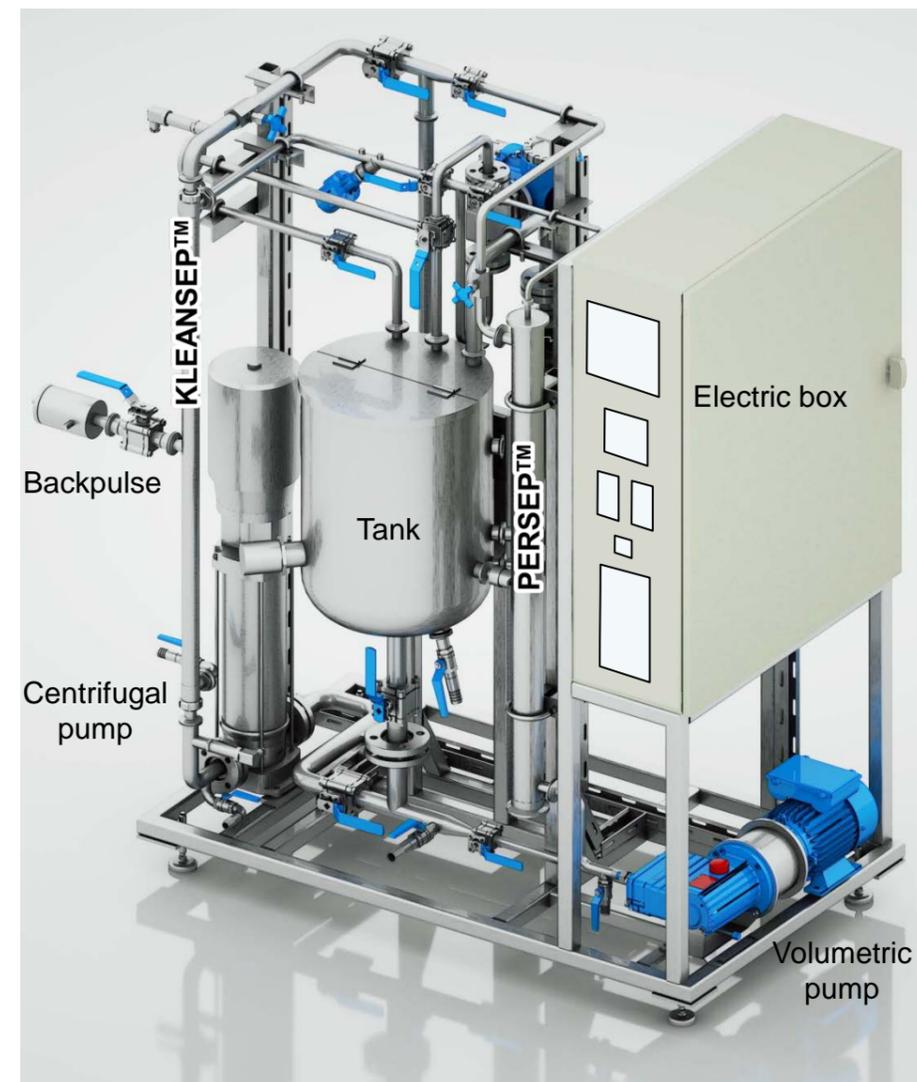
Length x Width x Height = 1405 x 940 x 1765 mm  
 Empty weight: 360 kg

### Electricity:

380 Volt network, three-phase current  
 Power: 9 kW

### Instrumentation:

Pressure transmitters  
 Temperature transmitters  
 Flow transmitter  
 Level Sensors



### Front of Electric box



Data Acquisition



Backpulse parameters



Speed of pumps



Temperature



Membranes choice  
 Heater ON/OFF  
 Emergency stop