

QuremTM

Filtration Membranes

Arvind Envisol, a division of Arvind Ltd., is a key player in the global water and wastewater treatment sector. We cater to both OEMs and end customers, providing comprehensive solutions for projects, services, and components. Our commitment to cutting-edge solutions addresses the intricate challenges of global water management. With a diverse portfolio, including products such as **KaiGO** FRP/HDPE Components, **Segmo** Solid Liquid Separation, **Cirflo** Pipe, Fittings and Valves, **Qurem** Membranes & Filters, **Konsiq** Instrumentation, **Orroto** Rotating Equipment, **Verlec** Electrical, **Qemistro** Chemicals, and **Listra** Mechanical spares, we offer a wide range of solutions. As a dedicated industry participant, Arvind Envisol remains unwavering in our commitment to excellence, positioning ourselves as a reliable partner for project success across domains like project, service, and component needs. Today, our growing client portfolio trusts us for world-class components and services to purify, replenish, and recycle water resources.

Brackish Water Reverse Osmosis Membrane 4040

The BW 4040 is a spiral-wound element featuring a polyamide thin-film composite membrane. These elements are designed to provide a balance of high rejection rates and low energy requirements resulting in lower overall costs especially when dealing with medium and high salinity feed water. The key feature of this membrane is its capability for high flow and high rejection making it particularly suitable for the treatment of brackish water. This membrane technology is employed in various water treatment applications where efficient removal of impurities from brackish water sources is essential.

QUREM MODEL NO.	BW-4040E	BW-4040	BWLP-4040	BW-4040 FR
Maximum Product Water GPD (m3/d)	2250(8.5)	2600(9.8)	2400(9.1)	2200(7.8)
Maximum Salt Rejection (%)	99	99.5	99.1	99.5
Test Condition:	2000 ppm NaCl solution 225 psi (1.55 MPa) Applied Pressure 77 °F (25 °C) Operating Temperature 15% Permeate Recovery 7.0 pH Range	2000 ppm NaCl solution 225 psi (1.55 MPa) Applied Pressure 77 °F (25 °C) Operating Temperature 15% Permeate Recovery 7.0 pH Range	1500 ppm NaCl solution 150 psi (1.03 MPa) Applied Pressure 77 °F (25 °C) Operating Temperature 15% Permeate Recovery 7.0 pH Range	2000 ppm NaCl solution 225 psi (1.55 MPa) Applied Pressure 77 °F (25 °C) Operating Temperature 15% Permeate Recovery 7.0 pH Range

GENERAL DESCRIPTION

Configuration	Spiral-Wound	Spiral-Wound	Spiral-Wound	Spiral-Wound
Membrane Polymer	Polyamide	Polyamide	Polyamide	Polyamide
Effective Membrane Area ft2 (m2)	85(7.9)	100 (9.3)	85(7.9)	85(7.9)
Feed Spacer Thickness (mil)	28	28	28	28

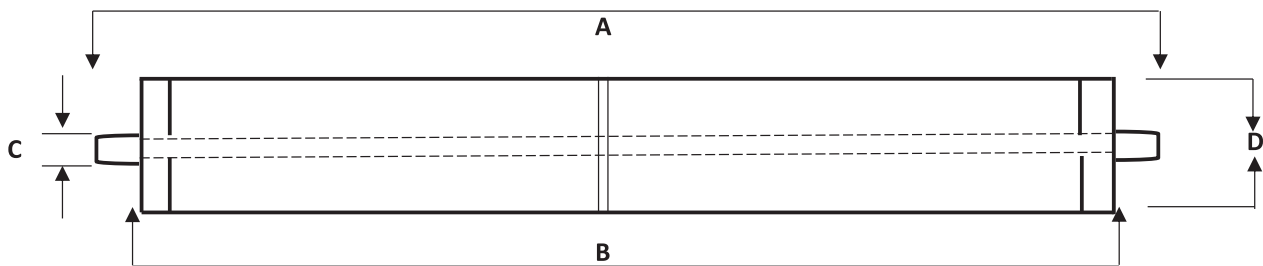
PRODUCT USE AND RESTRICTIONS

Maximum Operating Pressure psi (Mpa)	600psi (41bar)	600psi (41bar)	600psi (41bar)	600psi (41bar)
Maximum Free Chloride Tolerance (ppm)	< 0.1 ppm	< 0.1 ppm	< 0.1 ppm	< 0.1 ppm
Maximum In-flow Temperature (°C)	113°F (45°C)	113°F (45°C)	113°F (45°C)	113°F (45°C)

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Continuous Running Water pH Range	2-11	2-11	2-11	2-11
Chemical Cleaning Water pH Range	1-13	1-13	1-13	1-13
Maximum Feedwater Silt Density Index (SDI)	5.0	5.0	5.0	5.0
Maximum Feed Water Flow (m3/h)	3.6	3.6	3.6	3.6
Maximum Single Element Pressure Drop psi (Mpa)	15psi(1.0bar)	15psi(1.0bar)	15psi(1.0bar)	15psi(1.0bar)
Maximum feed TDS (ppm)	4000	5000	2000	8000



Each membrane packed with 1 pc of this connector

A	D	C	B	Ports Connect Ø
1016 mm (40")	90 mm (4")	19.1mm (0.75")	26.7mm (1.05")	DN32 mm (1 1/4")

CAUTIONARY INSTRUCTIONS*

- Ensure elements stay consistently moist post-initial wetting.
- The limited warranty is void if operating limits and guidelines aren't followed strictly.
- To prevent biological growth during extended shutdowns, immerse membrane elements in a preservative solution.
- The customer is fully responsible for the effects of incompatible chemicals and lubricants on the elements.
- The maximum allowable pressure drop across the entire pressure vessel (housing) is 30 psi (2.1 bar).
- Prevent static permeate-side backpressure at all times.



Membrane Packing Size: 105x13x13 cm, Weight: 3.4 kg.

^ The limitations shown here are for general use. For specified projects, operation at more conservative values may ensure the best performance and longest life of the membrane.

Disclaimer: The information and data are provided in good faith and without any warranties. All express or implied warranties, including merchantability and fitness for a particular purpose, are disclaimed and excluded. The conditions and methods of use for our products are beyond our control. Qurem assumes no liability for results obtained or damages incurred through the application of the provided information and data. Users are responsible for determining the appropriateness of Qurem's products for their specific end uses.

QUREM ULTRAFILTRATION MEMBRANE

Arvind Envisol is a trusted source for high performance membrane fiber and module products. This is due to our specialized knowledge of PVDF hollow fiber technology which allows us to continually improve our UF membrane offerings. The strength in the core technology allows us to utilize it in a variety of module products to meet market needs.

Qurem modules are developed to help customers replace their existing UF modules on a one to one basis without any hardware changes or additions. Qurem's UF Membranes are made of hollow fiber PVDF material with high tensile strength and a pore size of 0.03 μm . Customers can follow their existing operation and cleaning program when using these UF membranes for their replacement project.

Qurem modules can also be used to design and build an entirely new UF pre or post treatment in green field projects. Design support and backup will be provided by AEL.

Qurem's UF Series pressurized ultrafiltration (UF) hollow fiber modules are engineered drop-in replacement products that provide owners of existing UF installations with a higher quality alternative to upgrade to from the originally installed products. The UF market leading fiber technology results in longer life and significantly less maintenance than any other module in the market.



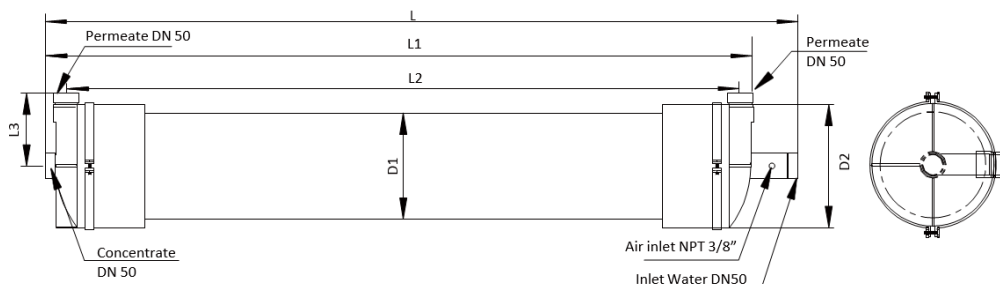
FEATURES

- 0.03 μm pore size guarantees stable permeate quality.
- Modified hydrophilic PVDF membrane with easy wetting performance
- High tolerance to varying influent water qualities
- Reduced pretreatment requirements due to outside-in flow
- High chemical resistance and hence easy to clean
- Antifouling & resistant to contaminants
- Energy saving due to low operating pressure
- Standard models allow for easy retrofits
- Engineered drop-in replacement modules = Simple, low effort, plug and play solution

APPLICATIONS

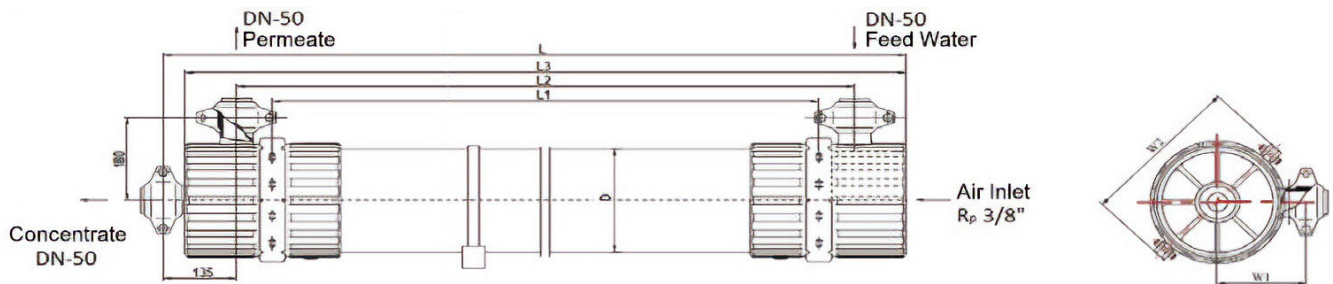
- Reverse osmosis pretreatment system
- Municipal wastewater treatment
- Industrial wastewater treatment

QUREM HUF SERIES



MODULE SPECIFICATIONS			
MODULE MODEL	QUREM HUF-52	QUREM HUF-78	QUREM HUF-105
Membrane Surface Area	52 m ²	78 m ²	105 m ²
Hollow Fiber Material	PVDF		
Pore Size	0.03 μm		
ID / OD	0.6 / 1.2 mm		
Flow Direction	Outside-in		
Operation Model	Dead - End Flow or Cross - Flow		
L	1364.9 mm	1832.6 mm	2340.6 mm
L1	1257.3 mm	1,724.7 mm	2232.7 mm
L2	1135.5 mm	1602.9 mm	2110.9 mm
L3	172 mm	172 mm	172 mm
D1	250 mm	250 mm	250 mm
D2	290 mm	290 mm	290 mm
Inlet / Outlet Connection	DN 50 (Victaulic)		
Housing / Clamps Material	UPVC		
Joint Material	SS 304		
Potting Material	Epoxy resin		
Design Flux/Permeate Flux (@25°C)	34 - 110 LMH	34 - 110 LMH	34 - 110 LMH
Max. TMP	2.0 bar		
OPERATION PARAMETERS			
Module Flow Rate	1.8 - 5.5 m ³ /h	2.7 - 8.6 m ³ /h	3.6 - 11.6 m ³ /h
Max. Feed Pressure (@20°C)	3.0 bar		
ΔTMP	0 - 2.0 bar		
Max. Backwash Pressure	2.5 bar / 36 psi		
Operation Temp.	5°C - 40°C / 41°F - 104°F		
pH Range	2 - 12 pH		
Max. Feed Turbidity	300 NTU		
Max. NaClO Tolerance	2000 ppm		
Max. TSS	100 ppm		
Expected Permeate SDI	SDI ≤ 2.5		
Expected Turbidity	≤ 1 NTU		

QUREM DUF SERIES



QUREM DUF		
MODULE TYPE	QUREM DUF-51	QUREM DUF-77
Membrane Surface Area	51 m ² (549 ft ²)	77 m ² (829 ft ²)
Hollow Fiber Material	PVDF	
Pore Size	0.03 µm	
ID / OD	0.7 / 1.3 mm (0.027 / 0.051 inch)	
Flow Direction	Outside-in	
Operation Model	Dead-end or Cross-flow	
L	1,860±3 mm (73.2±0.1 inch)	2,360±3 mm (92.9±0.1 inch)
L1	1,500±3 mm (59.1 inch)	2,000±3 mm (78.7 inch)
L2	1,630±3 mm (64.2±0.1 inch)	2,130±3 mm (83.9±0.1 inch)
L3	1,820±3 mm (71.7±0.1 inch)	2,320±3 mm (91.3±0.1 inch)
D1	225 mm (8.9 inch)	
W1	180 mm (7.1 inch)	
W2	342 (13.5 inch)	
Inlet / Outlet Connection	DN 50 (Victaulic)	
Housing / Clamps Material	UPVC / SS304	
Joint Material	SS304	
Potting Material	Epoxy Resin	
Design Flux / Permeate Flux (@25°C)	34 - 110 LMH	
Max. TMP	2.1 bar	

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OPERATION PARAMETERS		
Module Flow Rate	2.0 - 6.0 T/h (92 - 26.3 gpm)	3.0 - 9.0 T/h (13.8 - 39.4 gpm)
Max. Feed Pressure (@20°C)	6.25 bar / 93.75 psi	
ΔTMP	0 - 2.1 bar / 0 - 30 psi	
Max. Backwash Pressure	2.5 bar / 36 psi	
Operation Temp.	5°C - 40°C / 41°F - 104°F	
pH Range	2 - 11 pH	
Max. Feed Turbidity	300 NTU	
Max. NaClO Tolerance	2,000 ppm	
Max. TSS	100 ppm	
Expected Permeate SDI	SDI ≤ 2.5	
Expected Turbidity	≤ 1 NTU	

QUREM SUBMERGED MBR MODULES

Qurem submerged modules are used for Membrane Bioreactor (MBR) processes. Submerged MBR process is most often used to treat municipal/industrial waste water but can be used in drinking water applications as well.

Qurem MBR modules are made with reinforced hollow fibre PVDF membrane. The hollow fibres have high tensile strength with excellent chemical resistance. 0.1 μm pore size provides superior rejection rate of suspended solids, bacteria and viruses.

Compared with conventional treatment, Qurem MBR modules produce extremely high quality permeate. Due to the high mixed liquor suspended solids (MLSS), Qurem MBR modules can greatly reduce the overall treatment plant footprint and annual operation cost.

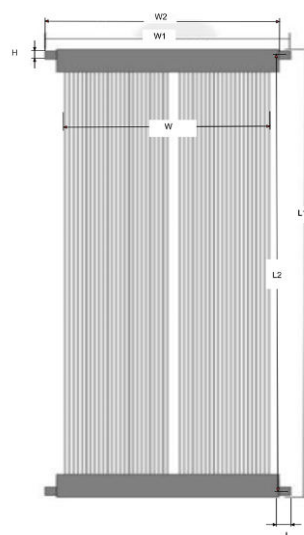
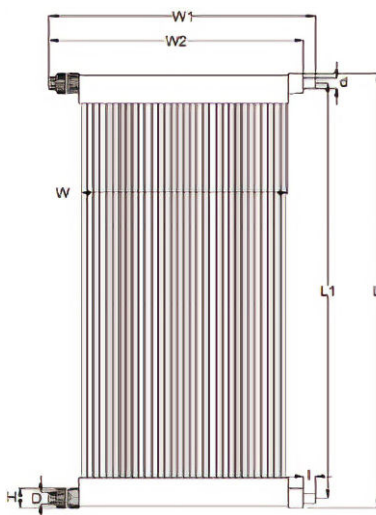


KEY FEATURES

- High hydrophilic PVDF membrane
- Reinforced hollow fiber membrane
- Reduced treatment plant footprint
- Long service life
- Consistent and stable flux performance
- Energy saving due to low operating pressure

APPLICATIONS

- Municipal sewage treatment and reuse
- Industrial wastewater treatment and reuse
- Landfill wastewater treatment
- Pre-treatment for RO system



QUREM MBR SERIES

QUREM MBR			
MODULE MODEL	QUREM MBR 1040	QUREM MBR 2080	QUREM MBR 3080
Effective Membrane Area	10 m ²	20 m ²	30 m ²
Membrane Material	PVDF		
Pore Size	0.05 µm		
Fiber ID/OD	1.0 / 2.0 mm		
L1	1000 mm	2000 mm	2000 mm
L	1040 mm	2040 mm	2040 mm
W	460 mm	460 mm	720 mm
W1	620 mm	620 mm	785 mm
W2	593 mm	593 mm	755 mm
I	27 mm	27 mm	30 mm
H	49 mm	49 mm	40 mm
End Cap Size	23 mm	23 mm	40 mm
Filtration Mode	Negative pressure suction		
Design Flux	8 - 20 LMH		
Recommended Flux	Depending on water parameter		
Module Gross Weight	4 kg	7 kg	12 kg
Sealing Material	PUR		
Permeate Collecting Tube Material	ABS		
OPERATING PARAMETERS			
Operation Temp. Range	5°C - 40°C		
Optimal Operation pH Range	4 - 10 pH		
Recommended pH Range	4 - 10 pH		
Max. Active Chlorine (ppm)	"200ppm(Feed Water) 5000ppm (Cleaning Solution)"		

STANDARD EQUIPMENT, COMPONENTS AND CHEMICALS (SECC)



KaiGO FRP/HDPE Components offers a complete set of essential elements designed for water treatment systems. Its extensive product range guarantees reliable and effective performance in various applications, ensuring the optimal functioning of water treatment systems.

- Membrane Housings
- FRP Pressure Vessels
- Electronic Dosing Pump
- HDPE Tanks
- PHE Bags
- Micron Cartridge Filters
- Diffusers, MBBR Media



Segmo Solid-Liquid Separation specializes in motion-based segregation technologies like dryers and filter presses, focusing on maximizing water recovery in processes such as Zero Liquid Discharge (ZLD) and solid concentration in the food industry. Segmo aims to reduce water footprints in relevant industries.

- Paddle dryer
- Heat Pump Dryer
- Filter press
- Screw Press
- HRSCC/Clarifier, DAF
- CentrifugeMCF Housing
- PSF/DMF Vessels
- Thermal(MVC, ATFD, MEE)
- Packaged plants (UF, RO, STP)



Qurem Membranes & Filters takes a pioneering role in supplying filtration technologies, including UF, MBR, and RO membranes. These advancements play a crucial role in ensuring the availability of clean and drinkable water across various industrial and municipal applications.

- UF Membranes
- MBR Membranes
- RO Membranes



Konsiq Instrumentation, a leading brand in our company, provides customized, high-quality instruments for a range of industrial needs. With a focus on precision and advanced technology, our instruments deliver optimal performance and durability in modern industrial applications.

- Flowmeters
- Rotameters
- Pressure-Level (Gauge/Switch/Transmitter)
- Temperature Gauge
- Analyzers



Orroto Rotating Equipment encompasses a diverse array of critical rotating components essential for seamless industrial operations. These components significantly contribute to the efficient functioning of a broad spectrum of systems across various industries.

- Pumps – high pressure, centrifugal, axial, vacuum
- Dosing pumps (Diaphragm, Hydraulic)
- Blowers
- Centrifugal fan
- Agitators



Verlec Electrical offers a comprehensive selection of electrical components that cater to various applications. Our precision-crafted electrical products adhere to the highest standards of performance and reliability. Whether powering essential machinery or facilitating efficient electricity distribution, Verlec combines excellence with electrical expertise, contributing collectively to the optimal functioning and longevity of industrial operations.

- Panels
- Induction motors
- Cable – Power, Control, Instrumentation
- VF Drives



Chemicals are pivotal for the efficient operation of water treatment, cooling towers and boilers. Qemistro Chemicals specializes in providing specialty chemicals for industrial functions. Our comprehensive chemical solutions contribute to the efficient and prolonged functioning of water treatment, cooling towers and boilers.

- Water treatment
- Cooling towers
- Boilers
- Construction
- Dyes & pigments
- Specialized paints & coatings



Cirflo Pipe, Fittings, and Valves specializing in both metallic and non-metallic components, offer a comprehensive suite of products meticulously designed for optimal efficiency and enduring performance. This commitment to delivering reliable, high-quality pipe fittings, and valve solutions enhances the overall integrity of industrial systems.

- Metallic Pipe (MS, SS304L, SS316L, Duplex)
- Non-Metallic Pipe (UPVC, CPVC)
- Fittings
- Valves (Ball, Butterfly, Gate, Globe, Check)



Listra Mechanical Parts and Tools are pivotal in elevating operational efficiency across diverse sectors. Boasting a comprehensive product range, Listra excels in supplying essential components for a variety of industrial applications. Committed to delivering top-notch quality, reliability, and durability, Listra ensures peak performance, contributing to the seamless and prolonged functioning of machinery and systems. Precision and reliability are at the core of Listra's dedication to meeting the diverse needs of industries.

- Bearings
- Mechanical seal
- Couplings, pulleys
- Timer belts
- Fasteners, O-rings
- Tools, Inserts
- Adhesives

Envisol
POWERED BY **ARVIND**

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