

EXPERT IN WATER TREATMENT



**ATS WATER
TECHNOLOGY**

HIGH-QUALITY PRODUCTS

MODERN TECHNOLOGIES

PROFESSIONAL SERVICES

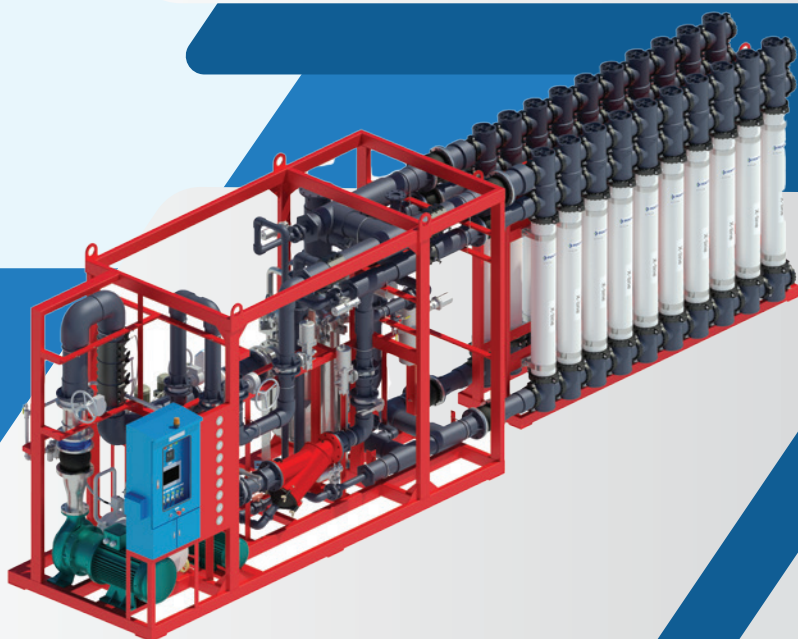
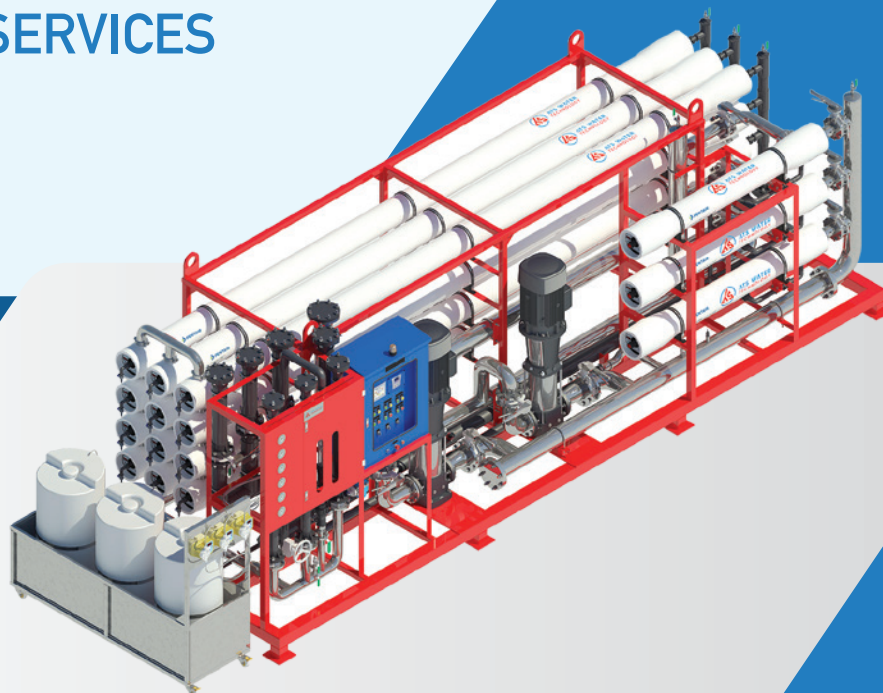


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**ATS WATER
TECHNOLOGY**

Company Overview

ATS Water Technology Co., Ltd (ATS) was established in 2009. We have specialized in consulting water treatment solutions & supplying the equipment and completed water treatment skids for most OEMs nationwide.

Nowadays, ATS is a leading suppliers of equipment, chemical, spare parts and technical service, water treatment solutions for municipal, desalination, process, semiconductor, boiler, food & beverage, aquaculture, wastewater reuse, wastewater, zero liquid discharge, etc.

Our equipment suppliers are well known worldwide manufacturers: [Amiad](#), [Pentair](#), [PWT](#), [Piedmont](#), [Danfoss](#), [Aquaporin](#), [LG Chem](#), [Epore](#), [Mega](#), [Antech](#), [Renew Water Group](#), [Aqsep](#), [Memstar](#), etc.

With accumulated experience in equipment supply, coupled with nearly 12 years of consultancy role in the water industry, ATS has built a team of well-qualified engineers and highly skilled technicians with deep knowledge in water treatment technology.

Come to ATS is your right choice because we are not only a reliable supplier of chemicals, equipment, spare parts, and completed water treatment skids but also a reputable technical service & solutions provider in maintenance and upgrading facilities or new projects.

Our motto: ATS is a community of professionals, modern technology, high-quality products are always considered as the foundation for strength in business and sustainable development.



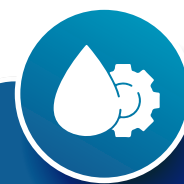
01



**Consulting
Solutions
For Water
Treatment
Industries**



**Completed
Water
Treatment
Skids**



**Water
Treatment
Equipment &
Components**

02



Consulting Solutions For Water Treatment Industries

From state-of-the-art technologies, we provide water treatment solutions for



Ultrapure water for use in process industries such as: power plants, electronics, semiconductor, pharmaceutical, refining and petrochemical industries.



Process water



Aquaculture



Municipal



Desalination



Waste water reuse / ZLD



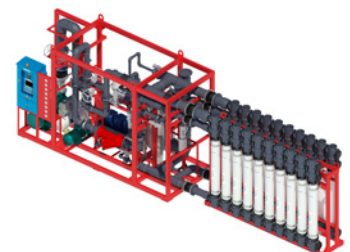
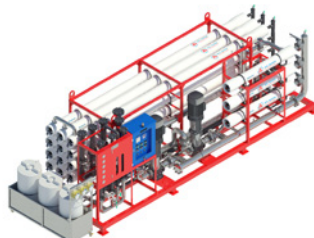
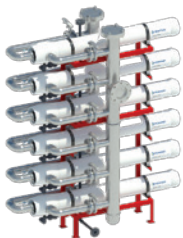
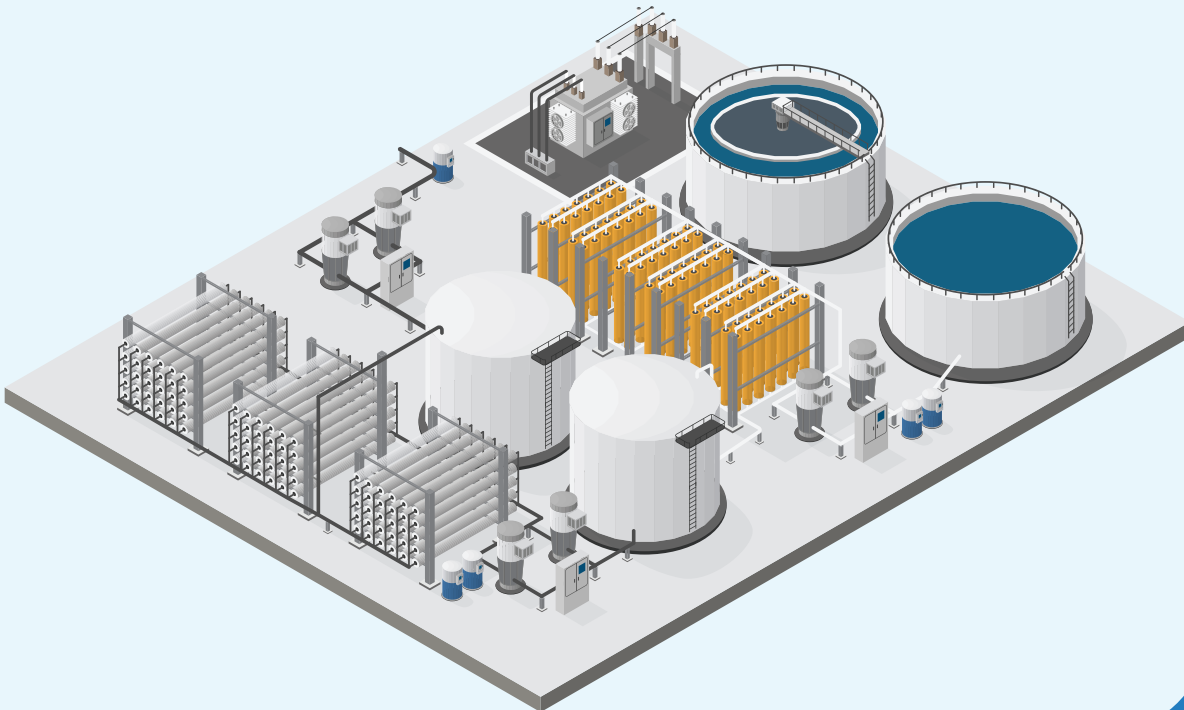
Waste water treatment



ATS WATER
TECHNOLOGY

03

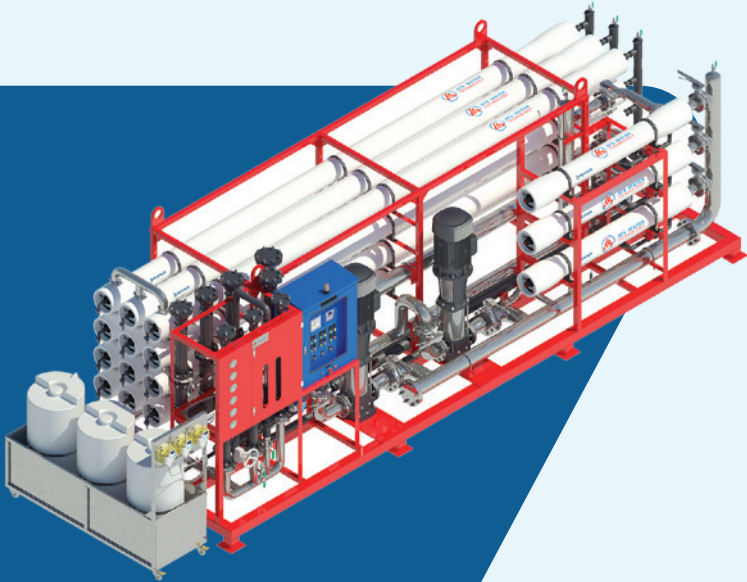
Completed Water Treatment Skids



ADES BRO8 SERIES

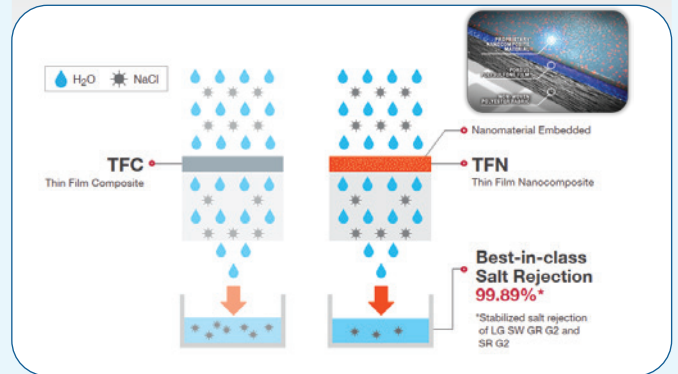
With the state of art technology, ATS Water Technology Co., Ltd has always in pursuit. We put in place decades of expertise and experience to build a robust and reliable Reverse Osmosis (RO) system for the challenging markets using RO membrane from LG Chem NanoH₂O™ with Core Technology:

Thin Film Nanocomposite (TFN) instead of conventional technology **Thin Film Composite (TFC)**. TFN gives higher performance compared to TFC regards to flow rate, salt rejection and operating pressure.



Core Technology: Thin Film Nanocomposite (TFN)

Performance comparison between TFN vs. TFC (Thin-Film Composite)



Standard features:

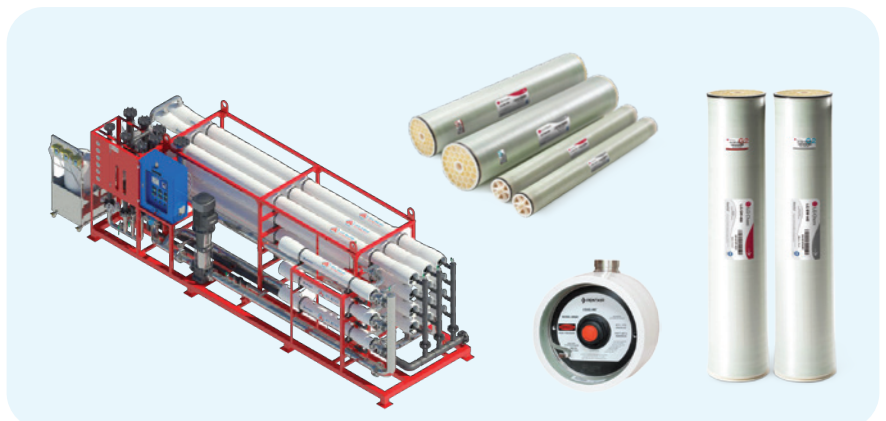
- Multi-stage High pressure pump with VFD
- 8" TFN spiral wound RO membrane - LG Chem NanoH₂O™
- 5 micron cartridge filter - AQUALINE Pentair
- Piping: Low pressure - uPVC Sch80 NSF Certification, High pressure: SUS316 Sch5
- PLC & HMI 7" control panel with SS400 powder coated IP54 enclosure
- Automatic hourly flushing with auto-valve
- Liquid filled pressure gauges (panel mount)
- FRP RO Pressure Vessel - CODELINE Pentair
- Manual valves & accessories
- Permeate, Concentrate & Recirculation flow indicators
- High & Low pressure sensors
- ORP meter & controller
- Permeate conductivity monitor
- SS400 with 3 layers epoxy coated steel skid frame
- Connection with JIS-10K Flange
- 380-415V/3Ph/50Hz power supply
- Anti-scalant dosing pre-filled with 1 pail of PWT Chemical-USA

Available options:

- CIP skid
- pH adjustment (can be for feed or permeate)
- Online feed water conductivity monitor
- Feed pump
- Feed/Permeate blending
- Water meter/Pulse water meter for dosing pump control
- DIN/ANSI Flange Connection
- SUS304/SUS316 Skid frame

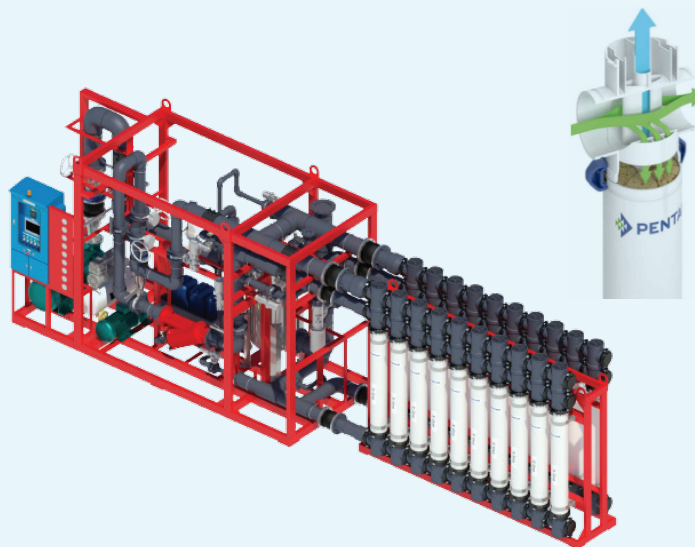
Model	RO System Configuration (Elements/PV)	Total 8" membrane	Capacity (m ³ /h)	Recommended capacity m ³ /h	Feed / Permeate / Concentrate / Off-spec Connections, (DN)	Approx. Dimensions (LxWxH)m	Approx. weight (kg)
ADES-BRO8-010	2-1 (4)	12	8-10	10	65/50/40/40	6.0 x 1.3 x 2.4	1620
ADES-BRO8-015	4-2 (3)	18	12-15	15	65/65/50/50	5.0 x 1.6 x 2.5	2130
ADES-BRO8-020	4-2 (4)	24	16-20	20	65/65/50/65	6.1 x 1.6 x 2.5	2510
ADES-BRO8-030	6-3 (4)	36	25-30	30	80/65/65/65	6.2 x 1.9 x 2.6	3290
ADES-BRO8-040	6-3 (5)	45	35-40	40	80/65/65/65	7.2 x 1.9 x 2.2	4020
ADES-BRO8-050	8-4 (5)	60	45-55	50	125/80/65/80	7.3 x 2.0 x 2.2	4900
ADES-BRO8-060	10-5 (5)	72	56-65	60	125/100/65/100	7.5 x 2.2 x 2.6	5790
ADES-BRO8-070	12-6 (5)	84	70-80	70	125/100/65/100	7.7 x 2.4 x 3.0	6840
ADES-BRO8-100	16-8 (5)	120	90-100	100	150/125/80/125	7.9 x 2.8 x 3.0	8350

* For city water (TDS<1000ppm, recovery 75%)



ADES XLINE SERIES

Using state of art technology and decades of expertise and experience, ATS Water Technology has built a robust and reliable Pressurized Ultrafiltration (UF) system for challenging markets. In this system, ATS uses the established UF modules from Pentair X-Flow. The 0.72mm PES hollow fiber membranes in the modules have a tight pore size of 20nm and can produce excellent and superior effluent quality that conventional sand and multimedia filters can not achieve. The membranes can to operate at high fluxes at low energy compared with other membranes and effectively remove bacteria, viruses and other microorganisms from the water.



ADES XLINE SERIES standard package

includes:

- Feed & Backwash pump with IE3, IP55 motor
- UF modules (Inside out PES/PVP) UF casing PVC
- 200 micron Manual strainer for Feed and Backwash line
- Schedule 80 PVC piping
- PLC & HMI 9" control panel
- SS400 powder coated IP54 enclosure
- Pressure Transducers
- Liquid filled pressure gauges (panel mount)
- Automatic control with pneumatic butterfly valves
- Manual valves & accessories
- Flow indicators
- Chemical enhanced backwash (CEB) dosing system (excludes CEB tank)
- Air compressor for valve control
- SS400 with 3 layers epoxy coated steel skid frame
- Connection with JIS-10K Flange
- 380-415V/3Ph/50Hz power supply

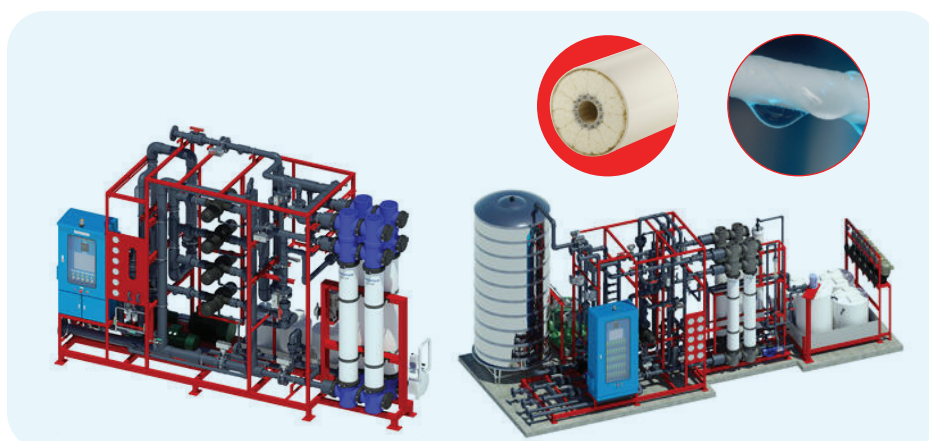
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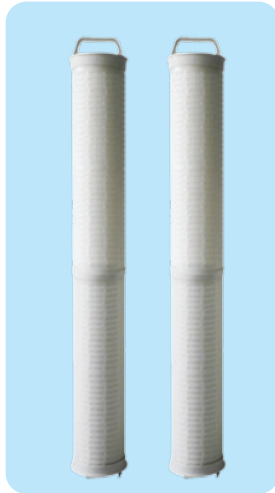
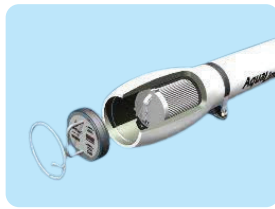
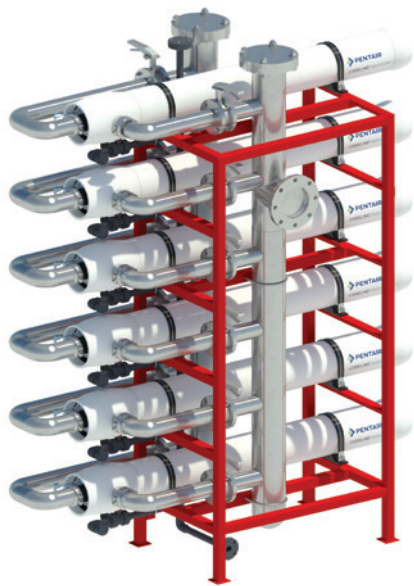
- Membrane cleaning skid (CIP)
- pH adjustment
- Online turbidity monitor
- Filtrate (Backwash) tank (PE, SUS304, FRP)
- Materials for Sea water filtration
- DIN/ANSI Flange Connection

Model	Module number XF75	Membrane area (m ²)	Flow rate for city water or similar (m ³ /h)	Required Backwash volume ¹ (m ³ /h)	Overall Dimensions LxWxH ² (m)
ADES-UFX-101-00	01	075	02-06	>06	3400x1300x2500
ADES-UFX-102-00	02	150	06-12	>12	3600x1300x2500
ADES-UFX-103-00	03	225	12-18	>18	3800x1500x2500
ADES-UFX-202-00	04	300	18-24	>24	3600x1500x2500
ADES-UFX-203-00	06	450	24-36	>36	4200x1500x2600
ADES-UFX-204-00	08	600	36-48	>48	4800x1600x2800
ADES-UFX-205-00	10	750	48-60	>60	5600x1600x2800
ADES-UFX-206-00	12	900	60-72	>72	7800x2000x3000
ADES-UFX-207-00	14	1050	72-84	>84	8300x2000x3000
ADES-UFX-208-00	16	1200	84-96	>96	8600x2000x3000
ADES-UFX-209-00	18	1350	96-108	>108	9500x2300x3300
ADES-UFX-210-00	20	1500	108-120	>120	9800x2300x3300

¹ The required backwash volume is the minimum volume requirement of the usable water volume in the UF water tank for HC, CEB & supply to using point.

² The dimensions of the system may vary and subject to change without prior notice.





Ergonomically designed with FRP housings and cartridge filter elements ranging from 0.6 micron to 100 micron, making it very suitable for pre-filtration in various industries like chemical, process, pharmaceutical, desalination etc. that provide superior flow rates, corrosion resistance, lesser footprint and long lasting.

Applications

Superior filtration for a wide variety of applications like chemical, cosmetic, electronic, food & beverage, ink, magnetic media, medical, pharmaceutical, photographic, pre-filter for RO systems, salt water, bleach etc.



Max. recommended capacity of the system	Skid Model Name	Skid Dimension	Skid Weight		No. of AquaLine Housing	No. of AquaLine PP Cartridges (XYZ µm Nominal)	Inlet/Outlet Flange
			Dry Weight Kgs (+/- 5%)	Wet Weight Kgs (+/- 5%) 1.0 SG Liquid			
		mm			(AQ 8-60) (Ø8"X60" L)	(AL-XYZ-60 B), (Ø6.75"x60" L)	
68 m³/h	2 Housing - Narrow	2718 x 711 x 2337 (mm)	345	476	2	2	4"x 4"
102 m³/h	3 Housing - Narrow	2718 x 711 x 2337 (mm)	376	544	3	3	6"x 6"
170 m³/h	5 Housing - Narrow	2718 x 711 x 2337 (mm)	451	687	5	5	6"x 6"
272 m³/h	8 Housing - Narrow	2921 x 1067 x 2083 (mm)	592	921	8	8	6"x 6"
340 m³/h	10 Housing - Narrow	3403 x 1092 x 2362 (mm)	848	1293	10	10	8"x 8"



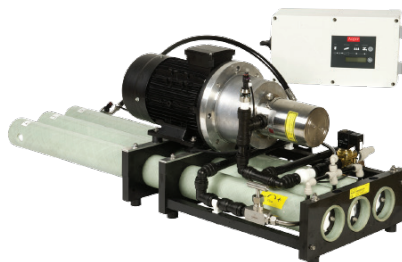
AUTHORIZED USER OF
ASME CODE SYMBOL



Certified to
NSF / ANSI 61



WM-E Series
Record low power consumption



WM-B Series
Economical yet high quality



WM22000E
Larger capacity

AqSep A/S is an international company with its prime activity in research, development and production of water desalination systems utilizing and combining the latest technology developed in close collaboration with Danfoss A/S, a global leader within the industry for mechanical and electronic components.

Their products help minimize the disadvantages in water scarcity by providing small desalination units with record low energy consumption for the convenience of modern life and a safer and cleaner environment. Thanks to our advanced energy recovery technology, you can have a water supply with a significantly reduced carbon footprint.

	Products						
	WM4800E-321	WM9000E-340	WM11000E-340	WM22000E-340	WM4000B-321	WM9000B-340	WM18700B-340
Unit production rate, lpd	4800	9000	11000	22000	4000	9000	18700
RO membrane: Nos × diameter × length	3×3"×21"	3×3"×40"	4×3"×40"	8×3"×40"	3×3"×21"	3×3"×40"	6×3"×40"
Weight - approx., lb (kg)	97 (44)	143 (65)	198 (90)	265 (120)	82 (37)	132 (60)	287 (130)
Measurements – L×W×H, inches (cm)	29"×16"×16" (73×40×41)	47"×16"×18" (119×40×41)	47"×20"×16" (119×50×41)	47"×22"×29" (119×56×73)	29"×16"×16" (73×40×40)	47"×16"×17" (120×40×43)	47"×18"×30" (119×46×75)
Pump power consumption ¹ , kW	0.7	0.9	1.0	2.0	1.8	2.4	4.9
Specific pump energy ¹ , kWh/1000 gallons (kWh/m ³)	13 (3.5)	9 (2.4)	8.3 (2.2)		41 (10.8)	24 (6.4)	24 (6.3)
Pressure adjustment	Auto				Manual		
System feed quantity, gph (lph)	354 (1337)	362 (1365)		719 (2721)	275 (1041)	349 (1319)	703 (2656)
System operation, psi (bar)	290 to 1001 (20-69)				290 to 899 (20-62)	290 to 986 (20-68)	290 to 1001 (20-69)
Motor supply, single phase	230 V; 50/60 Hz			N.a.	230 V; 50/60 Hz	N.a.	
Motor supply, 3 phase	400 V; 50 Hz 208, 480 V; 60 Hz			400 V; 50 Hz 208, 480 V; 60 Hz ³	400 V; 50 Hz 208, 480 V; 60 Hz		400 V; 50 Hz 480 V; 60 Hz
System feed pressure, psi (bar)	Min. 7.3 (0.5), max. 73 (5), recommended 43-73 (2-5)						
Water connections	All connections: Hose tail fitting for a 3/4" hose, 19 mm internal diameter						
Salt rejection	Min. 99.2 %, Stabilized 99.4%						
Salinity monitoring	Continuous TDS readout on product water (temp. compensated)						
Salinity range ² , mg/l TDS	1,500-45,000						
Ambient temperature range, °F (°C)	Min. 33 (0.5) – Max. 122 (50)						

Rated performance may vary ±15%, Nominal conditions: 25 °C seawater at 32,000 mg/l TDS, 50 Hz grid

¹ Based on simulation in ROSA design software from Dow Water & Process Solutions

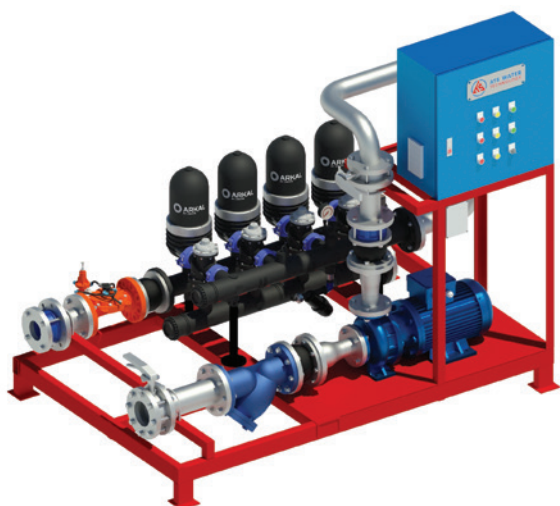
² Depending on feed water temperature/amount of feed water solids (TDS)

³ A variable speed drive is required for operation in 60 Hz grid



ADES ADF Series

ADES ADF is the side-stream filtration product line for cooling tower which uses the Amiad Spin Klin™, a modular, all polymeric automatic disc filtration system. Spin Klin™ is based on innovative technology that captures and retains a large amount of solids. Its unique and efficient hydraulic self-cleaning backwash mechanism requires low water consumption and saves energy demands.



Model	ADES-ADF-036
No. of unit batteries	4
Dimension ² L x W x H (mm)	1620 x 1460 x 1665
Approx. Weight (kg)	98
Net Production Flow (m ³ /h)	36

²The dimensions of the system may vary and are subject to change without prior notice.

Model	4 x 2" Spin Klin™
Filtration Degrees (µm)	100
Filtration type	Disc filter
Backwash data	
Flushing time (Sec.)	20
Min. backwash pressure (Bar)	3.5
Min. flow for backwash (m ³ /h)	10

Model, flow rate & micron rating will be designed on request.

ADES ASF Series

ADES ASF is the side-stream filtration product line for cooling tower which uses the SAF-X, the next generation of Amiad SAF series. The SAF-X automatic filtration system offers a large filtration area and suction scanner cleaning technology driven by an electrical drive-unit. The self-cleaning filter provides improved usability, easier maintenance and higher installation flexibility along with Amiad's proven suction-scanning cleaning technology.



Model	ADES-ASF-035
Filtration area (cm ²)	1500
Dimension ² L x W x H (mm)	1860 x 500 x 1800
Approx. Weight (kg)	350
Net Production Flow (m ³ /h)	35

²The dimensions of the system may vary and are subject to change without prior notice.

Model	SAF X-1500
Filtration Degrees (µm)	100
Filtration type	Screen Filter
Backwash data	
Flushing time (Sec.)	20
Reject water volume per flush cycle (Liter)	39
Min. flushing flowrate (m ³ /h)	7

Model, flow rate & micron rating will be designed on request.

ADES MCS

ADES MCS is ergonomically designed with FRP housings and cartridge filter elements ranging from 0.6 micron to 100 micron, making it very suitable for pre-filtration of CIP process, chemical filtration, pharmaceutical, desalination etc. that provide superior flow rates, corrosion resistance, lesser footprint and long-lasting performance.

ADES-MCS system includes:

- CIP pump with IE3, IP55 motor.
- Pentair housing and cartridge filter element.
- CIP tank (PE made).
- uPVC Sch80 piping.
- Liquid filled pressure gauges and Flow indicator.
- Manual valves and accessories.
- PWT chemicals for CIP (1 pail of each type).
- SS400 with 3 layers epoxy coated steel skid frame.
- Connection with JIS10K Flange.
- 380 - 415V / 3Phase / 50Hz power supply.



CIP Chemicals Specifications¹

Low pH cleaner (2.5 - 3.5)	Opticlean™ A
High pH cleaner (10.5 - 12)	Opticlean™ B
Application	MF / UF / NF / RO membranes
Certificate	NSF/ANSI 60

¹Please contact ATS Water Technology for custom

System Features/ Benefits

- High flow filtration with a wide range of cartridge micron rating to suit your application.
- High performance polypropylene media.
- Rugged design & lower cost alternative.
- Labor-saving quick change design.
- Vertical rack system saves valuable floor space.

System and Operating Configuration

Model	ADES-MCS-036
No. of AquaLines	01
Dimension ² L x W x H (mm)	1600 x 2000 x 2100
Approx. Weight (kg)	190

²The dimensions of the system may vary and are subject to change without prior notice.

Cartridge filter Specifications

Housing	80AQ15-60
Shell material	FRP
Design/Operating pressure (bar)	10.3
Max. operating temperature (°C)	45
Filter element	ALN05-60B
Material	PP
Dimension L x D (inch)	60 x 6.75
Pore size (µm Nominal)	5

Model, flow rate & micron rating will be designed on request.

Smart technology

All HANS water solutions are WIFI compatible and provide the kind of data your business needs – like water usage, pressure, TDS levels, and filter life. All this data is delivered in real time to your mobile device. You'll know what's going on with your water at all times so small problems don't become expensive problems.

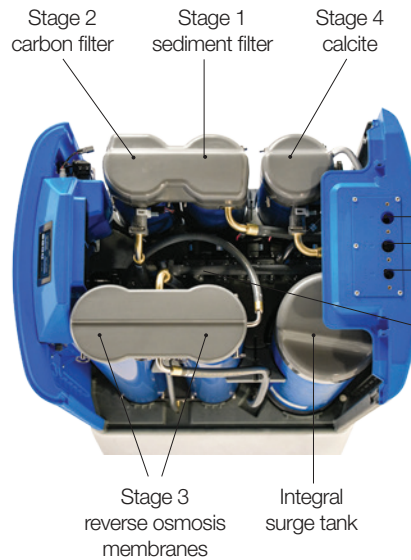


HANS Premium Water Model 2

The HANS Premium Water Model 2 is the solution for businesses with water that doesn't require pretreatment or specialty water. Its four-stage system combines sediment filtration, carbon filtration, reverse osmosis and re-mineralization.

Model 2 Quad

The Quad is a high-output reverse osmosis device. Its four proprietary membranes are ideal for businesses that require high volumes of clean water. Need even higher volumes of clean water? Add more Quads. They can be grouped into manifold systems to meet ever higher output requirements.



Easy installation

Three connection points

1. Inlet water
2. Clean water out
3. Reject water out

Variable-speed pump

Automatically adjusts speed depending on water demand. Uses less power and is more efficient than single-speed pumps.

HANS Premium Water Treatment Module

The HANS Premium Water Treatment Module is the ultimate in customization and flexibility. Depending on your business's needs and water conditions it can be a sediment filter, a carbon filter, and an iron filter, or a water softener. It can also be a combination of these functions. If your business needs specialized water it can be an ultraviolet treatment module or an ultrafiltration module.

Customized to your water conditions

1. Sediment Filter
 2. Carbon Filter
 3. Softener
 4. Water softener
 5. Ultrafiltration
 6. Ultraviolet treatment
- Single function or combinations



HANS Premium Water Pump

The HANS Premium Water Pump was designed from the ground up by an engineer frustrated by pumps constantly burning out and breaking down. With HANS, you get two pumps in one. If one pump goes down, the other one automatically kicks on and picks up the load with no downtime or change in output. You also get total control. Our proprietary LCD touch screen controls allow you to adjust motor speed and pressure. The control boxes are WIFI compatible and keep you alerted to pump conditions through our proprietary mobile app.





ATS WATER
TECHNOLOGY

04

Water Treatment Equipment & Components



Auto Self-Cleaning Filters

ATS Water Technology Co., Ltd. supplies many kinds of filtration systems including technologies screen, disc, media, and microfiber that meet the challenges of presented by different water sources, outlet requirements and extreme working conditions. The solutions process millions of cubic meters of water every month, delivering clean water all year round and all over the worldwide.



Certified to NSF/ANSI 61



Disc Technology



Screen Technology



Media Technology



Microfiber Technology

Automatic Screen Filters

OMEGA Series



Diameters | 4"-16"
Operation | Automatic
Flow rate | $\leq 2,200 \text{ m}^3/\text{h}$ (9,700 gpm)
Filtration degrees | 10-500 micron

SAF-X Series



Diameters | 2"-10"
Operation | Automatic
Flow rate | $\leq 400 \text{ m}^3/\text{h}$ (1,760 gpm)
Filtration degrees | 10-800 micron

SIGMA PRO Series



Diameters | 4"-8"
Operation | Automatic
Flow rate | $\leq 280 \text{ m}^3/\text{h}$ (1,233 gpm)
Filtration degrees | 50-500 micron

EBS Series



Diameters | 8"-36"
Operation | Automatic
Flow rate | $\leq 7,200 \text{ m}^3/\text{h}$ (32,000 gpm)
Filtration degrees | 10-800 micron

MCFM Series



Diameters | 4"-10"
Operation | Automatic
Flow rate | $\leq 500 \text{ m}^3/\text{h}$ (2,200 gpm)
Filtration degrees | 30-3000 micron

MINI SIGMA Series



Diameters | 8"-36"
Operation | Automatic
Flow rate | $\leq 7,200 \text{ m}^3/\text{h}$ (32,000 gpm)
Filtration degrees | 50-500 micron

ABF Series



Diameters | 3"-36"
Operation | Automatic
Flow rate | $\leq 7,200 \text{ m}^3/\text{h}$ (32,000 gpm)
Filtration degrees | 200-3,500 micron

TEQUATIC™ Series



Diameters | 3"-6"
Operation | Automatic
Flow rate | $\leq 36-73 \text{ m}^3/\text{h}$ (320 gpm) per filter element
Max. TDS: 10,000 ppm

TAF Series



Diameters | 2"-3"
Operation | Automatic
Flow rate | $\leq 50 \text{ m}^3/\text{h}$ (220 gpm)
Filtration degrees | 10-500 micron

Automatic Disc Filters

2" SPIN KLIN™ Batteries 2" Spin Klin™ Air Aided (AAF)



Diameters | 3"-6"
Operation | Automatic
Flow rate | $\leq 120 \text{ m}^3/\text{h}$ (530 gpm)
Filtration degrees | 10-400 micron

Media Filters & Sand Separation Filters

MEDIA Filters



Technology | Media
Diameters | 16"-60"
Operation | Automatic
Flow rate | $\leq 75 \text{ m}^3/\text{h}$ (330 gpm) per unit

Automatic Microfiber Filters Semi-Automatic & Manual Filters

AMF Series



Diameters | 2"-8"
Operation | Automatic
Flow rate | $\leq 200 \text{ m}^3/\text{h}$ (880 gpm)
Filtration degrees | 2-20 micron

3" SPIN KLIN™ Batteries



Diameters | 6"
Operation | Automatic
Flow rate | $\leq 200 \text{ m}^3/\text{h}$ (880 gpm)
Filtration degrees | 10-400 micron

AGF Series



Technology | Media
Diameters | 48"
Operation | Automatic
Flow rate | $\leq 70 \text{ m}^3/\text{h}$ (308 gpm) per unit

MANUAL STEEL Series



Technology | Screen
Diameters | 2"-8"
Operation | Manual
Flow rate | $\leq 300 \text{ m}^3/\text{h}$ (1,320 gpm)
Filtration degrees | 50-3,500 micron

4" SPIN KLIN™ GALAXY Batteries



Diameters | 4"-8"
Operation | Automatic
Flow rate | $\leq 280 \text{ m}^3/\text{h}$ (1,233 gpm)
Filtration degrees | 10-500 micron

DVF Series



Technology | Media
Diameters | Up to 3"
Operation | Automatic
Flow rate | $\leq 50 \text{ m}^3/\text{h}$ (220 gpm)

MANUAL PLASTIC AMIAD TAGLINE Series



Technology | Screen, Disc
Diameters | 3/4"-3"
Operation | Manual
Flow rate | $\leq 50 \text{ m}^3/\text{h}$ (220 gpm)
Filtration degrees | 80-500 micron

SPIN KLIN™ NOVA



Diameters | 10"-12"
Operation | Automatic
Flow rate | $50-330 \text{ m}^3/\text{h}$ (220-1,452 gpm)
Filtration degrees | 20-400 micron

SAND SEPARATOR Series



Diameters | 2"
Operation | Automatic
Flow rate | $\leq 125 \text{ m}^3/\text{h}$ (550 gpm)

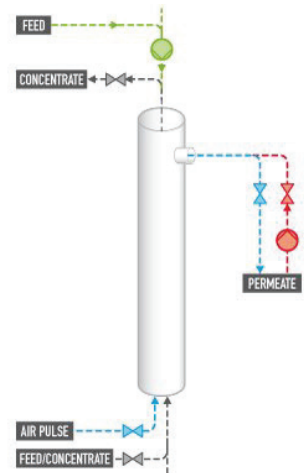
MANUAL PLASTIC ARKAL Series



Technology | Disc
Diameters | 3/4"-6"
Operation | Manual
Flow rate | $\leq 160 \text{ m}^3/\text{h}$ (705 gpm)
Filtration degrees | 20-800 micron

X-FLOW Membrane Elements

The Pentair X-Flow Ultra-, Tight Ultra-, Micro- and Nanofiltration Membrane Elements are used for the (pre) treatment of water. X-Flow Membrane Elements are used in the field of ultrafiltration in capillary form, microfiltration and ultrafiltration in tubular form, which makes selective filtration possible. Our extensive portfolio of Membrane Elements guarantees the right specifications for each application. The X-Flow Membrane Elements are available for all water areas, from potable water production to the treatment of process and wastewater and the pre-treatment of seawater, but also for the food, beverage and pharmaceutical industries.



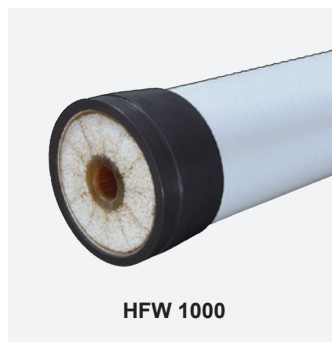
Product

Ultrafiltration (UF)

Tight Ultrafiltration (TUF)

Nanofiltration (NF)

Tubular Ultrafiltration (MBR)



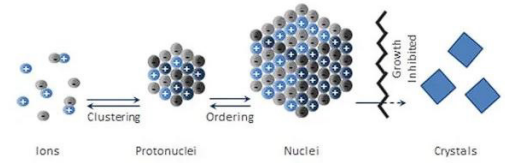
Solution Designs



Professional Water Technologies has focused on chemical manufacturing and supply for the membrane industry, with a product line developed around our unique dendrimer-based antiscalant chemistry for scale and fouling control. Today, PWT offers a complete portfolio of antiscalants, antifoulants, dispersants, cleaners, coagulants, biocides and preservatives for even the most difficult MF/UF and NF/RO source waters



ProDose XPRT™ – Scaling Prediction Software



Membrane Pretreatment

PWT offers a wide range of pretreatment products which are hand selected based on your unique feed water chemistry. PWT's dendrimer based technology provides a phosphate free solution for optimizing system performance, which is ideal in situations where phosphate discharge is a concern. The dendrimer based technology is available as an 11x super concentrate to reduce shipping and/or storage requirements or a ready for use solution. Whether it is scale control or the prevention of biological/organic fouling, PWT's pretreatment line and in depth application knowledge will help improve your operations.



COAGULANTS & FLOCCULANTS: FILTERX™
SCALE INHIBITORS: SPECTRAGUARD™, TITAN ASD™
ANTIFOULANT: BIOGUARD™, ORGANOGUARD™

ANTISCALANT SELECTION GUIDE

Product	Spectra Guard™ 100	Spectra Guard™ 250	Spectra Guard™ 360	Titan ASD™ 200
CaCO ₃	***	***	***	***
CaSO ₄	***	***	***	**
BaSO ₄	***	***	***	**
Fe/Mn	*	***	***	*
CaHPO ₄	*	*	***	*
SiO ₂	***	*	***	**
Phosphate Free	✓			✓
NSF 60	✓	✓	✓	✓

* Preferred product in the presence of cationic polymers.

*** = excellent control
 ** = average control
 * = moderate control

Membrane Cleaners

Fouling is often an unavoidable side effect of membrane filtration, but effective foulant removal during cleanings is crucial to maximize system performance and membrane life. Whether it is organics, biological activity, metal hydroxides (such as iron), and/or scale (such as CaCO₃ or silica) PWT's full line of proprietary, membrane safe cleaners help tackle the various foulants that can build up during operation. With specially selected builders, surfactants, solubilizing agents, dispersing agents, buffers, and/or chelating agents each cleaner was developed to target specific foulants, providing superior removal.



Lavaso™ – LIQUID CLEANERS
OptiClean™ – POWDER CLEANERS

CLEANER SELECTION GUIDE

Product	Target pH	Product Application			
		Colloids/Organics / Biological	Silica	Inorganic Salts	Metal Hydroxide
LAVASOL – LIQUID CLEANERS (Typically diluted as 2% by volume)					
Lavaso 1	3.3			✓	✓
Lavaso 2	10.2	✓			
Lavaso 5	3.0		✓✓	✓	
Lavaso 6	2.0			✓✓	✓
Lavaso 7	12.5	✓✓			
Lavaso 8*	12.3	✓✓			
Lavaso 9	11.9	✓✓			
OPTICLEAN – POWDER CLEANERS (Typically diluted as 1% by weight)					
OptiClean A	3.2			✓	✓
OptiClean B	11.3	✓✓			
OptiClean D	3.9			✓	✓✓
OptiClean F	12.3	✓✓			
OptiClean H	2.0			✓✓	✓
OptiClean J	10.9	✓✓			
OptiClean S	3.0		✓✓	✓	
OptiClean N	8.5	✓✓			

* Contains free chlorine and should only be used on chlorine tolerant membranes.

Green Cleaners (Phosphate free)

Introducing brand new environmentally friendly products...

- OptiClean™ X Eco*
Low pH cleaner
- OptiClean™ Y Eco*
High pH cleaner
- OptiClean™ N
Enzymatic cleaner

*Phosphate free and contains readily Biodegradable chelant (EDTA free)





Membrane Preservative

Preservol™ membrane preservative allows membranes to be stored for short and extended periods without loss of performance. This product is reliable at extreme temperatures and has an extended shelf-life, maintaining products ability long-term.

Preservol™ is safe for use on polyamide thin-film composite membranes, cellulose acetate membranes, nanofiltration and ultrafiltration membranes.

Preservol™ has 2 kinds: **Preservol™L (liquid)** and **Preservol™P (powder)**.

Aqualine is a liquid filtration solution which provides superior flow rates and guarantees long-lasting performance. Combining a small footprint with large productivity, the Aqualine plays an important role in cost optimization of water treatment across a range of industries.

Product	HOUSING			CARTRIDGE				
Model	New launch							
								
Model	80AQ15-60 (Non Code)	80CF15-60 (Non Code)	80CF15-60 80CF30-60	ALNXX-60B (Nominal) ALXX-60B (Absolute)				
Rating (Psi)	150	150	150 / 300	35 (recommended change out differential pressure)				
Application	RO pre-treatment	RO pre-treatment	Oil & Gas / FPSO High pressure in line	As per system requirement				
Certifications/ Accreditations	ASME / CE / ISO 9001:2015							



* 40" long variants of housings and cartridges are also available on request.

Aqualine Pressure Vessels

- High flow filtration with a wide range of cartridge micron rating to suit your application
- High-performance pleated media filtration technology
- Long lasting rugged FRP housings from Codeline, available in 150 & 300 psi pressure rating
- ASME complaint FRP housings for critical applications
- Labor-saving quick module change
- Can be installed both vertically and horizontally
- Super duplex F/C ports for seawater compatibility

Aqualine high flow filters

- Made from high performance polypropylene media
- 6.75" pleated construction features 15 times more surface area
- Extended surface area provides long life & fewer change-outs
- Outside-in design for high flows at low differential pressures

Cartridge Filters

Absolute, Depth Filter, Pleated Filter, String Wound



ATS Water Technology Co., Ltd offers all types of filter cartridges: Melt – blown Depth Filter, Pleated Filter, String Wound Depth Filter.

- Quality products, manufactured based on the most advanced technology
- Provides deep filtration, ensuring system safety
- Widely applied in many industries: F&B, pharmaceutical, semiconductor equipment manufacturing, plating,...
- Diversity of filter products to meet all different requirements.
- Production materials are on the FDA list suitable for use in food and pharmaceutical products
- Directly made in Korea

Applications

Pharmaceutical & Hospital applications
Water Treatment
Food & Beverage
Electronics & Semiconductor
Solvent, Paint, Ink & Resins
And High-viscosity liquid filtration

Specification

Rating: 0.2, 1, 5, 10µm (Normal)
Nominal and Absolute type
Length: 10 – 40"
Material of media: PP, PE, Cotton,...



Meltblown, Absolute Depth Filter Cartridges



String Wound Filter Cartridges



Pleated Filter Cartridges



Filter Bags



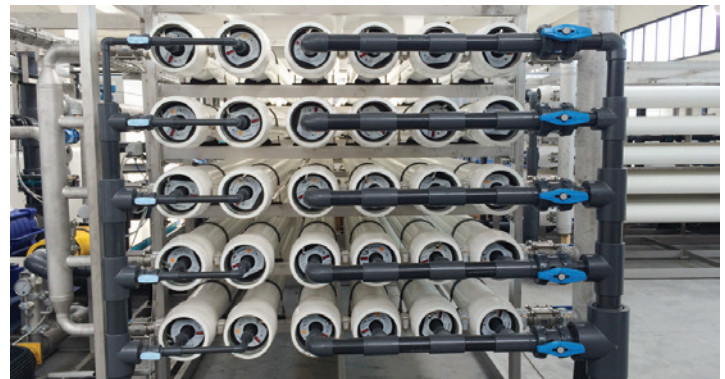
Filter Housings



RO/NF/UF Pressure Vessels

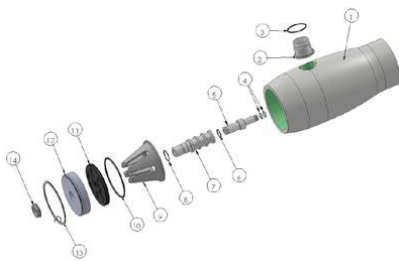
ATS Water Technology Co., Ltd provides all kinds of RO/NF/UF membrane housings, accessories used for diverse water applications, from industrial water treatment to wastewater treatment, from seawater reverse osmosis to water treatment processes in the Oil & Gas sector.

- End entry, side entry & multi port vessels.
- Standard size - 2.5", 4" & 8" dia.
- Customized size – 8.7", 9", 11" dia.
- Element length – 1 to 8.
- FC port size up to 4" ips grooved.
- Operating pressure range - 150 psi, 300 psi, 450 psi, 600 psi, 1000 psi & 1200 psi.
- ASME, PED, NSF, DWI & ISO 9001:2008 ACCREDITED. 3D MODELING DESIGN
- Using OCTA design – reduce risk of leakage & broken



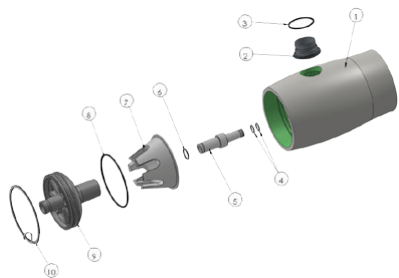
OCTA 80S SERIES

Code Compliant



MODEL NUMBER	DRAWING NUMBER	MAX. OPERATING PRESSURE	MAX. OPERATING TEMPERATURE	QUALIFICATION PRESSURE	ELEMENT LENGTH
CODELINE 80S15	99159	150 PSI / 10 Bar	190 °F / 88 °C	900 PSI / 62 Bar	1-8
CODELINE 80S30	99160	300 PSI / 20 Bar	190 °F / 88 °C	1800 PSI / 124 Bar	1-8
CODELINE 80S45	99161	450 PSI / 31 Bar	190 °F / 88 °C	2700 PSI / 186 Bar	1-8
CODELINE 80S60	99162	600 PSI / 41 Bar	190 °F / 88 °C	3600 PSI / 248 Bar	1-8
CODELINE 80S100	99163	1000 PSI / 68 Bar	150 °F / 66 °C	6000 PSI / 413 Bar	1-8
CODELINE 80S120	99164	1200 PSI / 82 Bar	150 °F / 66 °C	7200 PSI / 496 Bar	1-8

Non-coded**



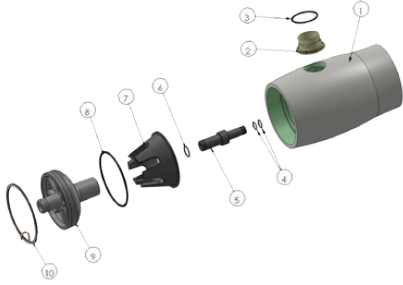
MODEL NUMBER	DRAWING NUMBER	MAX. OPERATING PRESSURE	MAX. OPERATING TEMPERATURE	QUALIFICATION PRESSURE	ELEMENT LENGTH
CODELINE 80S15 NC	99171	150 PSI / 10 Bar	190 °F / 88 °C	900 PSI / 62 Bar	1-8
CODELINE 80S30 NC	99172	300 PSI / 20 Bar	190 °F / 88 °C	1800 PSI / 124 Bar	1-8
CODELINE 80S45 NC	99173	450 PSI / 31 Bar	190 °F / 88 °C	2700 PSI / 186 Bar	1-8
CODELINE 80S60 NC	99174	600 PSI / 41 Bar	190 °F / 88 °C	3600 PSI / 248 Bar	1-8

Any make of 8" nominal diameter spiral-wound element is easily accommodated.

* Specifications are subjected to change without prior notice (for more details refer to model specific engineering drawings)

** 80S Non-coded series cannot be ASME stamped

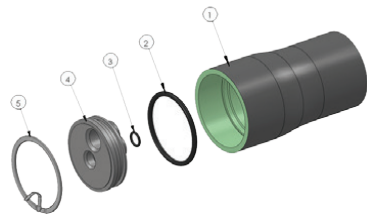
ECOLINE 8 INCH SERIES



MODEL NUMBER	DRAWING NUMBER	MAX. OPERATING PRESSURE	MAX. OPERATING TEMPERATURE	QUALIFICATION PRESSURE	ELEMENT LENGTH
CODELINE ECOLINE 80-300	99196	300 PSI / 20 Bar	120 °F / 49 °C	1200 PSI / 82 Bar	1-8
CODELINE ECOLINE 80-450	99197	450 PSI / 31 Bar	120 °F / 49 °C	1800 PSI / 124 Bar	1-8

Any make of 8" nominal diameter spiral-wound element is easily accommodated.
 * Specifications are subjected to change without prior notice (for more details refer to model specific engineering drawings)

ECOLINE 40L30N



MODEL NUMBER	DRAWING NUMBER	MAX. OPERATING PRESSURE	MAX. OPERATING TEMPERATURE	QUALIFICATION PRESSURE	ELEMENT LENGTH
CODELINE ECOLINE 40L30N	99373	300 PSI / 20 Bar	120 °F / 49 °C	1200 PSI / 82 Bar	-b1 (14") -c1 (21") -1**; -2; -3

Any make of 4" nominal diameter spiral-wound element with a 3/4" diameter male product water tube is easily accommodated.
 * Specifications are subjected to change without prior notice (for more details refer to model specific engineering drawings)
 ** -1 is for 40" long housing

Couplings and Permeate Connectors



ATS Water Technology Co., Ltd. supplies a full range of flexible grooved-end coupling with Duplex and Super Duplex materials commonly used in RO systems, especially seawater RO. Couplings are designed for low to high pressure environments, available in a variety of materials and sizes to ensure system performance and safety.



Permeate Connectors



Flexible Pipe Couplings



	S	STYLE S / SS 1500 PSI Duplex - Super Duplex 0.75" to 4.0"	4
	D	STYLE D / DS 1200 PSI Duplex - Super Duplex 0.75" to 16.0"	4
	F	STYLE F / FS 400 - 600 PSI Duplex - Super Duplex 0.75" to 16.0"	5
	B	STYLE B 600 PSI 316 Stainless steel 0.75" to 16.0"	6
	K	STYLE K 300 - 450 PSI 316 Stainless steel 0.75" to 16.0"	6
	J	STYLE J 100 PSI 316 Stainless steel 76.1 mm	7
	P	STYLE P 100 - 250 PSI Composite Plastic 0.75" to 8.0"	8
COMPLEMENTARY PRODUCTS			9



Dosing Pumps & Controlling instrument

ATS Water Technology Co., Ltd. supplies a full range of chemical dosing and control instruments for pH, turbidity, redox (ORP), conductivity, dissolved oxygen, and temperature control. Our products are used in:

- Swimming pools
- Industrial processes
- Drinking water applications
- Wastewater applications
- Treatment plants
- Steam boilers
- Cooling towers
- Food and beverage businesses
- Industrial laundries and dishwashing units
- Mixing of agricultural pesticides and liquid fertilizers and many more areas.



Dosing pump (solemoid, motor driven, peristaltic)



Sensors/probes & Controller (pH, ORP, EC, Oxygen, Chlorine...)



High Pressure Piston Pump & Energy Recovering Devices

With Danfoss high-pressure APP pumps, iSave and MPE 70 energy recovery devices tailored to Sea Water Reverse osmosis (SWRO) applications you will get one of the most reliable and sustainable pumps for desalination. It can be used in almost any SWRO application – land-based, offshore or marine. Mounted in containers or trains, the design can contain several units in parallel to secure uninterrupted and sufficient supply at any time.



The Danfoss APP pump

From 0.15 to 86 m³/h (0.7 to 378 gpm)

For trains producing up to 5,000 m³/day, and systems producing up to 30,000 m³/day.

Pump size	Flow range		Pressure	
	m ³ /h	gpm	barg	psig
APP 0.6 - 1.0	0.15 - 1.0	0.7 - 4.4	20 - 80	290 - 1160
APP 1.5 - 3.5	1.6 - 3.5	7.04 - 15.4	20 - 80	290 - 1160
APP 5.1 - 10.2	4.9 - 10.3	21.6 - 45.3	20 - 80	290 - 1160
APP 11 - 13	11.0 - 13.5	48.4 - 59.4	20 - 80	145 - 1160
APP 16 - 22	15.8 - 21.8	69.9 - 96	20 - 80	145 - 1160
APP 21 - 43	21.1 - 44.6	92.9 - 196.4	20 - 80	145 - 1160
APP 53 - 86 NEW	25 - 86	110 - 378	20 - 80	435 - 1160



MPE 70

Pressure exchanger + motor
(External booster pump will be required.)
Suitable for big projects)

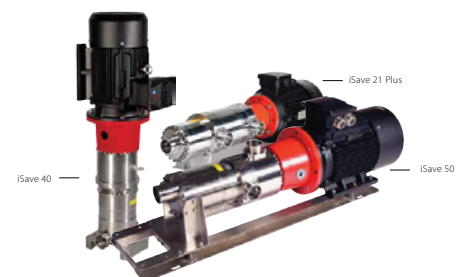


Flow at 625-875 rpm	Max outlet pressure	Material	Low voltage electric motor
50-70 m ³ /h	83 bar	Super Duplex, Duplex, Carbon fiber reinforced thermoplastic	1400V / 2.2 kW 0.8 kW (at 875 rpm 60 bar)

* At 60 barg and 70 m³/h

iSave

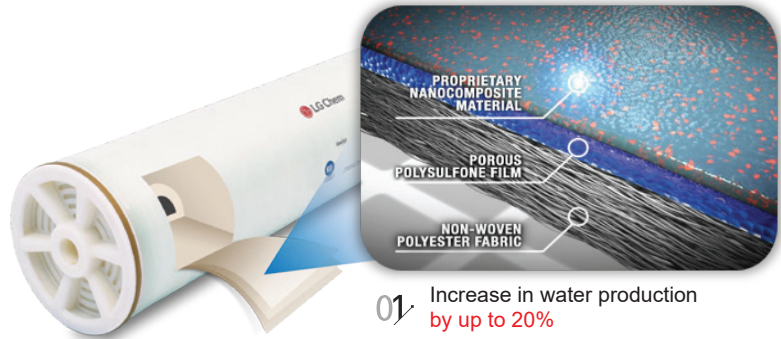
Pressure exchanger
+ booster pump
+ motor



Product	Flowrange	Pressure range	Efficiency*
iSave 21	10-21 m ³ /h	10-83 barg	Up to 91%
iSave 40	22-40 m ³ /h	10-83 barg	Up to 92%
iSave 50 & 70	41-70 m ³ /h	40-80/70 barg	Up to 94%

* Including high pressure pump

LG Chem manufactures the full line of NanoH₂O™ seawater and brackish water reverse osmosis (RO) membranes based on innovative Thin Film Nanocomposite (TFN) technology.



- 01 Increase in water production by up to 20%
- 02 Highest salt rejection in the industry 99.89%

Brackish Water Reverse Osmosis (RO) Membranes

LG Chem's NanoH₂O™ brackish water RO membranes that serve various municipal and industrial applications have been operating in the major utilities around the world. Incorporating innovative Thin Film Nano-composite (TFN) technology, all LG BWRO membranes provide superior performance along with intrinsic anti-fouling property and are suitable for applications where consistent and reliable performance is a must.



Product	Active Membrane Area, ft ² (m ²)	Permeate Flow Rate, GPD (m ³ /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Feed Spacer, mil	Test Pressure, psi (bar)
High Rejection Standard ¹	LG BW 440 R G2	440 (41)	12,650 (47.9)	99.8	99.65	28
	LG BW 440 R Dura	440 (41)	11,550 (43.7)	99.7	99.6	28
	LG BW 440 R	440 (41)	11,550 (43.7)	99.6	99.5	28
	LG BW 400 R	400 (37)	10,500 (39.7)	99.6	99.5	34
High Rejection Anti-fouling ¹	LG BW 400 R G2	400 (37)	11,500 (43.5)	99.8	99.65	34, low dP
	LG BW 400 AFR G2	400 (37)	11,500 (43.5)	99.7	99.6	34, low dP
	LG BW 400 R Dura	400 (37)	10,500 (39.7)	99.7	99.6	34, low dP
	LG BW 400 AFR	400 (37)	10,500 (39.7)	99.6	99.5	34
Low Pressure Standard ¹	LG BW 440 ES	440 (41)	11,550 (43.7)	99.6	99.5	28
	LG BW 400 ES	400 (37)	10,500 (39.7)	99.6	99.5	34
Ultra Low Pressure ¹	LG BW 440 UES	440 (41)	11,550 (43.7)	99.0	98.0	28
	LG BW 400 UES	400 (37)	10,500 (39.7)	99.0	98.0	34, low dP
High Rejection ²	LG BW 4040 R	85 (7.9)	2,500 (9.5)	99.6	99.3	28
	LG BW 4021 R	34 (3.2)	1,000 (3.8)	99.6	99.3	28
	LG BW 2521 R	9 (0.9)	345 (1.3)	99.6	99.3	28
Low Pressure ²	LG BW 4040 ES	85 (7.9)	2,500 (9.5)	99.5	99.2	28
	LG BW 4021 ES	34 (3.2)	1,000 (3.8)	99.5	99.2	28
	LG BW 2521 ES	9 (0.9)	345 (1.3)	99.5	99.2	28
Ultra Low Pressure ³	LG CW 4040 SF*	85 (7.9)	2,900 (11.0)	99.0	98.0	28
	LG BW 4040 UES	85 (7.9)	2,700 (10.2)	99.0	98.0	28
	LG BW 4021 UES	34 (3.2)	1,000 (3.8)	99.0	98.0	28
	LG BW 2540 UES	21 (2.0)	750 (2.8)	99.0	98.0	28
	LG BW 2521 UES	9 (0.9)	345 (1.3)	99.0	98.0	28

Test Conditions¹: 2,000 ppm NaCl at 25°C (77°F), pH 7, Recovery 15%
 Test conditions²: 2,000 ppm NaCl at 25°C (77°F), pH 7
 Test conditions³: 500 ppm NaCl at 25°C (77°F), pH 7
 Recovery: LG BW 4040 R, LG BW 4040 ES, LG BW 4040 SF*, LG BW 4040 UES, LG BW 2540 UES: 15%
 LG BW 4021 R, LG BW 2521 R, LG BW 4021 ES, LG BW 2521 ES, LG BW 4021 UES, LG BW 2521 UES: 8%
 *Dry type

Seawater Reverse Osmosis (RO) Membranes

LG Chem's NanoH₂O™ seawater RO membranes, incorporated with innovative Thin Film Nanocomposite (TFN) technology, deliver industry-leading salt rejection and 20% more flow than the membranes manufactured from conventional technologies. Our seawater RO membranes significantly reduce the cost of desalination while delivering superior water quality.



Product	Active Membrane Area, ft ² (m ²)	Permeate Flow Rate, GPD (m ³ /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Boron Rejection, %	Feed Spacer, mil
LG SW 440 SR G2	440 (41)	6,600 (25.0)	99.89	99.75	93	28
LG SW 400 SR G2	400 (37)	6,000 (22.7)	99.89	99.75	93	28 or 34
LG SW 440 GR G2	440 (41)	8,250 (31.2)	99.89	99.75	93	28
LG SW 400 GR G2	400 (37)	7,500 (28.4)	99.89	99.75	93	28 or 34
LG SW 440 R G2	440 (41)	9,900 (37.5)	99.88	99.75	93	28
LG SW 400 R G2	400 (37)	9,000 (34.1)	99.88	99.75	93	34
LG SW 440 SR	440 (41)	6,600 (25.0)	99.85	99.7	93	28
LG SW 400 SR	400 (37)	6,000 (22.7)	99.85	99.7	93	28 or 34
LG SW 440 GR	440 (41)	8,250 (31.2)	99.85	99.7	93	28
LG SW 400 GR	400 (37)	7,500 (28.4)	99.85	99.7	93	28 or 34
LG SW 440 R	440 (41)	9,900 (37.5)	99.85	99.7	93	28
LG SW 400 R	400 (37)	9,000 (34.1)	99.85	99.7	93	28 or 34
LG SW 440 ES	440 (41)	15,570 (57.0)	99.80	99.6	89	28
LG SW 400 ES	400 (37)	13,700 (51.9)	99.80	99.6	89	34

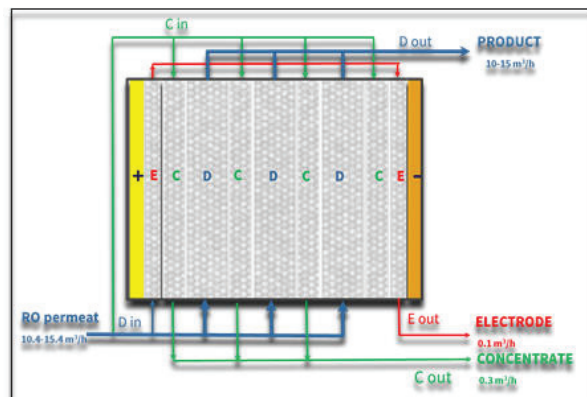
Test Conditions: 32,000 ppm NaCl, 5ppm boron at 25°C (77°F), 800 psi (55 bar), pH 8, Recovery 8%

MPure™ modules are building on MEGA's ion-exchange membrane manufacturing capability and extensive electro separation experience. All modules include RALEX® ion exchange membranes developed by MEGA.

The novel MPure™ module produces 16 to 18 MΩ·cm product water quality at very high recovery. These modules are designed to replace mixed bed ion exchange at flow rates from 0.8 to 500 m³/h and beyond.

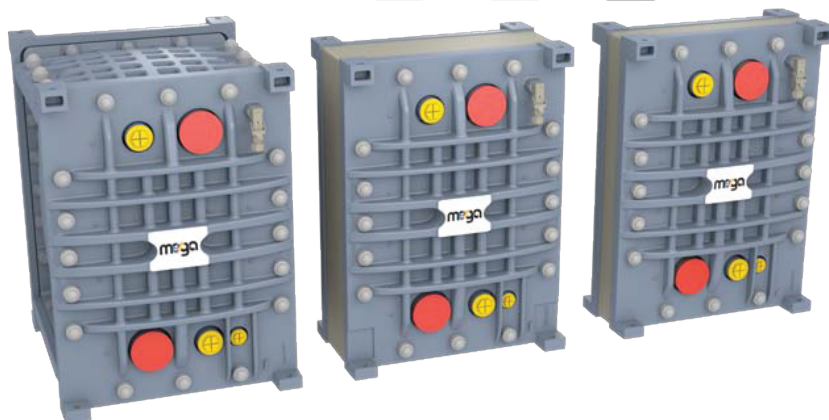
Features:

- Module interconnection capability for low cost system construction
- High flow rate modules up to 15 m³/h
- High deionization with recovery up to 97.5 %
- Robust design: no internal or external leaks
- Small footprint: ideal for operation inside containers
- Voltage stability
- Effective replacement for competing EDI technology
- Complete OEM engineering package



Typical Performance	MPure36	MPure12	MPure6
Flow nominal	10 m³/h (44 gpm)	3.33 m³/h (14.7 gpm)	1.67 m³/h (7.4 gpm)
Flow maximum	15 m³/h (66 gpm)	5 m³/h (22 gpm)	2.5 m³/h (11 gpm)
Flow minimum	5 m³/h (22 gpm)	1.67 m³/h (7.4 gpm)	0.83 m³/h (3.7 gpm)
Concentrate flow	> 0.3 m³/h (> 1.3 gpm)	> 0.1 m³/h (> 0.4 gpm)	> 0.05m³/h (> 0.2 gpm)
Electrode flow	> 0.1 m³/h (> 0.4 gpm)	> 0.1 m³/h (> 0.4 gpm)	> 0.1 m³/h (> 0.4 gpm)
Recovery	< 97.4 %	< 96.2 %	< 94.3 %
Feed pressure	< 7 bar (< 102 psi)	< 5 bar (< 72.5 psi)	< 5 bar (< 72.5 psi)
Pressure drop D at nominal flow	1.3-2.3 bar (19-33 psi)	1.1-2.5 bar (16-36 psi)	1.1-2.5 bar (16-36 psi)
Pressure difference D>C	> 0.3 bar (> 4 psi)	> 0.3 bar (> 4 psi)	> 0.3 bar (> 4 psi)
Temperature	5-40 °C (41-104 °F)	5-40 °C (41-104 °F)	5-40 °C (41-104 °F)
Current	< 16 A	< 16 A	< 16 A
Voltage	< 300 V	< 100 V	< 50 V
Product water quality	> 16 MΩ·cm*	> 16 MΩ·cm*	> 16 MΩ·cm*
Silica removal	> 96 %	> 96 %	> 96 %

*Actual performance will depend on site conditions.
Please use MEGA's software to determine actual performance.



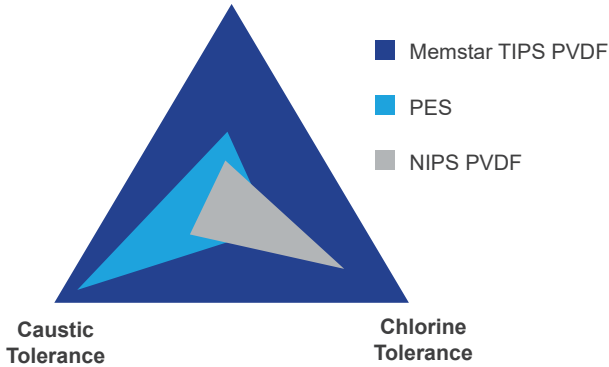
MPure™ 36, MPure™ 12, MPure™ 6

Memstar Membrane

ATS Water Technology Co., Ltd supplies all Memstar MBR filter equipment that comes with high performance TIPS Technology hollow fiber (HF) using PVDF material. These products are used in various applications, including surface water, municipal wastewater treatment, industrial wastewater treatment, and pre-treatment for reverse osmosis.

Module Type	SMM-1015T	SMM-1522T	SMM-2030T
Filtration Surface area (m ²) [ft ²]	15 [160]	22 [235]	30 [325]
Membrane material	PVDF (TIPS)		
Pore size (µm)	0.04		
Filtration mode	Outside-In		
pH range	Operating: 1 – 12; Cleaning: 1 – 14		
Typical flux (LMH) [gfd]	8 – 30 [5-18]		

Mechanical Strength



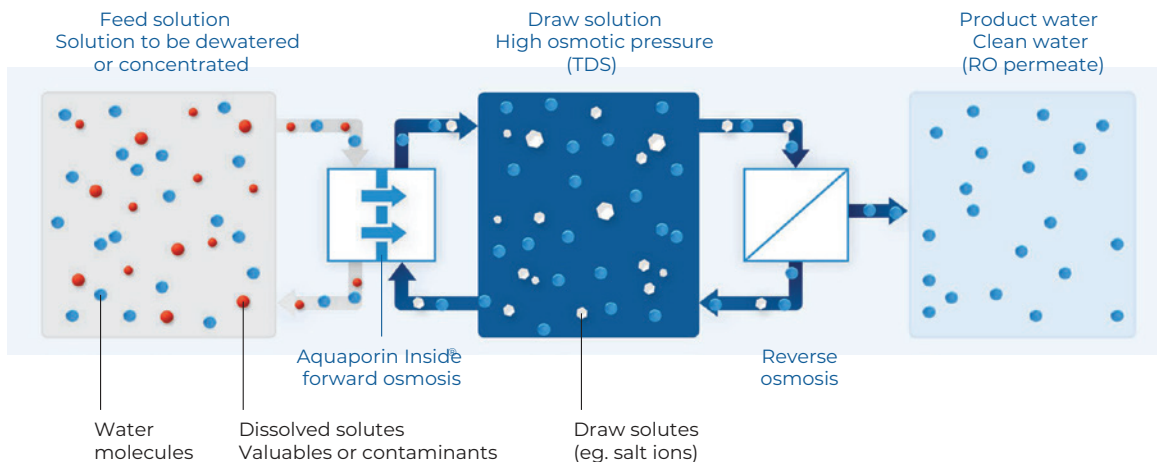
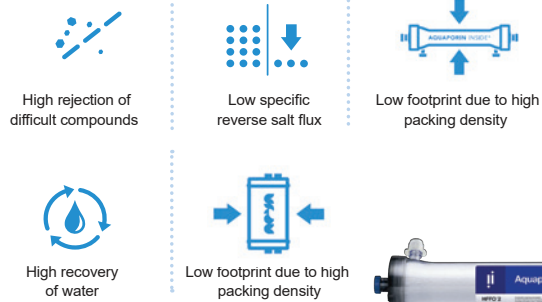
Forward Osmosis Membrane (FO)



Membrane FO is an evolution of the Aquaporin Inside® Forward Osmosis (FO) membrane technology, capable of purifying water faster and more energy-efficiently than ever before.

Ideal FO applications include:

- Industrial water
- Drinking water
- Dialysis treatment
- Food & Beverage
- Space exploration



LANXESS is a leading global ion exchange resin manufacturer and solution provider for water treatment and liquid purification with excellent technical Know-how and customer service. For more than 80 years our Lewatit® ion exchange resins and adsorbers are used in numerous industries to treat and purify water and other liquid media. In addition, we offer a range of Bayoxide® iron oxide adsorbers for various water treatment applications.

Ion exchange resins play a key role in water treatment and purification systems – whether for drinking water, service water, or wastewater. **LANXESS** has long been committed to the sustainable production of ion exchange resins. The prudent and efficient use of raw materials and energy is essential, not only from an economic point of view.



Ion exchange resins offer major potential for improving sustainability



Chemical and Petrochemical

Lewatit® ion exchange resins have proven themselves in various processes in the chemical industry, for example as catalysts or in chloralkali electrolysis, but also in the treatment of process and waste water.



Food and Beverage

Lewatit® ion exchange resins are an established and indispensable component in the food and beverage industry. Lewatit® S resins are certified in many countries around the world for the processing of food, beverages, and food and drink additives. The Lewatit® S series has, among other things, **Halal and Kosher certifications**.



Household

Lewatit® resins are contained in filter cartridge systems with which soft drinking water can be produced quickly and conveniently. Lewatit® resins are also used in numerous household appliances to prevent limescale deposits.



Mining and Metallurgy

Selective ion exchange resins from LANXESS are used in the treatment of mining liquids and in metal extraction, purification and recovery. Our products offer the possibility of selectively binding specific metal ions.



Municipal Water Treatment

In the treatment of drinking water, wastewater and waste disposal our ion exchange resins and iron oxide adsorbers benefit from their unique ability to selectively bind ions. Even groundwater can be treated efficiently.



Paper and Pulp

Water is an indispensable auxiliary material in the production of paper and pulp. In order for this complex process to function reliably and produce high-quality paper of consistent quality, the water used must meet high standards.



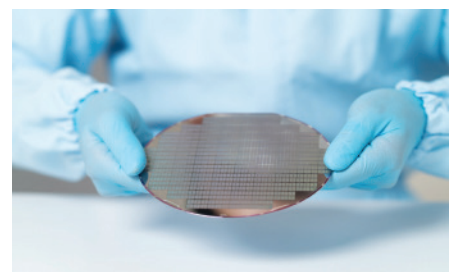
Pharma and Biotech

Lewatit® ion exchange resins and adsorbers are widely applied in bioprocessing and pharmaceutical operations, e.g. for capture and purification of highly effective substances originating from biological mass.



Power Generation

Water-steam cycles are the heart of all thermal power plants that generate electricity from fossil or nuclear fuels. Lewatit® ion exchange resins are used in power plants among others to demineralize the cooling and boiler feed water.

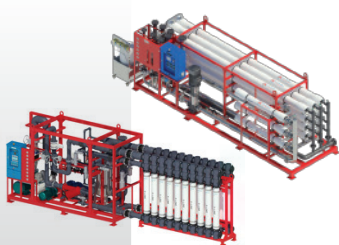


Semiconductor and Photovoltaic

LANXESS offer specific ion exchange resins for ultra-pure water which are manufactured to meet the precise needs of the electronics and semiconductor industry for wafer and microchip production.



- Completed UF Skid
- ADES XLine Series
- Completed RO Skid
- ADES BR08 Series



- Inside/Out UF Filtration & Silica removal
- Inside/Out NF Color removal
- Hollow fiber/Tubular MBR
- RO pressure vessels
- Aqualine high flow cartridge filtration



- Self-cleaning screen filters
- Disc filters
- Micro-fiber filters
- Hi TSS filter upto 10,000ppm



- FO Membranes (Forward Osmosis)



- FRP Cartridge Filter Housing
- Couplings
- Strainer



- EDI modules
- EDI systems



- Dosing Pumps
- Measurement and Controlling
- Devices Sensors & Calibrating
- LiquidsWater Meters



- Outside in Type for MBR
- 100% PVDF Hollow Fiber (TIPS)



- Bi-combo Filter
- Absolute Depth Cartridge Filter
- High Flow Depth Filter
- Melt - blown Depth Filter
- String Wound Depth Filter
- Pleated Filter



- SWRO membrane
- BWRO membrane (Global No. 1 in Seawater RO)



- Antifouling Chemicals
- Antiscaling Chemicals
- Cleaning chemicals for RO/NF/UF



- Small Seawater RO systems
- Max. 22m³/day



- High pressure axial piston pumps
- iSave energy recovery devices for
- Sea Water RO systems



- HANS Model 2
- HANS Quad RO
- Premium Treatment Module
- Redundant Pump Module



05 References






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