

ULTRA FILTRATION (UF)

OVERVIEW

Enviro Concepts Ultrafiltration (UF) membrane filtration systems are engineered to produce clean, purified water from various sources including rivers, lakes, stormwater ponds, secondary effluent, ground water, and seawater.

Enviro Concepts UF systems offer a level of purification between particle filtration and reverse osmosis, removing viruses and bacteria, but not essential minerals. UF membranes remove contaminants as small as .01 Microns. UF filtrate is used for drinking water, utility water, reclaimed water, food and beverage production, and pre-treatment source water for Reverse Osmosis (RO) systems. It protects the RO membrane, increases RO efficiency, and reduces operating costs.

Enviro Concepts UF systems are low cost, compact, skid-packaged units that include UF hollow fibre membrane modules.

FEATURES

- Modified PAN Hollow Fibre Cartridges
- Rotary Air Blower
- Feed and Back Flush with VFD
- Control Panel with PLC
- Manual & Automatic Control Valves
- Feed , Air and Back Flush Pressure Gauges
- Product Water Rota Meter
- Permeate Conductivity Meter
- Coated Carbon or Stainless Steel
- Chemical Enhanced Back Flush and CIP
- Containerised or Skid Mounted

APPLICATIONS

- Mine Vehicle and Equipment Wash Effluent
- Mechanical Workshops Treatment
- Industrial Wash Effluent Treatment
- Storm and Ground Water Filtration
- Sewage Treatment Plants
- Potable Water Treatment
- Activated Sludge Clarification
- Activated Sludge Systems
- Biological Nutrient Removal
- Municipal Wastewater Treatment
- Wastewater Treatment for Wash Bays
- Quarantine & Weed/Seed Hygiene
- Brackish and Sea Water Treatment & Desalination

OPERATING CONDITIONS

Feed Source:	Pre-clarified, Surface, Ground
Flow Type:	Out to In
Filtration Mode:	Dead End Mode
Recovery:	90-95%
Re-generation:	Air Scouring with Back Flush
Operating Temperature:	Max 45°C / 113°F
Operating TMP:	0.5 bar (Feed), 1.2 bar (Back Flush)
Power Supply:	400V/ 50Hz/ 3 Phase
CIP Chlorine:	Max 100 ppm
CIP Operating pH:	From 2 to 9

MEMBRANE SPECIFICATIONS

Membrane Material:	Hydrophilic (Modified PAN)
Surface Area (nominal)	45 m ²
Cap & Socket:	Glass Reinforced ABS
Housing Material:	uPVC
Potting:	Epoxy
Filtrate Flux:	up to 80 L/m ² /h
Feed Turbidity:	Max 300 NTU
Feed TSS:	Max 350 mg/L



Model No.	UF System Capacity		Membrane Elements	Line Sizes (mm)			Approx. System Dimensions (mm)			Approx. Weight (KG)
	LPM	m ³ /hr		Inlet	Product	Reject	Length	Depth	Height	
K2	50	3	2	50	50	50	900	790	2300	200
K4	80	5	4	50	80	100	1300	790	2300	300
K8	160	10	8	50	80	100	2600	1250	2260	700
K16	330	20	16	80	100	150	4000	1250	2260	1200
K24	500	30	24	80	100	150	4300	1250	2260	1800
K30	660	40	30	100	100	150	4600	1250	2260	2200
K40	830	50	40	100	100	150	5400	1250	2340	2800
K80	1,600	100	80	100	100	150	10800	1400	2340	4000