

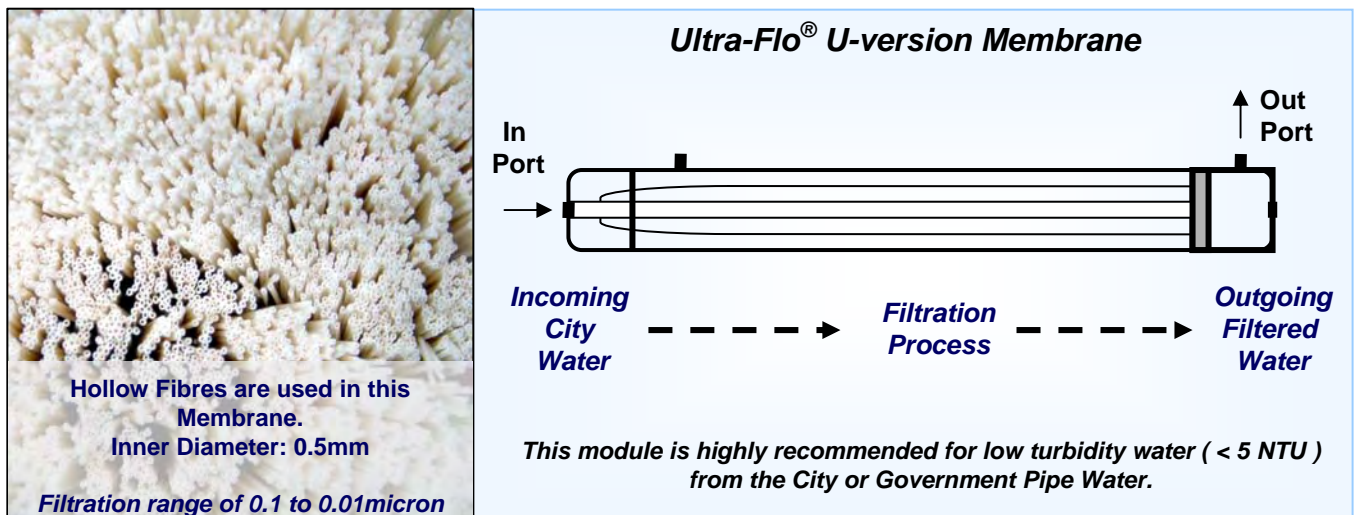
Ultra-Flo® U-Version

Hollow Fibre Ultrafiltration Membrane



Ultra-Flo® is a hollow-fibre based membrane filtration product. This filtration process covers the ultrafiltration range of between 0.1 to 0.01 micron. It is designed to remove suspended particulates, colloidal material, bacteria and high molecular weight material.

This membrane will consistently produce high quality water effectively to meet your respective needs.



Ultra-Flo® Membrane (U-version) is specially designed to filter low turbidity water (< 5 NTU) with added advantages:

Simple Configuration : This system can be configured with simple hardware design. A single pass and dead-end design eliminates the need for complicated valves and control systems, resulting in low-cost plant configuration and simple operation.

High Surface Density : This compact design permits higher filtration surface to the cartridge size and volume, allowing higher flow rate per cartridge on a dead-end mode.

High Quality Permeate : This will allow the down stream RO system to achieve higher quality output, operate at higher recovery, reduce chemical cleaning requirement and extend the operation life-span.

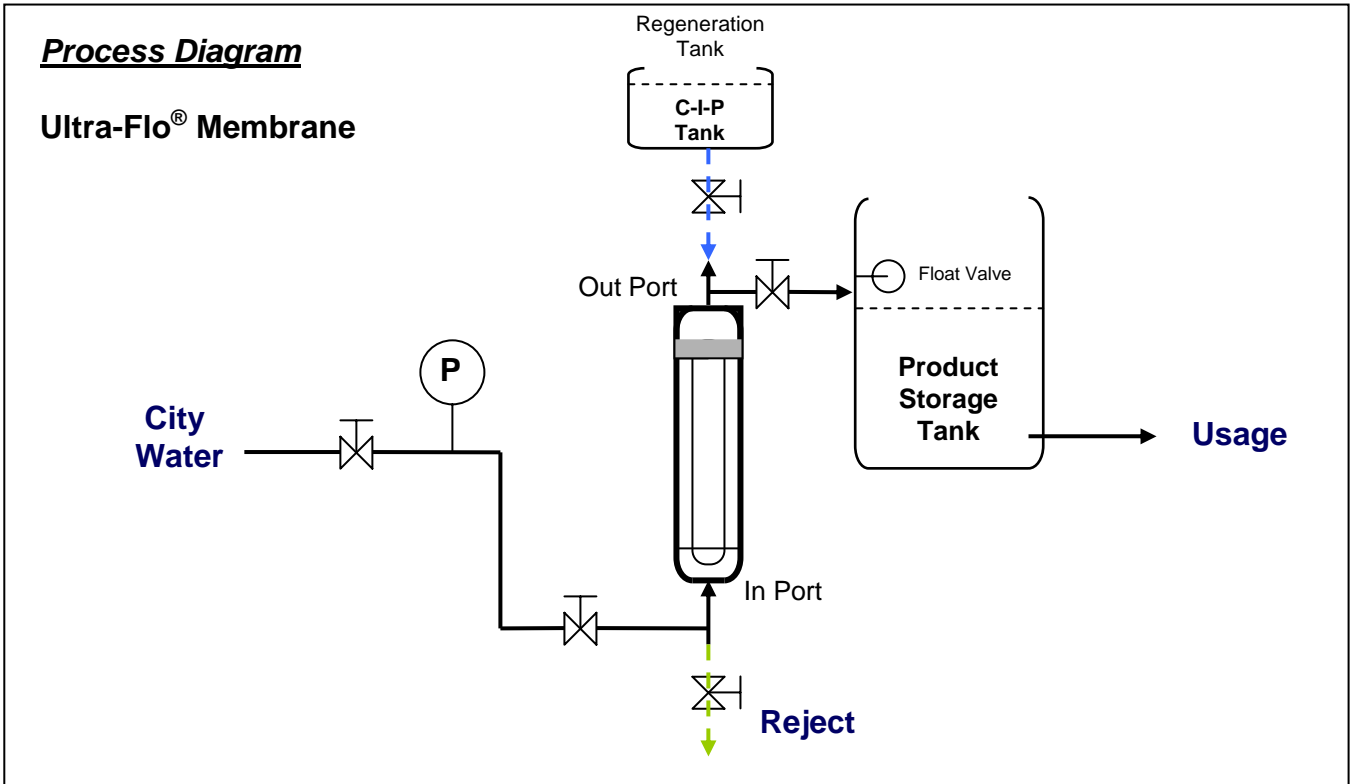


Ultra-Flo[®] U-Version

Hollow Fibre Ultrafiltration Membrane
U660C, U630C



The permeate water is of high quality water that can be applied directly as RO feed water, high quality factory feed water, or residential supply water. This distinct advantage will out-perform any other sub-micron filtration product available in both cost and quality.



Operating Parameter

Configuration	: Capillary Type (Out-to-In)
Material	: Hydrophilic Modified PAN
Fibre Size	: OD 1.0mm, ID 0.5mm
pH range	: 2 – 12
Recovery	: 100% (Dead-end Filtration)
Max Operating Pressure	: < 3.5 Bar
Typical Operating Pressure	: 2.5 Bar
Operating Temperature	: < 50° C
Feed Turbidity	: Typically < 5 NTU
Product Turbidity	: ≤ 0.1 NTU

Model No	U-630C	U-660C
Product Flow	1.0 – 1.5 m ³ /hr	2.0 – 2.5 m ³ /hr
Surface Area	30 m ²	60 m ²
Dimensions (Ø x l)	6" x 30"	6" x 60"
Weight	18 kg	38 kg

NB: Due to constant product upgrading and development, we reserve the right to change specifications from time to time.



Ultra-Flo® U660C

Hollow Fibre Ultrafiltration Membrane

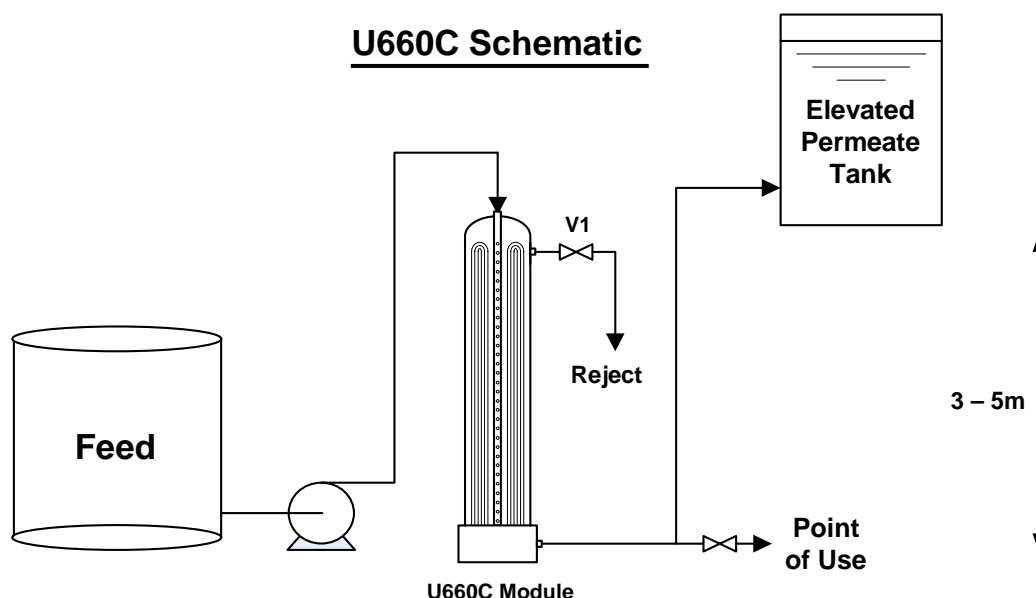


The permeate water is of high quality water that can be applied directly as RO feed water, high quality factory feed water, or residential supply water. This distinct advantage will out-perform any other sub-micron filtration product available in both cost and quality.

Operating Parameter

Configuration	: Capillary Type (Out-to-In)	Max Operating Pressure	: < 3.5 Bar
Material	: Hydrophilic Modified PAN	Typical Operating Pressure	: 2.5 Bar
Fibre Size	: OD 1.0mm, ID 0.5mm	Operating Temperature	: < 50° C
pH range	: 2 – 12	Feed Turbidity	: < 5 NTU
Housing Dimensions	: 7" x 66" (Ø x l)	Product Turbidity	: Typically ≤ 0.1 NTU
Weight	: 38 kg	Product Flow	: 2.0 – 2.5 m ³ /hr (city water)
Recovery	: 100% (Dead-end Filtration)	Surface Area	: 52 m ²

U660C Schematic



Precautions

- For first time start-up, throw away the first 20mins of permeate. Only use permeate after the first 20mins.
- If operation needs to be stopped for long periods i.e. more than a day, shut all ports to keep membrane wet.

U660C Operation

- 1) Start-up**
 - Open V1.
 - Start feed pump.
 - Shut V1. Throw away the first few minutes of permeate.
- 2) Cross-flow flushing (to wash the membrane from outside)**

This is required when permeate rate starts to drop.

 - While permeating, open V1.
 - This will allow some feed water to flush the membrane.
 - After 2 min, shut V1.
 - Continue with permeating.
- 3) Back-flush using permeate (to wash membrane from inside)**

This operation should be done at least once a day, at the end of the day or when the permeate rate drops drastically.

 - Stop the feed pump.
 - Ensure that there is at least 200 litres of water in the permeate tank.
 - Open V1.
 - Let the water flow out as reject.
- 4) Back-flush using chlorine (preferably once a week)**
 - Shut the feed pump and V1.
 - Fill the U660C with 100ppm of chlorine solution.
 - Leave overnight.



Ultra-Flo[®] U630

Hollow Fibre Ultrafiltration Membrane

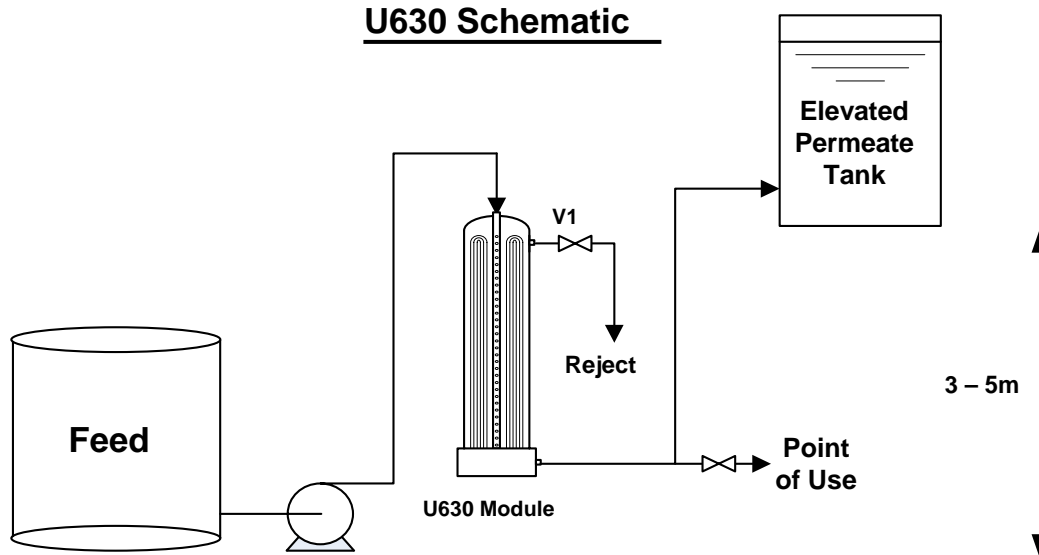


The permeate water is of high quality water that can be applied directly as RO feed water, high quality factory feed water, or residential supply water. This distinct advantage will out-perform any other sub-micron filtration product available in both cost and quality.

Operating Parameter

Configuration	: Capillary Type (Out-to-In)	Max Operating Pressure	: < 3.5 Bar
Material	: Hydrophilic Modified PAN	Typical Operating Pressure	: 2.0 Bar
Fibre Size	: OD 1.0mm, ID 0.5mm	Operating Temperature	: < 50° C
pH range	: 2 – 12	Feed Turbidity	: < 100 NTU
Housing Dimensions	: 7" x 36" (Ø x l)	Product Turbidity	: Typically ≤ 0.1 NTU
Weight	: 18 kg	Product Flow	: < 10m ³ /day
Recovery	: 100% (Dead-end Filtration)	Surface Area	: 30 m ²

U630 Schematic



Precautions

- For first time start-up, throw away the first 20mins of permeate. Only use permeate after the first 20mins.
- If operation needs to be stopped for long periods i.e. more than a day, shut all ports to keep membrane wet.

U630 Operation

- 1) Start-up**
 - Open V1.
 - Start feed pump.
 - Shut V1. Throw away the first few minutes of permeate.
- 2) Cross-flow flushing (to wash the membrane from outside)**

This is required when permeate rate starts to drop.

 - While permeating, open V1.
 - This will allow some feed water to flush the membrane.
 - After 2 min, shut V1.
 - Continue with permeating.
- 3) Back-flush using permeate (to wash membrane from inside)**

This operation should be done at least once a day, at the end of the day or when the permeate rate drops drastically.

 - Stop the feed pump.
 - Ensure that there is at least 200 litres of water in the permeate tank.
 - Open V1.
 - Let the water flow out as reject.
- 4) Back-flush using chlorine (preferably once a month)**
 - Shut the feed pump and V1.
 - Fill the U630 with 100ppm of chlorine solution.
 - Leave overnight.

