

UltraFLEX

Modular UF Water Treatment Plant

FILTEC

Making Water Safer

Designed with the flexibility to suit a variety of water quality and flow requirements

The **FILTEC UltraFLEX** series combines several water treatment processes. The base is built around Ultra-Filtration (UF) and pump package to which other process modules can be added.

The FILTEC UltraFLEX water treatment system is designed with the flexibility to suit a variety of water quality and flow requirements. The modules around the UF can be substituted in or out depending on the site water quality and the specification required for the end user. The filtration barrier of 0.04 micron able to screen out microbiology and suspended solids, making water safe for drinking and process uses.

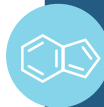
The FILTEC UltraFLEX uses high quality components from leading manufacturers, the equipment includes fully automated operations for filtration, back pulse, scour aeration and automatic membrane integrity testing. Customers can choose to order the modules skid mounted or the fully containerised solution.

Delivered as a range of engineered plug and play filtration systems the unit is extremely versatile, which means the system provides a hassle free and economic solution to an array of water treatment applications.



The FILTEC UltraFLEX water treatment system is customisable

Each of the optional modules below can be added to the base system to ensure the site and water quality and flow requirements are met:



- **Coagulant Dosing** – to improve the water quality and performance of the filtration systems



- **Pre-Filtration** – removes particulates down to 20 micron prior to the ultra-filtration skid to improve UF performance



- **Ultra-Filtration** – a membrane barrier to exclude particles 0.04 microns, including bacteria, viruses, and colloids, meeting increasingly stringent water-quality standards, and providing a stable, reliable, and consistent water quality.



- **Carbon Filtration (Post UF)** – The carbon filter is in place to eliminate any unpleasant taste and odour significantly



- **Ultraviolet (UV) Disinfection** – The UV component disinfects the water to ensure the water is pathogen free before use



- **Chlorine Dosing** – Liquid disinfectant dosing can be utilised where there is a requirement for residual disinfectant to be present in the water distribution system



- **Instrumentation and Automation** – includes several transmitters that measure flow, water quality and tank level



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MATERIALS OF CONSTRUCTION

Air Piping: 316 Stainless Steel
 Permeate/Feed: Sch. 80 PVC
 Header: Sch. 80 PVC
 All Skid Piping: Sch. 80 PVC
 Pump Skid Frame: 316 Stainless Steel



Included Equipment

The FILTEC UltraFLEX series are shipped fully assembled and factory tested on a single skid including the following equipment:

- Memcor L40 Membrane modules
- Pressure Instruments: Feed, Permeate (MIT), Air, Backwash
- Pressure Switches
- Basket strainer
- Actuated control valves
- Manual valves
- CIP tank

Configuration

Hollow Fibre Membranes
 Dead-end filtration (Out to In)
 Air scouring with Back flush (In to Out)

Operating Parameters

Operating Temperature: >0-40°C
 Operating Pressure: 55 kPA to 97 kPA
 Supply Water Pressure: 350 kPA max

Features

- Memcor L40 Membrane modules suitable for drinking water, water recycling* and RO pretreatment*
- In-Built Starter & PLC with HMI
- Compact skid mounted design
- Vertical mount module configuration for easy maintenance
- Nominal 0.04 micrometre pore size achieves high removal of viruses, parasites e.g. Giardia and Cryptosporidium
- Automatic backwash, air scour and membrane integrity test (MIT) (pressure decay test)
- High feed turbidity and TSS capabilities *With suitable pre-treatment - contact us and we'll help find the right solution for you.

Package Upgrade Options

The FILTEC UltraFLEX series can be ordered with the following upgrade options designed to work seamlessly with the system.

- Front end coagulant dosing for dissolved organics removal
- Pre-filter skid for increase in UF performance
- Ultraviolet reactor has been added for the disinfection of water
- Granular activated carbon included to remove taste and odour compounds
- Hypochlorite dosing for bacteria control in the distribution system
- Instrumentation to meet any customers needs
- Air compressor, receiver tank
- 20 or 40ft Containers with electrical power and lighting

Water Source	Bore / Well Water & Rainwater 0 - 10 NTU	Surface & River Water 10 - 50 NTU
Flux	70	65
Product Turbidity	0.1	0.1
Recovery	95%	93%
1 Module	4.5 m ³ /hr	4.0 m ³ /hr
2 Modules	9.0 m ³ /hr	8.1 m ³ /hr
3 Modules	13.5 m ³ /hr	12.2 m ³ /hr
4 Modules	18.0 m ³ /hr	16.2 m ³ /hr

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