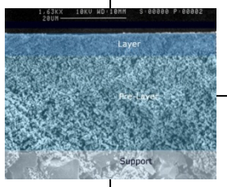
KLEANSEP™

Membranes and Modules



Kleansep™ : High Flux Rate Ceramic Monolith

Kleansep membranes are available in a wide range of cut-off for the separation of organic molecules, water soluble polymers, emulsions and specific inorganic products.

The ceramic monolith together with the highly selective coating produce high output and a high separation quality.

Membranes and Cut-off

SPECIFICATIONS	
Support:	monolithic $TiO_2 – Al_2O_3$
External diameter/length:	25 mm / 1178 mm
Number of channels:	7 - 8 - 12 - 19 - 31 - 61
Membrane code:	X - E - D - W - H - S
Diameter of channels:	6 - 5 - 4,5 - 3,5 - 2,8 - 2,0 mm
Membrane:	ZrO_2 / TiO_2
Bursting pressure:	80 bar
Service pressure:	10 bar
pH range:	0 – 14
Sterilization:	121°C
Sterilization by oxidants:	yes
Solvents / radiations:	unaffected
Temperature limitation:	up to 150°C

Microfiltration
● 1,0 µm ● 0,8 µm ● 0,45 µm ● ● 0,2 µm ● 0,1 µm HR ●
Ultrafiltration
● 300 kD HF ● 150 kD ● 50 kD ● ● 15 kD ● 8 kD ●
Nanofiltration
● 5 kD ● 1 kD ●

Modules

Geometry of modules		Number of channels - Membrane area in sqm					
Modules	Number of membranes	7	8	12	19	31	61
Module K01	1 membrane	0,16	0,2	0,2	0,25	0,33	0,45
Module K03	3 membranes	0,48	0,6	0,6	0,75	0,99	1,35
Module K07	7 membranes	1,12	1,4	1,4	1,75	2,31	3,15
Module K19	19 membranes	3,04	3,8	3,8	4,75	6,27	8,55
Module K37	37 membranes	5,92	7,4	7,4	9,25	12,21	16,65
Module K99	99 membranes	15,84	19,8	19,8	24,75	32,67	44,55
Module K138	138 membranes	22,08	27,6	27,6	34,5	45,54	62,1

The membrane area of a filtration module is based to the quantity of membranes and to the quantity of channel by ceramic tube (7, 8, 12, 19, 31, 61 channels)

Separation

KLEANSEP™ Ceramics membranes

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.

KLEANSEP™

Kleansep™: the best choice of performance

ROBUST MEMBRANE OFFERING A LONGER LIFE-TIME EXPECTANCY

- Unrivalled performance in microfiltration
- Quickest return on investment
- Very high flux rate
- Compact design
- Very high physical resistance
- Unaffected by chemicals, solvents and radiations
- Back flushing capability

Kleansep™: the best choice for your needs

- A wide range of cut-off from nanofiltration to microfiltration
- Orelis Environnement process expertise
- Adaptable to varying viscosities and concentrations with a choice of channel geometries
- Laboratory scale testing facility
- Process support and technical assistance available for both pre-contact and after sales

Kleansep™: applications

- Membrane bioreactor
- On-board membrane treatment
- Bilge water
- Chemical industry
- Nuclear industry
- Agro food industry
- Paper industry
- Rolling mills
- Pre-treatment cleaner
- Washing machine tanks
- Oily waste water
- Surface treatment industry
- Automotive industry
- Laundry waste water

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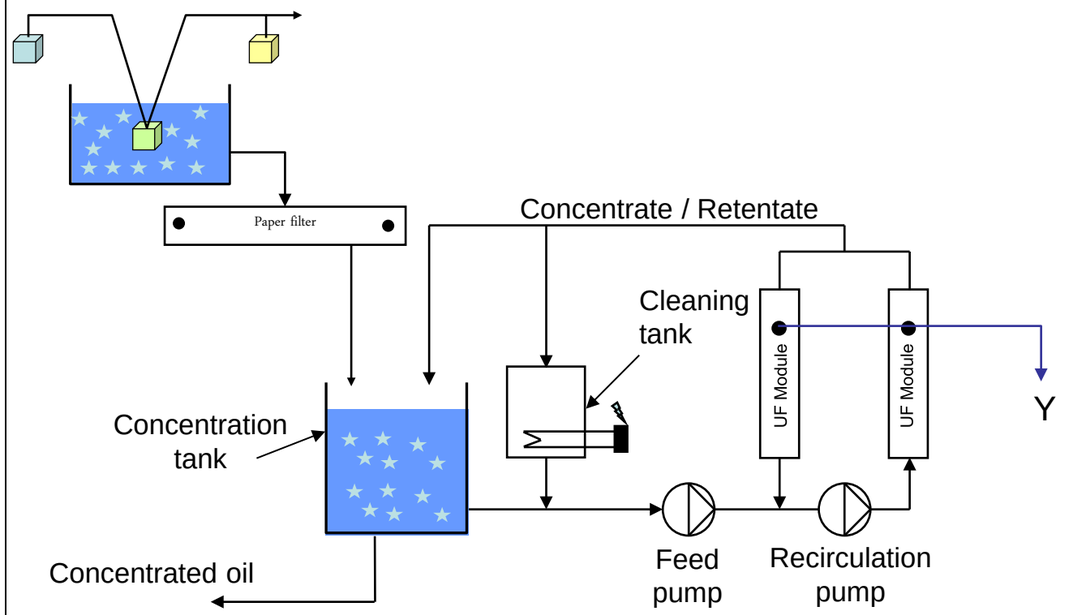
KLEANSEP™

Technical advantages

- Easy operating
- Accepts variations in polluant load
- Real physical barrier for all types of emulsions
- Automatic cleaning

Process flow diagram



Environmental advantages

- Water savings through permeate reuse
- Production of a low volume of oily concentrates
- Fullfills strenghest regulations – High water quality

Economical advantages

- Savings on chemical products
- Savings on concentrate treatment