

## LABORATORY AND INDUSTRIAL RANGE

ORELIS Env. is active in mem-brane manufac-turing 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...

### PLEIADE®

The **Innovative Solution** for Industries:  
Polymeric and Ceramic membranes



The veins free liquids technology is most effective for demanding applications.

### MINIPILOT



Perfect for feasibility studies  
1 pilot 2 membranes technologies :  
Microkleansep™ Module equipped with ceramic membrane  
Rayflow® Module equipped with flat sheet membrane Pleiade®

### KLEARSEP™



The best Oily Water Separator for the treatment of Bilge Water

### KLEANSEP™



The robustness of the membranes allows the separation of organic and mineral particles, oils, polymers.

### MP4®



It excels for its simplicity and robustness for the treatment of small communities wastewater such as base camps and resorts

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# Protection

## FLOSEP IMMERSED Hollow fiber

Our job: design, produce and sell organic and ceramic membranes, Pleiade®, Kleansep™, Klearsep™, Flosep and Persep™ range, plan type, Spiral, Tubular Multichannel, and hollow fiber.

Innovative in the fields of purification and recycling of effluent, Orelis Environnement is an expert company in membrane separation technology, in the service of your processes.

We are working with installers and OEMs to implement our solutions membranes.

Our teams are at your disposal to find the solution to your needs.





## FLOSEP: IMMERSED hollow fiber membrane module

Membrane bioreactor (MBR) is a new sewage treatment technology with the combination of membrane separation and biological treatment technology. New technology, highly efficient water treatment systems and the clear water quality that makes this technology stand out in the lacking water resources world today. The main application fields of MBR are industrial wastewater treatment and reuse; municipal wastewater treatment and reuse; living quarters domestic wastewater treatment and reuse and so on. As one of the most important compositions in MBR technology, Orelis Environnement high quality curtain-type hollow fiber membrane module can be widely applied in different types of MBR.



Curtain-type hollow fiber membrane module

## Performance parameters

Membrane form	Hollow fiber
Membrane material	PVDF
Membrane Average pore size	0.1 $\mu\text{m}$
Membrane diameter (inner/outer)	0.8/1.5 mm
Membrane pore structure	Assymetric
Adhesive	Epoxy

## Filtration effect

SS >2 $\mu\text{m}$	100%
Microorganism	99.999%
Permeate NTU	$\leq 1$ NTU
Permeate SDI	$\leq 2.5$

## Usage Condition

Filtration method	Outside-in
Pressure	0.01-0.05MPa (Negative pressure)
Operating temperature	5-45°C
PH range of use	2-11 (Cleaning PH range 1-12)
Flux range of design	10-20 L/m <sup>2</sup> .h (based on raw water quality selected)
Recommended ratio air-water	20:1-40:1
Air supply requirement	Oil-free compressed air
Oil content of raw water	<3 mg/L
Maximum concentration of residual chlorine in feed water	200 mg/L
Maximum concentration of residual chlorine in cleaning agent	5000 mg/L

## Picture of the MBR system installation site

