

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 installation with Kleansep™ membranes



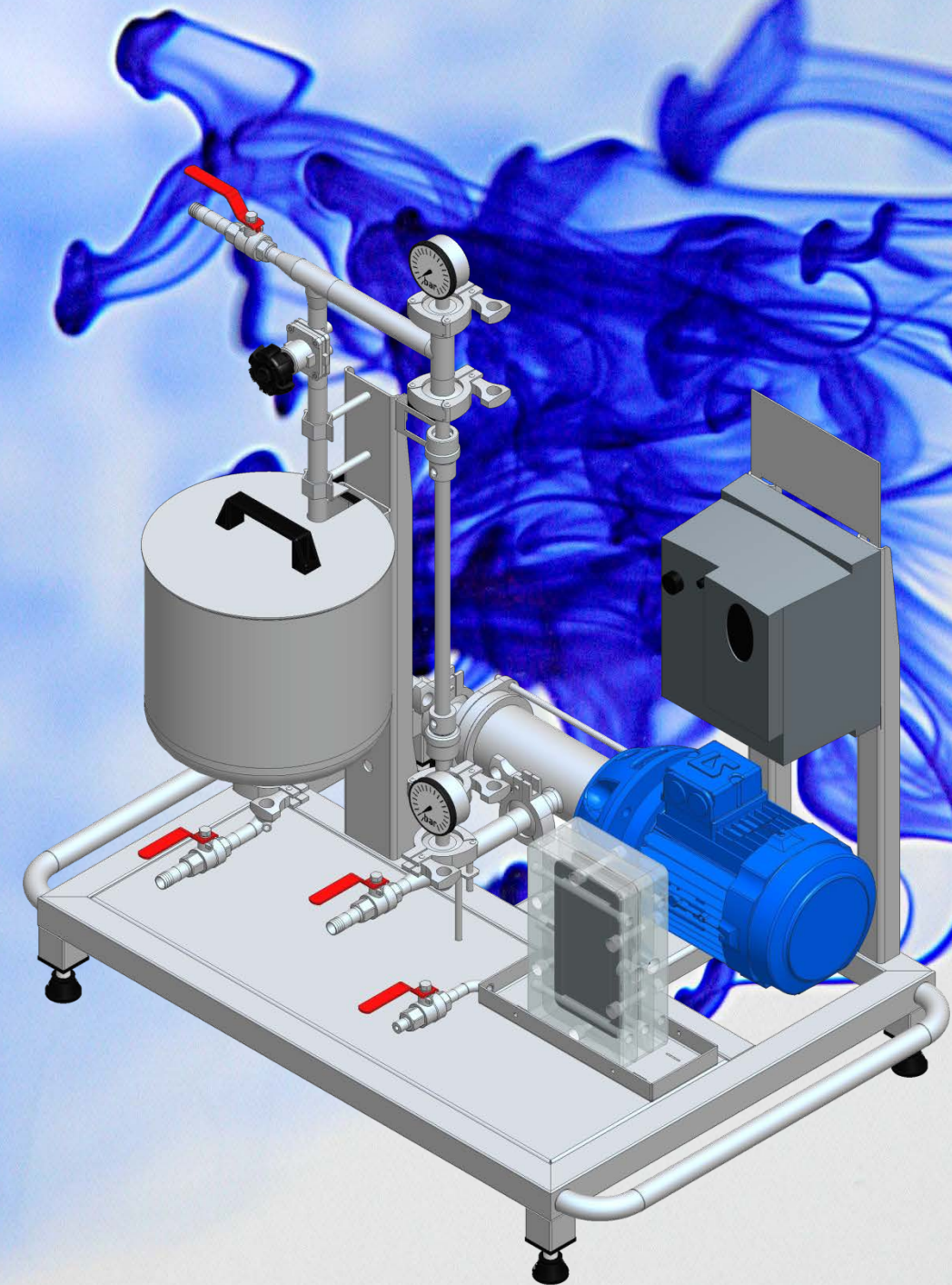
Pictures of our installation with Pleiade® and MP4® membranes



Picture of our installation with Persep™ membranes



Picture of our installation with Flosep membranes



Minipilot Ceramic and Organic Membrane

Minipilot with Rayflow® module
(Product might be slightly different from picture)

Perfect for feasibility studies

1 pilot 2 membranes technologies :

- Mikroleansep™ Module equipped with ceramic membrane
- Rayflow® Module equipped with flat sheet membrane Pleiade®

Technical description

1- Feeding jaketed tank ①, SS, 10L, removable SS flat lid, clamp connections.

2- Volumetric screw pump ②, SS/hypalon, variable flowrate by frequency variator : 0.1 to 0.75 m³/h, SS diaphragm valves, thermometer, pressure measurement, clamp connections.

3- KLEANSEP™ module in option. Area ceramic membrane module 80 cm² (see instructions MICROKLEANSEP™ module ref. NL002).

4- RAYFLOW® Module in option (3'). Area organic membrane module from 100 to 200 cm² (see instructions Rayflow® ref. NL004).



Rayflow® Module
(Product might be slightly different from picture)

5- This pilot is provided with 4 valves :
- V1 and V2 are the draining valves,
- V4 is a sample valve,
- V3 is the valve of the return to the feeding tank.

6- M1 and M2 : manometers for the pressure in and the pressure out of the module.

7- Frame in aluminium, with 4 ajustable feet.



Monochannel membrane
(Product might be slightly different from picture)



MicroKleansep™ Module
(Product might be slightly different from picture)

Functioning principle

Test the efficiency of differents filtration membranes on volume between 5 and 10 liters.

The liquid is driven from the feeding tank ① to the filtration modules by the pump ②. The liquid is flowing in the module (Microkleansep™ ou Rayflow®) 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 V3, the pressure will increase so you can change the functioning parameters.



Technical description

Instrumentation:

- Two dial gauges manometers : 0 to 4 bar.
- A digital display thermometer : -40 to 100 °C.

Control unit:

- Variable frequency drive with integrated on/off switch.
- Differential circuit-breaker: 10 A / 30 mA.

Frame:

Aluminium self-supported frame with four anti-sliding adjustable feet to place on a lab table.

Overall dimensions:

Length x Width x Height = 950 x 600 x 1000 mm.
Empty weight: 70 kg, in use: 80 kg.

Electricity:

230 V network, single-phase, 50 Hz.
Power: 0.4 kW.
Connection on 2 Phases + Grounding plug, 5 meters of cable.

Cold water:

Cooling water network.
Flow rate: 100 l/h.
Pressure: 3 bar max.
Collection by gravity at ground level.

Recommended complementary equipment:

- Stopwatch and graduated flask or test tube for bottling.
- Polyethylene glycol flask (20 000 Da) for study of membrane characterization.

Optional services:

Formation of trainers on site or in our factory by our engineers.

