



# SRP ULTRAFLO 4000 SERIES

Ultrafiltration Membrane  
(Outside-In with Air Scouring)



### PRODUCT DESCRIPTION

### OPERATING CONDITIONS

Membrane Material	Reinforced- PVDF
Membrane Configuration	Capillary
Nominal Membrane Pore Size	0.03 µm
Potting Material	Epoxy
Housing Material	PVC/ABS
Membrane ID/OD	1.0mm/2.6mm
Preservative	Glycerin (35%)

Typical Filtrate Flux	70~120 L/m <sup>2</sup> h
Maximum Applied Feed Pressure	0.5 MPa (73 psi)
Maximum TMP Backwash Pressure	0.2 MPa (30 psi) 0.2 MPa (30 psi)
Operating Temperature	5~40 °C
Operating pH Range	2~10
Operation Mode	Dead-end or Cross flow, Interval or continue air scouring
CIP Chlorine Concentration	1000-3000 ppm

### MODULE SPECIFICATIONS

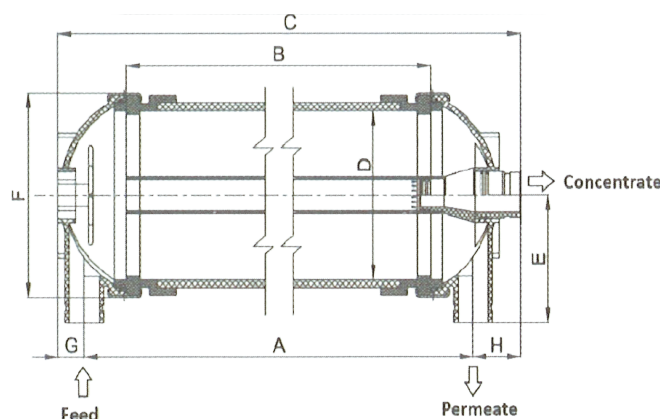
#### SRP ULTRAFLO 4000 SERIES – PRESSURISED UF MEMBRANE SERIES

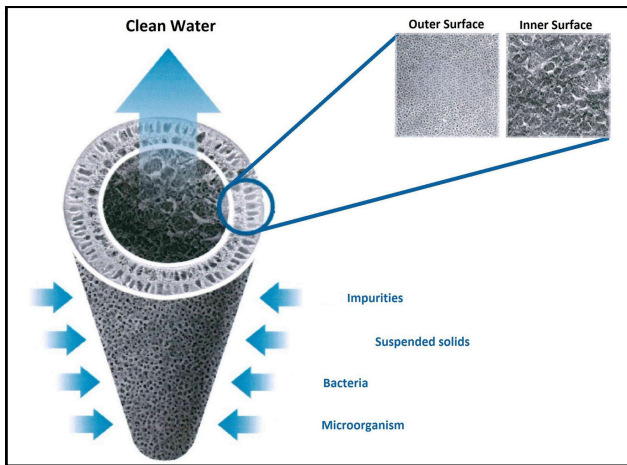
Module Name	Total Filtration Area (m <sup>2</sup> )	A (mm)	B (mm)	C (mm)	D (φ mm)	E (mm)	F (φ mm)	G (mm)	H (mm)
SRP ULTRAFLO 4025	25	850	750	965	250	172	277	40	75
SRP ULTRAFLO 4050	50	1600	1500	1715	250	172	277	40	75
SRP ULTRAFLO 4075	75	2100	2000	2215	250	172	277	40	75

Feed, Permeate and Concentrate pipe connections are all VICTAULIC 2"

### TECHNICAL INFORMATION

Backwash Flux	1.5 to 2.5 time
Backwash Duration	30~120 seconds
Backwash Air Flow	10~20 Nm <sup>3</sup> /h/Module
Backwash Frequency	15~60 minutes
CEB Frequency	Minimum one time per day
CEB Duration	2~20 minutes
Chemical Cleaning	NaOCl or H <sub>2</sub> O <sub>2</sub> , NaOH, HCl, citric acid or oxalic acid





### SALIENT FEATURES

**Reinforced PVDF** hollow fibres offer a distinct advantage over their non-reinforced counterparts, particularly in challenging environments like wastewater treatment with high fouling characteristics. The reinforcement enhances the mechanical strength and tensile modulus of the fibers.

This mechanical fortification allows the membrane to withstand the stresses induced by fouling agents, thereby prolonging its operational lifespan. Additionally, the reinforced structure often exhibits a more uniform pore size distribution and reduced pore swelling, which are critical factors in maintaining high filtration efficiency and fouling resistance.

**Fouling Resistance:** The SRP ULTRAFLO series is specifically engineered to combat fouling, it resists buildup of undesirable substances on the membrane's surface that can reduce its performance and longevity.

**High selectivity:** The SRP ULTRAFLO series engineered to have high selectivity, which means they can remove specific contaminants from a fluid stream while allowing other components to pass through.

**Ease of operation:** The SRP ULTRAFLO series are relatively easy to operate and maintain, with simple cleaning procedures and low chemical usage. Features that make maintenance easier, such as quick-release mechanisms or self-cleaning components, can help reduce downtime and increase productivity.

**Scalability:** The SRP ULTRAFLO series can be scaled up or down depending on the needs of the customer, making them suitable for a wide range of applications.

**Robust Construction:** The SRP ULTRAFLO membranes are produced using an innovative method known as "Complex Thermally Induced Phase Separation" (c-TIPS) technology. This process imparts a high degree of crystallinity to the membrane, leading to outstanding chemical resistance, robust mechanical properties, and an extended lifespan.

**Low Operation Pressure:** Usually, SRP membranes are engineered to operate efficiently at pressures as minimal as 0.02 MPa (equivalent to 3.0 psi) in order to generate a sufficient amount of water.

**Permanently Hydrophilic Membrane:** The sustained operational flow rate for the majority of UF membrane products is significantly reduced compared to their initial flow rate due to the loss of membrane hydrophilicity caused by polymer reconfiguration. In contrast, the SRP FORCEFLO UF membrane retains its hydrophilicity indefinitely, ensuring a consistent flow rate.

**Low Energy Consumption:** This membrane system functions at reduced pressures and consumes less energy compared to alternative separation methods.

**Reliability:** The SRP ULTRAFLO series perform consistently and reliably over long periods of time. This is especially important in applications where downtime can be costly or dangerous.

**Oxidation-inert Membrane:** SRP ULTRAFLO series membrane module's thorough cleaning can be achieved using a higher concentration of oxidizing agent, owing to the chemical resistance of the reinforced PVDF polymer it's made from.

**Soft Potting:** The "roots" of the capillaries are the weakest portion in membrane module and may get damaged / broken during operation. The roots of membranes in SRP UF module are protected by a soft layer of potting material.

### APPLICATION

Reinforced PVDF hollow fibres represent an ideal choice for wastewater applications where both mechanical robustness and high separation performance are required.





## SRP Membranes

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# SRP ULTRAFLO 3000 SERIES

Ultrafiltration Membrane  
(Outside-In with Air Scouring)



**FLOW CAPS  
(STANDARD END CAP)**



**TEELINK CAP  
(SPECIALISED END CAP)**

**PRODUCT DESCRIPTION**

Membrane Material	PVDF
Membrane Configuration	Capillary
Nominal Membrane Pore Size	0.03 $\mu\text{m}$
Potting Material	Epoxy
Housing Material	PVC/ABS
Membrane ID/OD	0.7/1.3mm
Preservative	Glycerin (35%)

**OPERATING CONDITIONS**

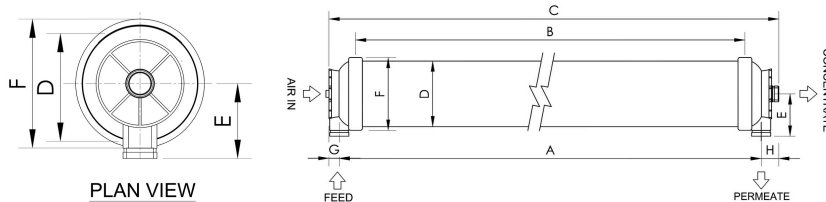
Typical Filtrate Flux	40~100 L/m <sup>2</sup> h
Maximum Applied Feed Pressure	0.5 MPa (73 psi)
Maximum TMP Backwash Pressure	0.2 MPa (30 psi) 0.2 MPa (30 psi)
Operating Temperature	5~40 °C
Operating pH Range	2~10
Operation Mode	Dead-end or Cross flow, Interval or continue air scouring
CIP Chlorine Concentration	1000-3000 ppm

**MODULE SPECIFICATIONS**

**SRP ULTRAFLO 3000 SERIES FLOW CAPS (STANDARD END CAP)**

Module Name	Total Filtration Area (m <sup>2</sup> )	A (mm)	B (mm)	C (mm)	D ( $\varnothing$ mm)	E (mm)	F ( $\varnothing$ mm)	G (mm)	H (mm)
SRP ULTRAFLO 3040	40	850	750	965	250	172	277	40	75
SRP ULTRAFLO 3080	80	1600	1500	1715	250	172	277	40	75
SRP ULTRAFLO 3110	110	2100	2000	2215	250	172	277	40	75

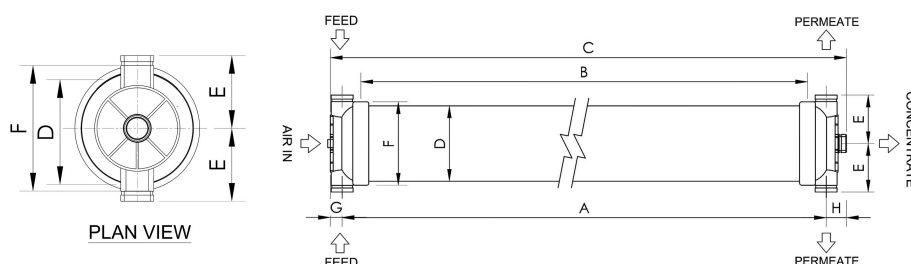
Feed, Permeate and Concentrate pipe connections are all VICTAULIC 2"



**SRP ULTRAFLO 3000 SERIES TEELINK CAP (SPECIALISED END CAP)**

Module Name	Total Filtration Area (m <sup>2</sup> )	A (mm)	B (mm)	C (mm)	D ( $\varnothing$ mm)	E (mm)	F ( $\varnothing$ mm)	G (mm)	H (mm)
SRP ULTRAFLO 3040	40	860	750	965	250	161	277	40	65
SRP ULTRAFLO 3080	80	1610	1500	1715	250	161	277	40	65
SRP ULTRAFLO 3110	110	2110	2000	2215	250	161	277	40	65

Feed and Permeate: VICTAULIC 2 1/2" & Concentrate pipe connections: VICTAULIC 2"



## TECHNICAL INFORMATION

Backwash Flux	1.5 to 2.5 time
Backwash Duration	30~120 seconds
Backwash Air Flow	10~20 Nm <sup>3</sup> /h/Module
Backwash Frequency	15~60 minutes
CEB Frequency	Minimum one time per day
CEB Duration	2~20 minutes
Chemical Cleaning	NaOCl or H <sub>2</sub> O <sub>2</sub> , NaOH, HCl, citric acid or oxalic acid

## SALIENT FEATURES

**Fouling Resistance:** The SRP ULTRAFLO series is specifically engineered to combat fouling, it resists buildup of undesirable substances on the membrane's surface that can reduce its performance and longevity.

**High selectivity:** The SRP ULTRAFLO series engineered to have high selectivity, which means they can remove specific contaminants from a fluid stream while allowing other components to pass through.

**Ease of operation:** The SRP ULTRAFLO series are relatively easy to operate and maintain, with simple cleaning procedures and low chemical usage.

**Scalability:** The SRP ULTRAFLO series can be scaled up or down depending on the needs of the customer, making them suitable for a wide range of applications. This can include modular designs that allow for easy expansion or contraction, or adjustable settings that can be customized to meet specific requirements.

**Robust Construction:** The SRP ULTRAFLO membranes are produced using an innovative method known as "Complex Thermally Induced Phase Separation" (c-TIPS) technology. This process imparts a high degree of crystallinity to the membrane, leading to outstanding chemical resistance, robust mechanical properties, and an extended lifespan.

**Low Operation Pressure:** Usually, SRP membranes are engineered to operate efficiently at pressures as minimal as 0.02 MPa (equivalent to 3.0 psi) in order to generate a sufficient amount of water.

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**Soft Potting :** The "roots" of the capillaries are the weakest portion in membrane module and may get damaged / broken during operation. The roots of membranes in SRP UF module are protected by a soft layer of potting material.

## APPLICATION

The SRP membrane module has versatile applications, including the purification of drinking water from both well and surface sources, the filtration of sewage and wastewater for recycling purposes, and the treatment of surface or seawater for RO and NF systems.





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