Qurem™

Filtration Membranes

Envisol
POWERED BY Arvind

Qurem
Filtration Membranes

Arvind Envisol, a division of Arvind Ltd., is a key player in global wastewater & solid waste recycling. From OEMs to end customers, we provide comprehensive solutions in projects, services, and components. Our 5 divisions include:

1. **Projects**
2. **Services**
3. **Standard Equipment, Components & Chemicals (SECC)**
4. **Solid Waste Recycling**
5. **Centre of Excellence (CoE)**

addressing complex challenges in water & solid waste management with cutting-edge innovations. Transforming Water & Solid Waste Management Globally.

SECC: Your Partner in Industrial Excellence. Standard Equipment, Components & Chemicals, leads in manufacturing industrial products for Water & Solid Waste Management and beyond. Backed by rigorous testing and a commitment to excellence, SECC delivers superior performance in wastewater & solid waste treatment, waste handling and specialized components. Our diverse portfolio includes the below brands and subsequent category products:

- **KaiGO** FRP & Polymer components
- **Segmo** Solid Liquid Separation
- **Cirflo** Pipe, Fittings and Valves
- **Qurem** Membranes & Filters
- **Konsiq** Instrumentation
- **Orroto** Rotating Equipment
- **Verlec** Electrical
- **Qemistro** Chemicals
- **Listra** Spares, Tools and safety

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 & solid resources.

Our filtration membrane offering covers the following:

- Brackish Water Reverse Osmosis
- Ultrafiltration Membrane
- Submerged MBR Membrane
- Electrodeionization (EDI)

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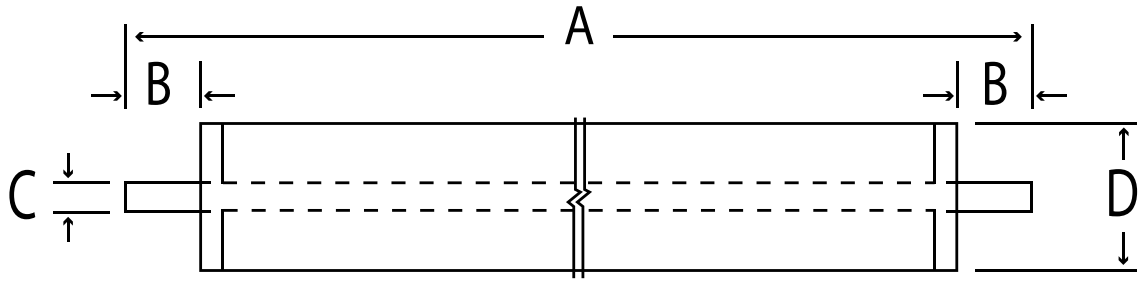
Brackish Water Reverse Osmosis Membrane 4040

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 4040	BW 4040+
Maximum Product Water GPD (m3/d)	2250(8.5)	2600(9.8)
Maximum Salt Rejection (%)	99	99.5
Test Condition:	• 2000 ppm NaCl solution • 225 psi (1.55 MPa) Applied Pressure • 77 °F (25 °C) Operating Temperatur e • 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
Membrane Polymer	Polyamide	Polyamide
Effective Membrane Area ft2 (m2)	85(7.9)	100 (9.3)
Feed Spacer Thickness (mil)	28	28
PRODUCT USE AND RESTRICTIONS		
Maximum Operating Pressure psi (Mpa)	600psi (41bar)	600psi (41bar)
Maximum Free Chloride Tolerance (ppm)	< 0.1 ppm	< 0.1 ppm
Maximum In-flow Temperature (^{0}C)	113°F (45°C)	113°F (45°C)
Continuous Running Water pH Range	2-11	2-11
Chemical Cleaning Water pH Range	1-13	1-13
Maximum Feedwater Silt Density Index (SDI)	5.0	5.0
Maximum Feed Water Flow (m3/h)	3.6	3.6
Maximum Single Element Pressure Drop psi (Mpa)	15psi(1.0bar)	15psi(1.0bar)
Maximum feed TDS (ppm)	4000	5000



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.

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.

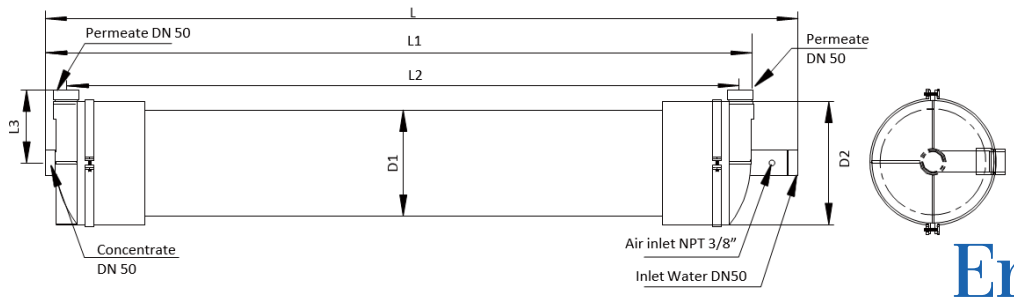
FEATURES

- 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

HUF SERIES



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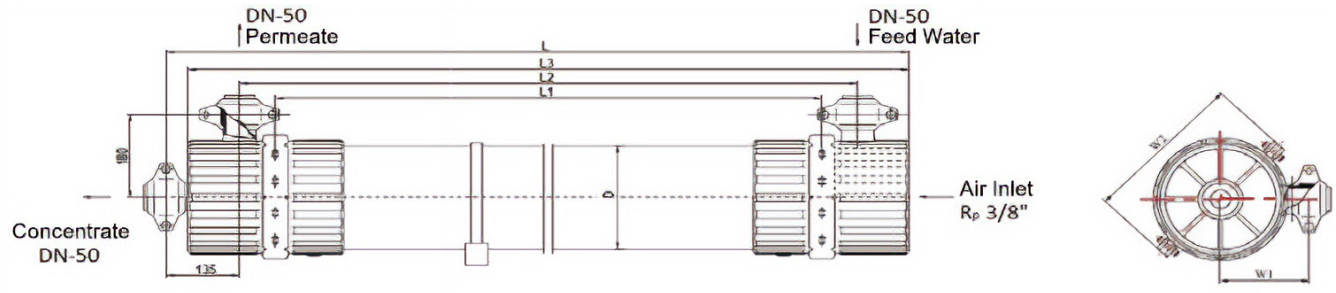
MODULE SPECIFICATIONS			
MODULE MODEL	**QUREM HUF-52**	**QUREM HUF-78**	**QUREM HUF-105**
Membrane Surface Area	52 m^2	78 m^2	105 m^2
Hollow Fiber Material	PVDF		
Pore Size	0.03 µm		
ID / OD	0.6 / 1.2 mm		
Flow Direction	Outside-in		
Operation Model	Dead - End Flow or Cross - Flow		
L	1364.9 mm	1832.6 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		

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	

contd.

contd.

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	

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.

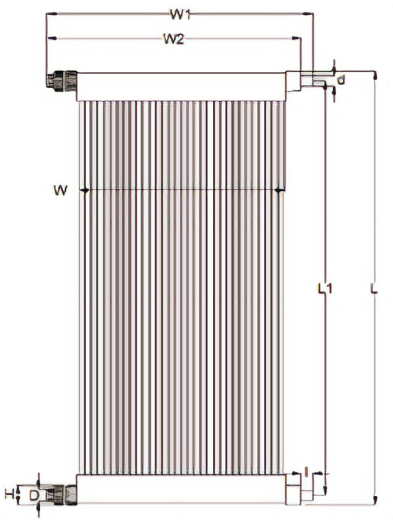
Compared with conventional treatment, Qurem MBR modules produce extremely high quality permeate. Due to the high mixed liquor suspended solids (MLSS), Qurem MBR modules can greatly reduce the overall treatment plant footprint and annual operation cost.

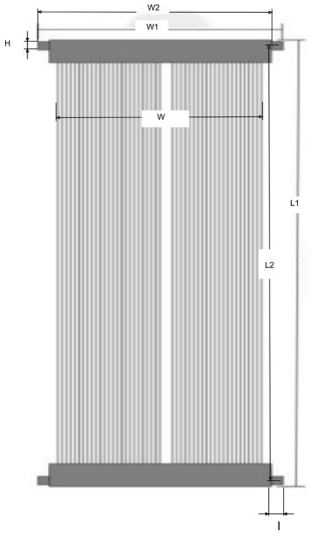
KEY FEATURES

- 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





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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)"		

EDI (Electrodeionization)

Qurem EDI (Electrodeionization) is often integrated with reverse osmosis and other purification systems to effectively remove ions from water. Within an EDI module, the ion exchange resin is divided into two sections: the working resin and the polishing resin, with a defined boundary known as the working front. The working resin primarily removes the majority of ions, while the polishing resin targets more challenging ions, such as weak electrolytes. The ultrapure water produced by EDI systems can achieve resistivity levels of 15-18 MΩ·cm. Additionally, EDI can be operated in either a continuous or intermittent mode, depending on the application requirements. EDI is widely used in the power generation and pharmaceutical industries, where low conductivity and high-purity water are essential for operations.

FEATURES

- Qurem EDI is designed to integrate seamlessly with reverse osmosis and other purification technologies to effectively remove ions from water.
- The ion exchange resin consists of two sections:
  - Primarily responsible for removing the majority of ions.
  - Targets more challenging ions, such as weak electrolytes, to enhance overall purification.
- EDI systems can produce ultrapure water with resistivity levels ranging from 15 to 18 MΩ·cm, ensuring compliance with stringent quality standards.
- EDI can operate in either continuous or intermittent modes, providing adaptability to meet specific application requirements.

APPLICATIONS:

- Boiler make-up water in electric power, chemical and metallurgical industries.
- Ultra-pure water in electronics, semiconductor and precision machinery industries.
- Water for chemical process, Pharmaceutical water, Laboratory ultrapure water.

Feed water for EDI modules must meet the specifications outlined below to ensure normal operation and the system design should be enhanced to achieve better performance.

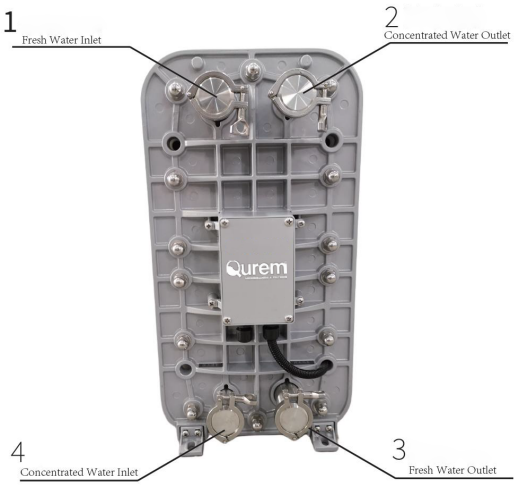
Description	Range Values
Recovery Rate	90% - 95%
Max. Intel Water Pressure	1.5 - 5.0 bar
Pressure Drop Under Normal Water Flow Rate	1.4 - 2.1 bar
Quality of water production	15-18 MΩ·cm
Temperature Range (oC)	5 oC – 35 oC (Normal 25 oC)
Water Inlet (pH)	6.5 – 9
Influent Conductivity (µ/cm)	1 – 10 µ/cm
Total Carbon Dioxide (ppm)	<5
Total Hardness (ppm)	<0.5
Silicon-Activated Silicon (ppm)	≤0.5 (≤0.2 Best)
Total Organic Carbon (ppm)	≤0.5
Residual Chlorine (ppm)	≤0.03
Ionic Metals (Fe/Mn.ppm)	≤0.01

QUREM EDI MODULE DETAILS:
STANDARD EDI MODULE - TYPE AND PARAMETERS

MODEL		EDI-500	EDI-1000	EDI-2000	EDI-3000	EDI-4000	EDI-5000
Corner Screw Hole Spacing	L	170	243	388	535	680	755
	W	217	217	217	217	217	217
Overall Size	L	270	345	500	660	820	930
	W	320	320	320	320	320	320
	H	605	605	605	605	605	605
Working Current (A, DC)		1 - 6	1 - 6	1 - 6	1 - 6	1 - 6	1 - 6
Working Voltage		0 - 400	0 - 400	0 - 400	0 - 400	0 - 400	0 - 400
Recovery Rate (%)		90 - 95	90 - 95	90 - 95	90 - 95	90 - 95	90 - 95
Water Resistivity (MΩ·cm)		15 - 18	15 - 18	15 - 18	15 - 18	15 - 18	15 - 18
Pure Water Outlet (Male Thread)		DN 32					
Concentrated water inlet / outlet (Male Thread)		DN 20					
Standard Water Production Flow (l/hr)		500	1000	2000	3000	4000	5000
Water Production Flow (m3/hr)		0.3 - 0.7	0.5 - 1.4	1.5 - 2.5	2.5 - 3.5	3 - 4.5	4 - 5.5
Fresh Water Inlet (1)		DN32 (external thread-1)					
Concentrated Water Outlet (2)		DN20 (external thread-2)					
Fresh Water Outlet (3)		DN32 (external thread-3)					
Concentrated Water Inlet (4)		DN20 (external thread-4)					

HIGH TEMPERATURE EDI MODULE - TYPE AND PARAMETERS

MODEL		EDI-500S	EDI-1000S	EDI-2000S	EDI-3000S	EDI-4000S	EDI-5000S
Corner Screw Hole Spacing	L	216	288	440	592	744	815
	W	200	200	200	200	200	200
Overall Size	L	324	395	547	699	851	922
	W	312	312	312	312	312	312
	H	605	605	605	605	605	605
Working Current (A, DC)		1 - 6	1 - 6	1 - 6	1 - 6	1 - 6	1 - 6
Working Voltage		0 - 400	0 - 400	0 - 400	0 - 400	0 - 400	0 - 400
Recovery Rate (%)		90 - 95	90 - 95	90 - 95	90 - 95	90 - 95	90 - 95
Water Resistivity (MΩ·cm)		15 - 18	15 - 18	15 - 18	15 - 18	15 - 18	15 - 18
Standard Water Production Flow (l/hr)		500	1000	2000	3000	4000	5000
Water Production Flow (m3/hr)		0.3 - 0.7	0.5 - 1.4	1.5 - 2.5	2.5 - 3.5	3 - 4.5	4 - 5.5
Disinfection Temperature (oC)		85 ±5 oC					
Disinfection Frequency		>150 times					
Fresh Water Inlet (1)		DN32 (external thread-1)					
Concentrated Water Outlet (2)		DN20 (external thread-2)					
Fresh Water Outlet (3)		DN32 (external thread-3)					
Concentrated Water Inlet (4)		DN20 (external thread-4)					



SECC BU Clientele

Client Reference Certificate

Arulpuram Common Effluent Treatment Company Pvt. Ltd.,

Date: 23.11.2023

To whomsoever it may concern

This is to certify that, M/s Arvind Envisol has supplied us 28 no's Ultra Filtration membranes (Qurem HUF-105 model) and was commissioned on 25.01.2019.

It is running successfully since then on our textile effluent and giving the guaranteed flux of >40 LPH and Turbidity of <0.5 NTU till date.

We are very much satisfied with the performance and would not hesitate in recommending to others.

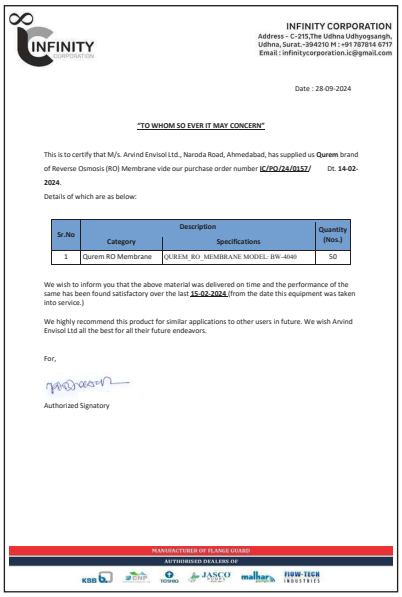
Thanking you,

Yours faithfully

General Manager

Arulpuram CETP

REGD. OFFICE & WORKS AT : S.F.No : 158, Thalunjikattu Thottam, Koundampalayampudur, Ganapathypalayam (Post), Veerapandi (Via), TIRUPUR - 641 606.
Cell : 77087 72227 E-mail : arulpuramcetp@gmail.com
GSTIN : 33AAGCA1262P1ZM CIN No : U09000TZ2006PTC 011784



INFINITY CORPORATION
Address - C-215,The Udhna Udhyogsangh, Udhna, Surat.-394210 M : +91 7878764 6717
Email : infinitycorporation.ic@gmail.com

Date : 28-09-2024

"TO WHOM SO EVER IT MAY CONCERN"

This is to certify that M/s. Arvind Envisol Ltd., Naroda Road, Ahmedabad, has supplied us **Qurem** brand of Reverse Osmosis (RO) Membrane vide our purchase order number **IC/PO/24/0157/** Dt. **14-02-2024.**

Details of which are as below:

Sr.No	Description		Quantity (Nos.)
	Category	Specifications	
1	Qurem RO Membrane	QUREM_RO_MEMBRANE MODEL: BW-4040	50

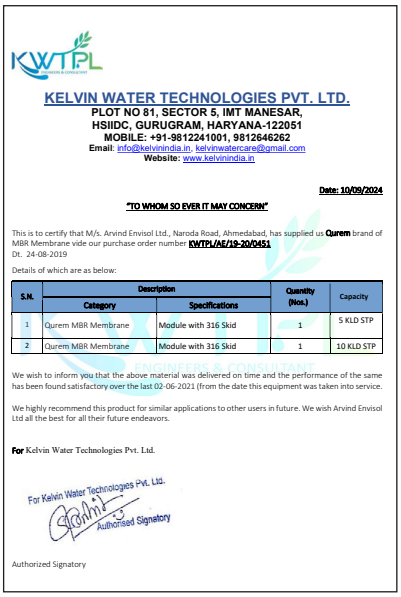
We wish to inform you that the above material was delivered on time and the performance of the same has been found satisfactory over the last **15-02-2024** (from the date this equipment was taken into service.)

We highly recommend this product for similar applications to other users in future. We wish Arvind Envisol Ltd all the best for all their future endeavors.

For,

Authorized Signatory

MANUFACTURER OF FLANGE GUARD
AUTHORISED DEALERS OF



KELVIN WATER TECHNOLOGIES PVT. LTD.
PLOT NO 81, SECTOR 5, IMT MANESAR,
HSIIDC, GURUGRAM, HARYANA-122051
MOBILE: +91-9812241001, 9812646262
Email: info@kelvinindia.in, kelvinwatercare@gmail.com
Website: www.kelvinindia.in

Date: 10/09/2024

"TO WHOM SO EVER IT MAY CONCERN"

This is to certify that M/s. Arvind Envisol Ltd., Naroda Road, Ahmedabad, has supplied us **Qurem** brand of MBR Membrane vide our purchase order number **KWTPL/AE/19-20/0451** Dt. 24-08-2019

Details of which are as below:

S.N.	Description		Quantity (Nos.)	Capacity
	Category	Specifications		
1	Qurem MBR Membrane	Module with 316 Skid	1	5 KLD STP
2	Qurem MBR Membrane	Module with 316 Skid	1	10 KLD STP

We wish to inform you that the above material was delivered on time and the performance of the same has been found satisfactory over the last 02-06-2021 (from the date this equipment was taken into service.

We highly recommend this product for similar applications to other users in future. We wish Arvind Envisol Ltd all the best for all their future endeavors.

For Kelvin Water Technologies Pvt. Ltd.

For Kelvin Water Technologies Pvt. Ltd.
Authorised Signatory

Authorized Signatory

Watertech
An ISO 14001: 2015 ISO 9001:2015 ISO 45001: 2018 (OHSAS) Certified Company
WATERTECH SERVICES PVT. LTD.
"Yash", Plot No. 94, Jai Durga Society No. 3, Manish Nagar, Beltarodi Road, Nagpur- 440 015. Mob.: 9822934432
CIN: U29253MH2012PTC233275

Date: 24-9-2024

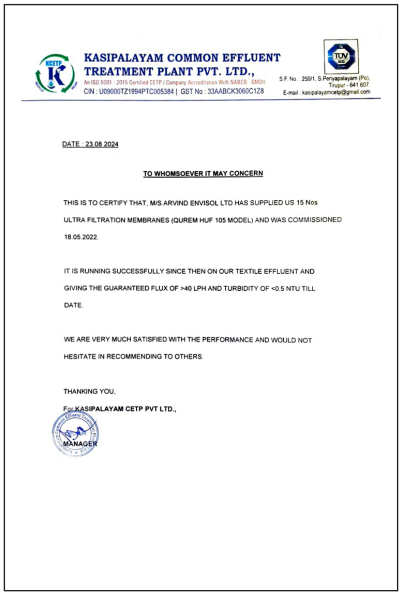
To Whom so ever it may concern.

This is to certify that "Qurem" MBR Membranes are performing satisfactory which had been procured from "M/s. Arvind Envisol Limited" vide our Purchase order No.WSPL/P/21-22/112 dated 19/2/22 .

These Qurem MBR Membrane have been implemented in water and waste water treatment and are found working satisfactory since the time of commissioning.

We wish team Arvind Envisol Limited all the best on their future endeavours.

For
Name & Designation
(Managing Director)
WATERTECH SERVICES PVT. LTD.



KASIPALAYAM COMMON EFFLUENT TREATMENT PLANT PVT. LTD.,
An ISO 9001 : 2015 Certified CETP | Company Accreditation With SABCB - SIMOS
CIN : U09000TZ1994PTC005384 | GST No : 33AABCK3060C1Z8
S.F No. 250/1, S.Periyapalayam (Po), Tirupur - 641 607
E-mail kasipalayamcetp@gmail.com

DATE : 23.08.2024

TO WHOMSOEVER IT MAY CONCERN

THIS IS TO CERTIFY THAT, M/S.ARVIND ENVISOL LTD HAS SUPPLIED US 15 Nos ULTRA FILTRATION MEMBRANES (QUREM HUF 105 MODEL) AND WAS COMMISSIONED 18.05.2022.

IT IS RUNNING SUCCESSFULLY SINCE THEN ON OUR TEXTILE EFFLUENT AND GIVING THE GUARANTEED FLUX OF >40 LPH AND TURBIDITY OF <0.5 NTU TILL DATE.

WE ARE VERY MUCH SATISFIED WITH THE PERFORMANCE AND WOULD NOT HESITATE IN RECOMMENDING TO OTHERS.

THANKING YOU.

For KASIPALAYAM CETP PVT LTD.,

MANAGER

Standard Equipments, Components and Chemicals (SECC Business Unit)

Envisol

POWERED BY Arvind

HEAD OFFICE:
Arvind Envisol Ltd., Arvind Mill Premises, Naroda Road, Ahmedabad - 380 025, India.
Toll Free No.: 1800 843 9988 • **Email:** support.envisol@arvind.in • **Visit us on:** www.arvindenvisol.com

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