MemPAK UF®

ULTRAFILTRATION PACKAGED SYSTEM

A consistent and reliable supply of clean water is essential to sustain a healthy and safe living environment. Our valuation of this precious resource is ever increasing. Rising costs of treatment and the challenges of providing adequate supplies of safe drinking water is leading many high volume users to look at ways of recovering and recycling water for use in less critical or non potable applications. At the same time, authorities are tightening up on allowable contaminate discharge levels, particularly where effluent is discharged into natural rivers, lakes or the sea.

Wastewater recycling

Municipal wastewater is typically around 99% water. With modern treatment techniques, clean water can be extracted and purified to a level which is safe for use in a multitude of non-drinking water applications.

The MemPAK UF® wastewater polishing package plant has been designed to accept treated effluent from a conventional wastewater treatment plant and to purify the extracted water to a high level suitable for a variety of reuse applications.

Key features

- Factory assembled and tested
- Plug and play design
- Capable of 6.5 log reduction of viruses
- Large capacity inlet media filtration
- Automatic media and membrane backwashing
- Ultrafiltration membrane by Dow
- Automatic membrane pressure decay integrity testing
- PLC controls with touch screen
- Online monitoring and data recording system
- Optional remote monitoring and control
- Optional UV sterilization
- Optional Chlorine dosing and monitoring
- Optional RO stage for high quality filtrate
- Small footprint
- Standard Skid frame design
- Optional fully containerised package
- Robust design using quality components for long service life

Membrane filtration for wastewater polishing

Membrane filtration has become the key tertiary treatment process used in water-for-reuse systems. An Ultrafiltration membrane system provides a positive barrier screen which eliminates all bacteria and most viruses.

Further treatment stages are often added for multiple barrier protection including UV sterilization, chlorine disinfection and reverse osmosis filtration.

Applications

MemPAK UF® provide an effective and reliable treatment of wastewaters purified to a level for safe water-for-reuse applications.

The large capacity, automatic back-flushing inlet media filter protects the membranes and allows for varying inlet water quality.

Ultrafiltration is an ideal pre-treatment to reverse osmosis systems.

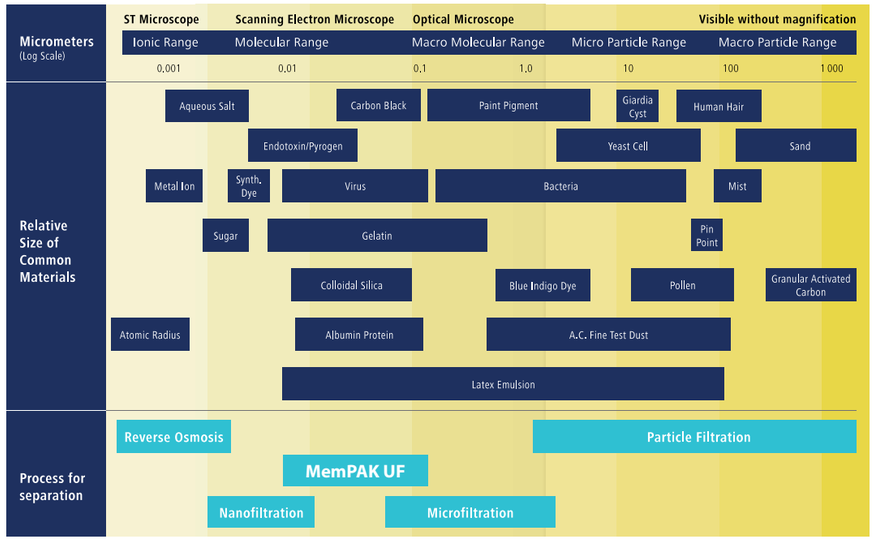
Typical wastewater sources include:

- Effluent from Municipal / Sanitary wastewater treatment plants
- Wastewater from textile and laundry industries
- Wastewater or treated effluent from food and beverage industries
- Hydroponic nurseries

Typical uses of recycled water include:

- Spray irrigation
- Boiler feed
- Plant wash down
- Cooling towers
- Toilet flushing

Micron size and substance removal



MemPAK MBR® specifications

QUALIFIED FEED WATER QUALITY PARAMETERS

MODEL	RATED FLOW (m³/day)
MemPAK UF-10	10
MemPAK UF-20	20
MemPAK UF-30	30
MemPAK UF-50	50
MemPAK UF-75	75
MemPAK UF-100	100
MemPAK UF-150	150
MemPAK UF-200	200
MemPAK UF-250	250
MemPAK UF-300	300
MemPAK UF-400	400
MemPAK UF-500	500
MemPAK UF-600	600
MemPAK UF-750	750
MemPAK UF-1000	1.0ML/day
MemPAK UF-1250	1.25ML/day
MemPAK UF-1500	1.5ML/day
MemPAK UF-2000	2.0ML/day

PARAMETER	Unit	DESIGN BASIS	MAXIMUM ALLOWABLE
Tubidity	NTU	< 50	300
TOC	mg/L	< 10	40
Particle Size	Micron	< 150	300
COD	mg/L	< 20	60
Oil/ Grease	mg/L	0	< 2
pH continuous	-	6 - 9	2 - 11
Temperature	°C	25	40
Cl2 continuous	mg/L	0.5	200
TSS	mg/L	< 50	100

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