

YIFU Reverse Osmosis Membranes

Brackish Water & Seawater RO Elements



LP-series membrane elements

BW / LP / ULP / XLE / SW

Membrane elements, specifications and selection information

YIFU TRADING

Products & Catalog Guide

YIFU Trading supplies reverse osmosis membrane elements for industrial water treatment, brackish water desalination and seawater applications. We help customers review product options, communicate feed-water and installation requirements, and coordinate technical documents with manufacturing partners. Our supply discussions cover new equipment and replacement elements, with the final model, quantity, accessories and support scope defined in the quotation. This catalog presents the available element series and their supplier-stated specifications.

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BWRO

Industrial & brackish water

BW, LP, ULP and XLE series for different source-water conditions.

24 models / original model identifiers

SWRO

Seawater & high-salinity water

SW series with its own test conditions and pressure limits.

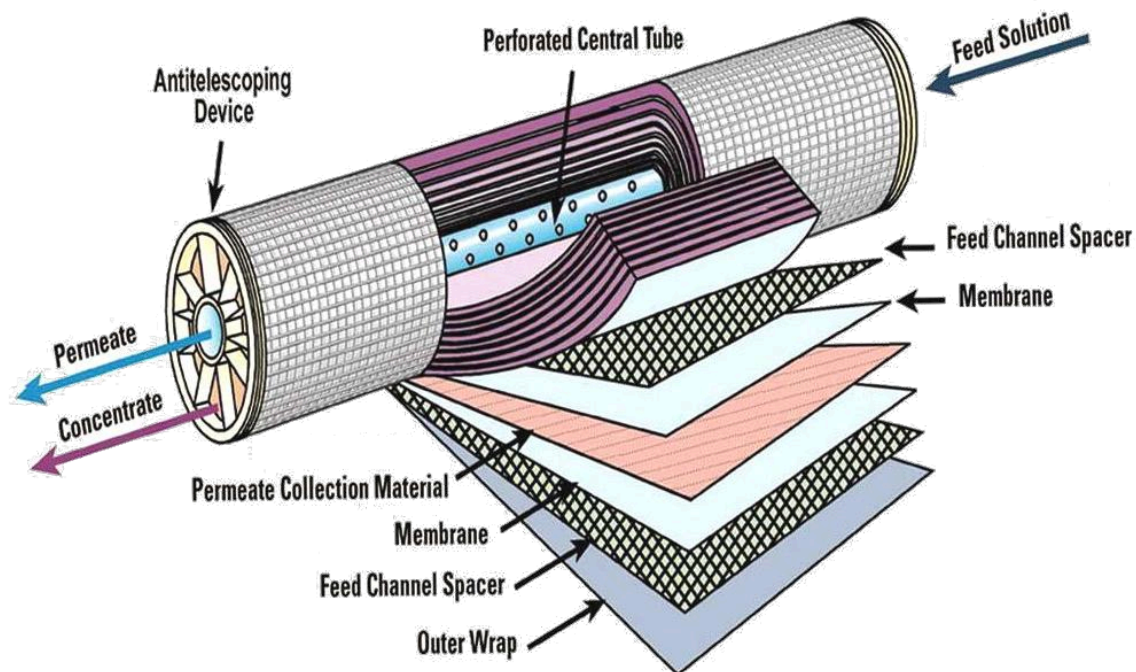
7 models / 2514 through 8040 formats

Primary supply: membrane elements. Interfaces, documentation and agreed accessories are coordinated for each order.

RO MEMBRANE CONSTRUCTION

Inside a Spiral-Wound Element

Membrane sheets and flow channels are wound around a perforated central tube. The exploded view identifies the internal layers and end components.



Spiral-wound construction schematic. Not an installation drawing.

Membrane & spacers	Membrane layers separate the feed channel from the permeate collection layer.
Permeate path	The collection material leads permeate to the perforated central tube.
External structure	The outer wrap and anti-telescoping device form the illustrated element assembly.

One feed stream. Two outlet streams.



Applied pressure above the feed solution's osmotic pressure drives water through the membrane. Permeate is collected on the low-pressure side; concentrate remains on the feed side.

BW / LP / ULP / XLE

Industrial & Brackish Water RO



LP-8040 / BW-8040
Product photographs

Four RO series support different feed-water salinity ranges. Select the series together with water chemistry, required permeate quality and available pressure.

Six models in each series

2521, 2540, 4021, 4040, 8040 and 8040-440. Full model codes and individual specifications appear on pages 05-07.

Element supply

Spiral-wound membrane elements for integration into an RO system. Confirm the pressure vessel and connection arrangement before replacement.

Typical uses

Industrial water preparation, groundwater desalination and suitably pretreated water reuse, according to the selected series.

Series selection by feed-water context

Series	Feed TDS*	Supplier-listed application context
BW	> 2000 mg/L	Brackish water, groundwater and advanced reclaimed-water treatment
LP	≤ 2000 mg/L	Groundwater, municipal water and advanced treatment of lightly polluted industrial wastewater
ULP	≤ 1000 mg/L	Municipal tap water and surface water
XLE	≤ 500 mg/L	Municipal water, rainwater, river and lake water

*Supplier application descriptions, not a complete feed acceptance envelope. Pretreatment and a project-specific assessment are required; TDS alone does not determine suitability.

BRACKISH WATER RO MEMBRANE ELEMENTS

BW Series Specifications

BW models cover six element sizes and membrane-area options. Values below apply under the BW test conditions shown on this page.

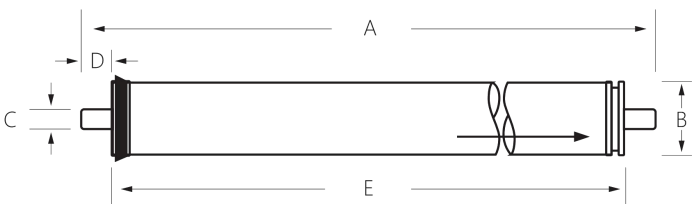
Model	Effective area ft ² (m ²)	Average yield GPD	Salt rejection %	Recovery* %
BW-2521	13 (1.2)	370	99.2	8
BW-2540	30 (2.8)	800	99.2	15
BW-4021	36 (3.3)	1,000	99.5	15
BW-4040	78 (7.2)	2,500	99.7	15
BW-8040	400 (37)	11,000	99.7	15
BW-8040-440	440 (41)	12,100	99.7	15

BW test conditions

NaCl 2000 ± 50 mg/L 225 psi (1.55 MPa) 25 ± 1 °C pH 7-8

GPD is retained as published, without conversion. Salt rejection is not stated as a minimum guarantee. *Recovery is the supplier's element-table value, not system recovery.

Element size & installation



Generic 4040 / 2540 / 4021 / 2521 format drawing. Dimension key and all seven format tables: page 10.

Design & Operating Notes

Membrane area and test yield describe the element. Field output depends on feed water, temperature, pressure and the complete system arrangement.

Before ordering

Confirm the full model suffix, vessel, connectors and installed dimensions. Operating limits are listed separately on page 12.

LOW PRESSURE RO MEMBRANE ELEMENTS

LP Series Specifications

For groundwater and other feeds within the supplier's TDS ≤ 2000 mg/L application range, including advanced treatment of lightly polluted industrial wastewater.

Industrial water preparation

Supplier-listed uses include municipal water desalination, electronic ultrapure-water preparation, boiler make-up water treatment and reclaimed-water regeneration.

LP-8040 shown. Actual selection depends on the feed and required product-water quality.



Model	Effective area ft ² (m ²)	Average yield GPD	Salt rejection %	Recovery* %
LP-2521	13 (1.2)	350	98.5	8
LP-2540	28 (2.6)	750	99.2	15
LP-4021	36 (3.3)	950	99.2	15
LP-4040	78 (7.2)	2,600	99.2	15
LP-8040	400 (37)	11,000	99.2	15
LP-8040-440	440 (41)	12,000	99.2	15

LP test conditions

NaCl 1500 $\pm$ 50 mg/L 150 psi (1.03 MPa) 25 $\pm$ 1 °C pH 7-8

GPD is retained as published, without conversion. Salt rejection is not stated as a minimum guarantee. *Recovery is the supplier's element-table value, not system recovery.

Specify the complete model

8040 area options

LP-8040 and LP-8040-440 have different effective membrane areas. Keep the complete suffix in the inquiry and order.

Mechanical compatibility

Use the dimensions on page 10 for initial review. Verify the exact variant and connection details for replacement service.

TWO SERIES / SEPARATE TEST CONDITIONS

ULP & XLE Specifications

ULP / Ultra Low Pressure

Municipal tap water and surface water; supplier feed TDS guidance ≤ 1000 mg/L.

Model	Effective area ft ² (m ²)	Average yield GPD	Salt rejection %	Recovery* %
ULP-2521	13 (1.2)	350	98.5	8
ULP-2540	28 (2.6)	750	99	15
ULP-4021	36 (3.3)	950	99	8
ULP-4040	78 (7.2)	2,600	98	15
ULP-8040	400 (37)	11,000	99	15
ULP-8040-440	440 (41)	12,000	99	15

ULP test conditions

NaCl 1000 $\pm$ 50 mg/L 110 psi (0.76 MPa) 25 $\pm$ 1 °C pH 7-8

XLE / Extreme Low Pressure

Municipal water, rainwater, river and lake water; supplier feed TDS guidance ≤ 500 mg/L.

Model	Effective area ft ² (m ²)	Average yield GPD	Salt rejection %	Recovery* %
XLE-2521	13 (1.2)	350	98	8
XLE-2540	28 (2.6)	750	98	15
XLE-4021	36 (3.3)	950	98	15
XLE-4040	78 (7.2)	2,600	98.5	15
XLE-8040	400 (37)	11,000	98.5	15
XLE-8040-440	440 (41)	12,000	98.5	15

XLE test conditions

NaCl 500 $\pm$ 20 mg/L 100 psi (0.69 MPa) 25 $\pm$ 1 °C pH 7-8

GPD is retained as published, without conversion. Salt rejection is not stated as a minimum guarantee. *Recovery is the supplier's element-table value, not system recovery.

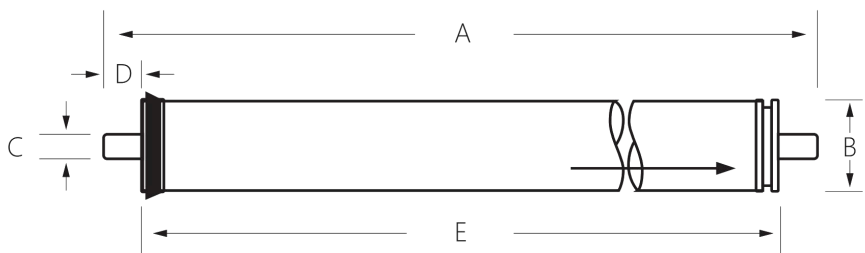
Different NaCl concentrations and test pressures prevent a direct performance ranking. Dimensions: page 10. Operating limits: page 12.

SW SERIES

Seawater RO Elements

Composite RO membrane elements for seawater desalination and selected high-salinity water applications. Seven SW models cover 2514 through 8040 formats.

Element format / engineering reference



Dimensional schematic for small-format RO elements, not a product photograph. SW-specific performance appears on page 09; full format dimensions are on page 10.

SW format group	Available original models
2.5-inch family	SW-2514 / SW-2521 / SW-2540
4-inch family	SW-4014 / SW-4021 / SW-4040
8-inch family	SW-8040

Water-source context

The supplier lists seawater, brine, high-salinity industrial wastewater, reclaimed water and RO/NF concentrate with TDS > 10000 mg/L.

Desalination or reconcentration duties require feed-specific review. This description is not an upper salinity limit or a universal suitability claim.

Selection priorities

Provide salinity, temperature, required permeate flow and target quality. Identify any boron-specific requirement in the project brief.

Pressure-vessel suitability, connections and the complete RO design must be checked for the chosen SW element.

SWRO is part of the reverse osmosis product range. Use the SW series test conditions and limits; do not substitute the brackish-water values.

SEAWATER RO MEMBRANE ELEMENTS

SW Series Specifications

Individual model values are shown under the supplier's seawater test conditions. The smaller formats retain their own rejection and recovery values.

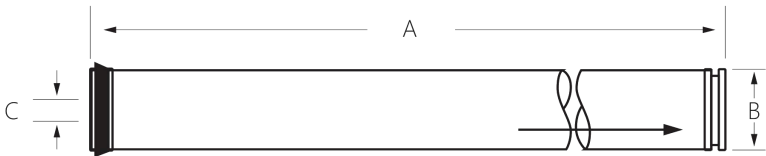
Model	Effective area ft² (m²)	Average yield GPD	Salt rejection %	Recovery* %
SW-2514	6.5 (0.6)	150	99.5	4
SW-2521	12 (1.1)	270	98.5	4
SW-2540	28 (2.6)	600	99.5	8
SW-4014	22 (2.0)	500	99.8	8
SW-4021	33 (3.1)	750	99.8	8
SW-4040	90 (8.4)	1,600	99.8	8
SW-8040	400 (37)	7,500	99.8	8

SW test conditions

NaCl 32000 ± 100 mg/L	800 psi (5.52 MPa)	25 ± 1 °C	pH 7-8
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GPD is retained as published, without conversion. Salt rejection is not stated as a minimum guarantee. *Recovery is the supplier's element-table value, not system recovery.

8040 format reference



Generic source 8040 drawing: A = 1016 mm, B = 201 mm, C = 29.1 mm. Confirm the final interface drawing for the ordered SW-8040 element.

Test & operating pressure

800 psi (5.52 MPa) is the SW test pressure. The supplier lists a separate maximum operating pressure of 1200 psi (8.27 MPa).

Project water quality

Specify the target permeate quality and any boron limit. The listed salt rejection is not a guarantee of drinking-water compliance.

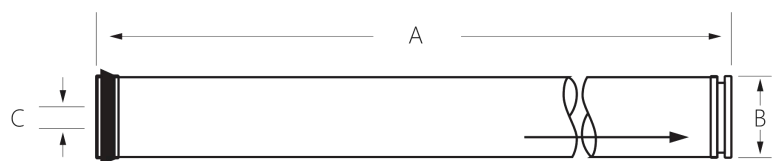
RO ELEMENT FORMATS

Dimensional Reference

Use the dimension letters with the corresponding drawing. All table values are the original millimetre values.

8040 format

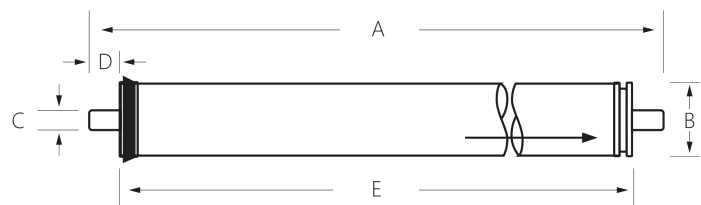
Dimensions in mm



Format	A	B	C
8040	1016	201	29.1

Small formats

Dimensions in mm



Format	A	B	C	D	E
4040	1016	99.7	19.1	26.7	962
2540	1016	61	19.1	30.2	956
4021	533.4	99.7	19.1	26.7	479
2521	533.4	61	19.1	30.2	473
4014	356	99.7	19.1	26.7	302.6
2514	356	61	19.1	26.7	302.6

Drawing key: A overall length; B outside diameter; C centre-tube dimension as drawn; D end projection; E body length. Drawings are schematic, not to scale.

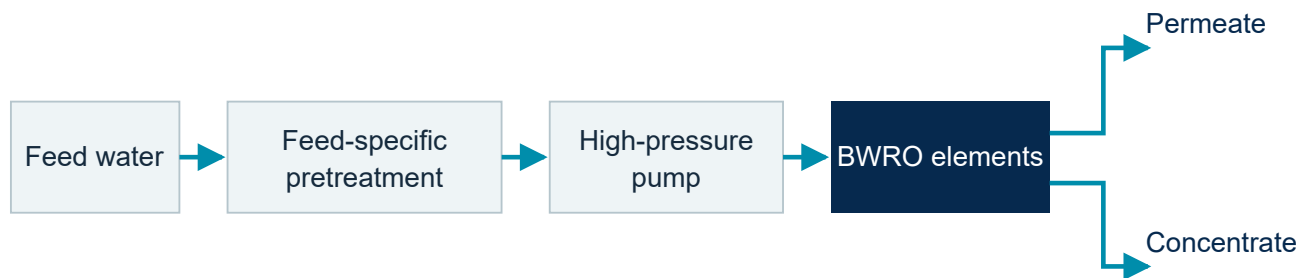
These are element dimensions, not pressure-housing dimensions. Confirm tolerances, seals, adaptors and the exact variant, including 8040-440, before replacement.

FROM FEED WATER TO PERMEATE

System Position & Pretreatment

The RO element separates a pressurised feed into permeate and concentrate. Pretreatment and downstream treatment are selected for the feed and product-water target.

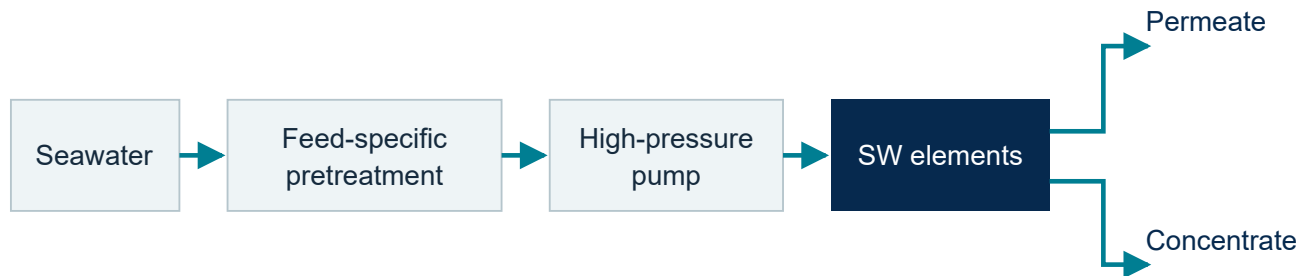
Industrial / brackish water RO



Schematic / not a standard equipment package

Conceptual RO process arrangement.

Seawater RO



Schematic / not a standard equipment package

Functional schematic only; it does not define a standard seawater plant configuration.

Interface	Items to coordinate for the project
Upstream treatment	The supplier's RO examples include sand filtration, activated carbon, softening or antiscalant dosing, and a sediment filter. The combination is feed-dependent.
Pressure & vessels	Select the pressure system and housings for the chosen element, feed conditions and approved operating duty.
Outlet streams	Define the permeate destination and concentrate handling. Further permeate treatment depends on the target water quality.

The diagrams explain membrane interfaces, not the scope of a standard YIFU equipment package. Equipment supply is subject to the agreed quotation.

SERIES-SPECIFIC LIMITS

Operating Limits & Maintenance

The following limits are stated separately for each series in the supplier catalog. Maximum values are not recommended operating setpoints.

Parameter	BW	LP	ULP	XLE	SW
Max. operating pressure psi (MPa)	600 (4.14)	600 (4.14)	600 (4.14)	600 (4.14)	1200 (8.27)
Max. inlet temperature / °C	45	45	45	45	45
Continuous operating pH	3-10	3-10	3-10	3-10	3-10
Chemical cleaning pH	2-12	2-12	2-12	2-12	2-12
Max. influent turbidity / NTU	1.0	1.0	1.0	1.0	1.0
Max. inlet SDI ₁₅	5	5	5	5	5
Max. free chlorine / mg/L	0.1	0.1	0.1	0.1	0.1
Max. pressure drop per element psi (MPa)	15 (0.1)	15 (0.1)	15 (0.1)	15 (0.1)	15 (0.1)

Pressure values retain the supplier's paired psi / MPa units. The pressure-drop limit is per membrane element. Test conditions and model-table recovery values remain on pages 05-07 and 09.

Cleaning & preservation

The pH range alone is not a complete cleaning procedure. Obtain the model-specific chemical, concentration, temperature and contact-time instructions before cleaning.

Confirm delivery condition, packaging, storage and flushing instructions for the ordered elements.

Replacement projects

Provide the complete installed model, vessel and connection drawings, element quantity and array, installation photographs and operating history.

Check actual dimensions and interfaces. A 4040 or 8040 format name alone does not establish interchangeability.

Review all limits together with feed chemistry and the system design. A maximum value in one row does not establish an approved combination of all extremes.

EQUIPMENT ARRANGEMENT

RO Equipment References

Examples from our manufacturing partner show how pressure housings, pumps, instrumentation and piping are arranged around RO membrane elements.



RO equipment reference with horizontal pressure housings and a central control panel.



Skid-mounted arrangement with horizontal pressure housings.



Compact arrangement with pumps, control panel and filter housing.

Integration review

Coordinate vessel format, connections, element loading access and the available installation space.

Replacement documentation

Send photographs alongside the equipment layout and current element model, rather than relying on appearance alone.

Images illustrate equipment arrangements only; no project performance is represented.

MATCH THE ELEMENT TO THE DUTY

Applications & Selection

The applications below come from the supplier's series descriptions. Use them to start the selection discussion, then review the actual water analysis and treatment target.

Application	Series to review	Information needed for selection
Brackish water & groundwater	BW; LP within its listed feed range	Salinity, temperature, complete feed-water analysis and target permeate quality.
Industrial water preparation	BW / LP; LP is listed for boiler make-up and electronic ultrapure-water preparation	Required RO output and the downstream treatment needed for the final water specification.
Municipal & surface water	LP / ULP / XLE according to their respective feed descriptions	Feed variation, pretreatment, required flow and product-water target.
Water reuse	BW / LP for the advanced-treatment duties described by the supplier	Upstream treatment, current water analysis, target reuse quality and concentrate handling.
Seawater & brine	SW	Salinity, temperature, available pressure, recovery objective and any boron-specific requirement.
High-salinity wastewater & concentrate	SW, subject to feed-specific assessment	Full feed composition, pretreatment and desalination or reconcentration objective.

Pretreatment is part of selection

Application names do not establish that an untreated feed is suitable. Check the series limits and the proposed upstream process together.

Specify the final water target

Element salt rejection is one input to system design. It does not by itself establish the final-use water specification.

For a replacement inquiry, include current operating data as well as the original element model. For a new plant, provide the process requirements before choosing the element quantity.

START WITH THE PROJECT REQUIREMENTS

Project Information & Supply Scope

01 / Feed water	Water source, current analysis, salinity or conductivity, temperature and relevant water-quality information.
02 / Required duty	Permeate flow, operating hours, target water quality and proposed system recovery. State any specific boron requirement for SWRO.
03 / System details	Existing pretreatment, membrane array, pressure vessels and current operating conditions.
04 / New or replacement	For replacement: complete element model, installation photographs, interface positions and drawings.
05 / Procurement	Required quantity, project country, delivery requirements and requested supply scope.

Membrane element supply

- BW, LP, ULP, XLE and SW elements by complete model.
- Model and technical-document coordination.
- Interfaces and accessories as confirmed in the quotation.

Technical coordination

- Feed-water and installation information review.
- Manufacturing-partner technical support as agreed.
- Equipment and services only where expressly included in the supply scope.

YIFU Trading

Send your feed-water analysis, required permeate flow and current membrane model for preliminary selection.

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Technical basis. Test values are element reference data, not field-output guarantees. Actual performance depends on the feed and complete system design. Confirm the final model-specific documents and agreed duty before purchase. Original model identifiers are retained for clear selection and ordering.



REVERSE OSMOSIS MEMBRANE ELEMENTS

Brackish Water. Seawater. Project-Specific Selection.

BW / LP / ULP / XLE / SW

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