





MANUFACTURER AND TECHNOLOGY DEVELOPMENT COMPANY

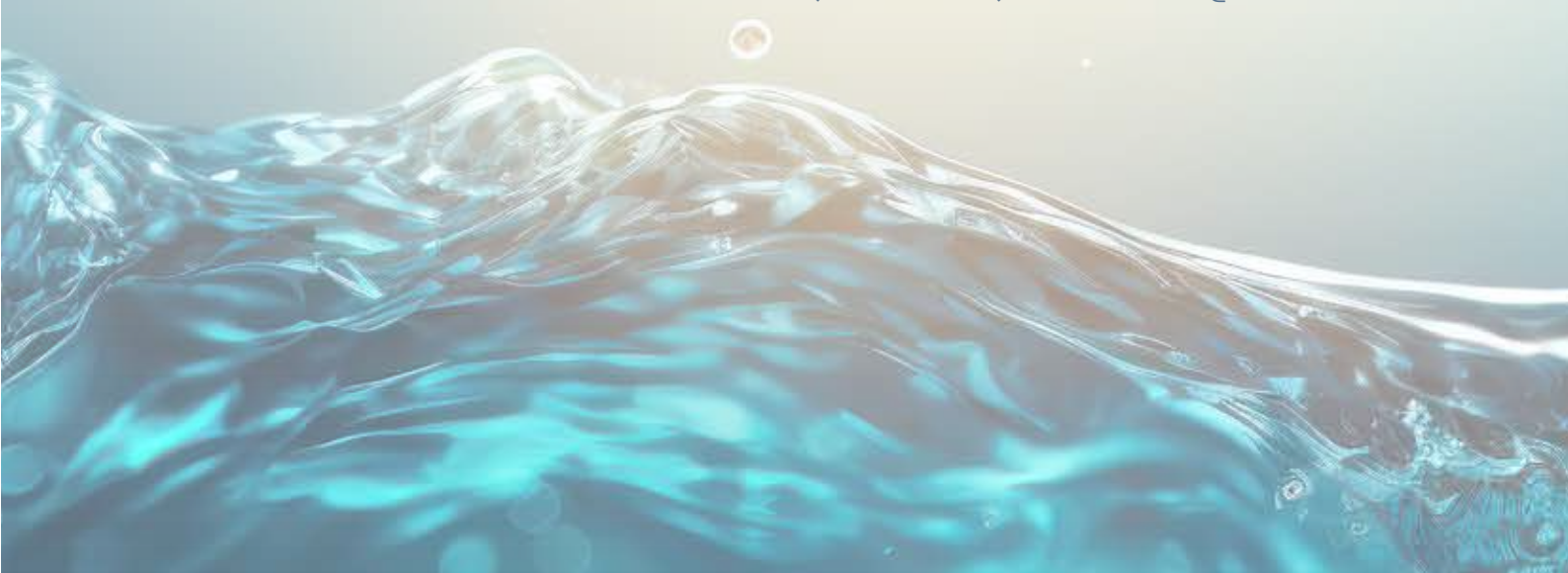


درباره ما

شرکت توسعه فناوری غشایی و اسمز معکوس پایا پالا آوید قشم یک سازمان تولید محور دانش بنیان، مبتنی بر دانش روز اروپا و چین است که پتانسیل تخصصی و قنی مهندسی خود را روی تصفیه آب غشایی متمرکز نموده است؛ این شرکت با الهام از بخش فناوری‌های غشایی بزرگترین گروه‌های تولیدی چین و پیشروترین مراکز تحقیق و توسعه‌ی اروپایی در مسیر ماموریت خود گام برمی‌دارد. تولید المنت‌های ممبران لب‌شور و دریایی در تمامی سایزهای رایج و تولید ممبران‌های اختصاصی‌سازی شده مورد نیاز صنایع مختلف و پهنه‌های جغرافیایی متفاوت بخشی از دستاوردهای پایا پالا است.

نوآوری فناورانه نیروی محرکه‌ی اصلی پایا پالا آوید قشم برای احداث بزرگترین مجموعه تولیدی صنعت فیلتراسیون آب در منطقه آزاد قشم و تبدیل شدن به اولین تولیدکننده ایرانی این صنعت با بازه وسیعی از محصولات بوده است. محصولات نظیر غشاهای میکروفیلتراسیون، آلترافیلتراسیون، نانوفیلتراسیون، اسمز معکوس و ... استفاده از ماشین آلات تولیدی بروز جهانی، آزمایشگاه و تجهیزات بی‌رقیب کنترل و تضمین کیفیت و موقعیت استراتژیک کارخانه در آب‌های خلیج همیشه فارس، پایا پالا را در تکمیل زنجیره‌ی ارزش خود جزو پیشتازان خاورمیانه، یکی از حساس‌ترین نقاط آبی جهان قرار داده است.

محصولات غشایی پایا پالا به شکل گسترده در زمینه‌های نمک‌زدایی، احیای فاضلاب شهری، پساب صنعتی با خروجی صفر، استفاده مجدد از آب احیا شده، تهیه آب خالص، تصفیه پساب‌های با آلودگی بالا، احیای رودخانه، تصفیه فاضلاب روستایی غیرمتمرکز و تغلیظ و جداسازی فرایندی مورد استفاده قرار می‌گیرند. همچنین راهکارهای فنی و مهندسی پایا پالا آوید قشم نظیر تست‌های عملکردی، تعویض تجهیزات و بهره‌برداری، نگهداری و تعمیرات، پایش عملکرد و مشاوره تخصصی این شرکت دانش‌بنیان را به انتخاب اول مجموعه‌های صنعتی تبدیل کرده است. این شرکت متعهد است تا روش‌ها و فناوری‌های پایدار تصفیه منابع آبی پیشرفته را که در کوتاه مدت به صورت راهکاری یکپارچه به مجموعه‌های صنعتی ارائه می‌شود در میان مدت برای کل جامعه‌ی ایرانی و در دراز مدت برای جامعه‌ی جهانی فراهم کند. پایا پالا آوید قشم مصمم است تا بکمک سرمایه‌های انسانی گرانقدر خود، بهینه‌ترین استفاده از منابع آبی جهانی را میسر نماید، بازچرخانی سبز این منابع را ارتقا ببخشد و پیشتاز توسعه پایدار صنعت گردد.



PAYA PALA AVID QESHM



محصولات متداول

۴ اینچ
۸ اینچ

لبشور
(BW)

1 PPAQ™ BW8040LFR HIGH PERFORMANCE AND FOULING RESISTANCE INDUSTRY-STANDARD BRACKISH WATER REVERSE OSMOSIS MEMBRANE ELEMENT

PPAQ™ BW8040 -2

2

ULTRA HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD BRACKISH WATER REVERSE OSMOSIS MEMBRANE ELEMENT

3 PPAQ™ BW4040 HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD BRACKISH WATER REVERSE OSMOSIS MEMBRANE ELEMENT

PPAQ™ BW8040

4

HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD BRACKISH WATER REVERSE OSMOSIS MEMBRANE ELEMENT

PRODUCT

محصولات متداول

۴ اینچ
۸ اینچ

آب دریا
(SW)

5 PPAQ™ SW4040LE
HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD
SEAWATER REVERSE OSMOSIS MEMBRANE ELEMENT

6 PPAQ™ SW8040HR-400
ULTRA HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD
SEAWATER REVERSE OSMOSIS MEMBRANE ELEMENT

7 PPAQ™ SW8040LE-440
HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD
SEAWATER REVERSE OSMOSIS MEMBRANE ELEMENT

8 PPAQ™ SW8040FR-400
HIGH PERFORMANCE AND FOULING RESISTANCE INDUSTRY-STANDARD
SEAWATER REVERSE OSMOSIS MEMBRANE ELEMENT

9 PPAQ™ SW8040XLE-440
HIGH REJECTION AND ULTRA HIGH PERFORMANCE INDUSTRY-STANDARD
SEAWATER REVERSE OSMOSIS MEMBRANE ELEMENT







 **PAYA PALA** AVID QESHM



General Information

- Keep elements moist at all times after initial wetting.
- For successful operation of Reverse Osmosis (RO) and Nanofiltration (NF) membrane systems, the operation must follow the guidelines provided in the PPAQ™ Reverse Osmosis/Nanofiltration Elements Operation Excellence and Limiting Conditions Tech Fact.
- To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution.
- The customer is fully responsible for the effects of incompatible chemicals and lubricants on
- Avoid static permeate-side backpressure at all times.
- Permeate obtained from the first hour of operation should be discarded.
- The use of this product in and of itself does not necessarily guarantee the removal of cysts and elements. pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

Important Information

Please consider good operating practices for the optimal performance of the Reverse Osmosis membrane elements to

assure damage free operation:

1. Loading of Pressure Vessels - Preparation & Element Loading
2. System Operation, including plant Start-Up Sequence and RO & NF Systems Shutdown
3. Handling, Preservation, and Storage Full information of plant design, system operation, and troubleshooting is given in the PPAQ™ Reverse Osmosis Membranes Technical Manual.

Regulatory Note

This product may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

All information set forth herein is for informational purposes only. This information is general information and may differ from that based on actual conditions. Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where PPAQ is represented. The claims made may not have been approved for use in all countries. Please note that physical properties may vary depending on certain conditions and while operating conditions stated in this document are intended to lengthen product lifespan and/or improve product performance, it will ultimately depend on actual circumstances and is in no event a guarantee of achieving any specific results. PPAQ assumes no obligation or liability for the information in this document. References to "PPAQ or the "Company" mean the PPAQ legal entity selling the products to Customer unless otherwise expressly noted. **NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.** No freedom from infringement of any patent or trademark owned by PPAQ or others is to be inferred.

PPAQ™ BW8040LFR

HIGH PERFORMANCE AND FOULING RESISTANCE INDUSTRY-STANDARD BRACKISH WATER REVERSE OSMOSIS MEMBRANE ELEMENT

Key Features

- Delivers consistent water quality and higher rejection and flow than previous generation BW product
- Based on historical BW Industry-standard RO membrane with decades of proven performance
- Excellent durability resulting in stable, long-term performance

Key Applications

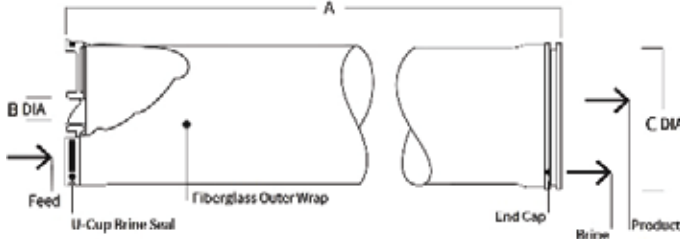
- Demineralization for industrial applications, such as: Power Generation, Steel & Metal, Chemical & Petrochemical
- Municipal water purification

Typical Properties

PPAQ™ Element	Active Area ft ² (m ²)	Feed Spacer Thickness (mil)	Permeate Flow Rate gpd (m ³ /d)	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
BW8040LFR	400 (37.2)	34	10,500 (39.7)	99.7	99.6

1. Permeate flow and salt rejection based on the following standard conditions: 2,000 ppm NaCl, 225 psi (15.5 bar), 77°F (25°C), pH 7.5-8 and 15% recovery.
2. Flow rates for individual elements may vary but will be no more than 15% below the value shown.
3. Sales specifications may vary as design revisions take place.

Element Dimensions



Itintec™ supplies coupler part number 313158 with each element. Each coupler includes two 3/8" EPDM O-rings (part number 131755).

PPAQ™ Element BW8040LFR Dimensions - inches (mm)

A	40.0 (1,016)
B	1.125 (29)
C	7.9 (201)

1. For element weight information refer to What is the weight of PPAQ™ elements as delivered?
2. For element packaging and shipping information refer to How are PPAQ™ elements packaged and shipped?

Suggested Operating Conditions

Membrane Type	Membrane Type
Maximum Operating Temperature	113°F (45°C)
Maximum Operating Pressure	600 psig (41.4 bar)
Maximum Pressure Drop	
Per Element	15 psig (1.0 bar)
Per Pressure Vessel (Minimum 4 Elements)	50 psig (3.5 bar)
pH Range	
Continuous Operation ¹	3 - 10
Short-Term Cleaning (30 min.) ²	1 - 13
Maximum Feed Flow ³	75 gpm (17 m ³ /hr)
Maximum Feed Silt Density Index	SDI 5
Free Chlorine Tolerance ⁴	< 0.1 ppm

1. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
2. Refer to PPAQ™ Cleaning Guidelines
3. For recommended feed and permeate flow rates, flux, and recovery for various feed sources, refer to PPAQ™ Design Guidelines for multiple-element systems of 8-inch elements
4. Oxidation damage is not covered under warranty, PPAQ recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater for more information.



PPAQ™ BW8040-2

ULTRA HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD BRACKISH WATER REVERSE OSMOSIS MEMBRANE ELEMENT

Key Features

- Delivers consistent water quality and higher rejection and flow than previous generation BW product
- Based on historical BW Industry-standard RO membrane with decades of proven performance
- Excellent durability resulting in stable, long-term performance

Key Applications

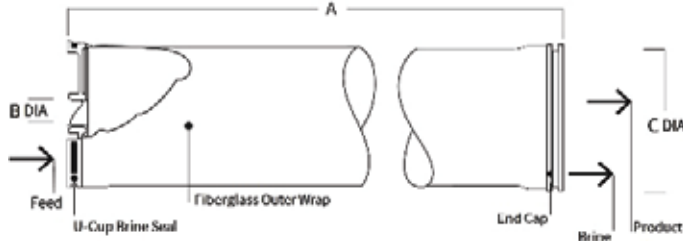
- Demineralization for industrial applications, such as: Power Generation, Steel & Metal, Chemical & Petrochemical
- Municipal water purification

Typical Properties

PPAQ™ Element	Active Area ft ² (m ²)	Feed Spacer Thickness (mil)	Permeate Flow Rate gpd (m ³ /d)	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
BW8040-2	400 (37.2)	28	10,500 (39.7)	99.7	99.6

1. Permeate flow and salt rejection based on the following standard conditions: 2,000 ppm NaCl, 225 psi (15.5 bar), 77°F (25°C), pH 7.5-8 and 15% recovery.
2. Flow rates for individual elements may vary but will be no more than 15% below the value shown.
3. Sales specifications may vary as design revisions take place.

Element Dimensions



filmTec™ supplies coupler part number 313158 with each element. Each coupler includes two 3/8" FPR O-rings (part number 151705).

PPAQ™

Element BW8040-2 Dimensions - inches (mm)

A	40.0 (1,016)
B	1.125 (29)
C	7.9 (201)

1. For element weight information refer to What is the weight of PPAQ™ elements as delivered?
2. For element packaging and shipping information refer to How are PPAQ™ elements packaged and shipped?

Suggested Operating Conditions

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	113°F (45°C)
Maximum Operating Pressure	600 psig (41.4 bar)
Maximum Pressure Drop	
Per Element	15 psig (1.0 bar)
Per Pressure Vessel (Minimum 4 Elements)	50 psig (3.5 bar)
pH Range	
Continuous Operation ¹	3 - 10
Short-Term Cleaning (30 min.) ²	1 - 13
Maximum Feed Flow ³	75 gpm (17 m ³ /hr)
Maximum Feed Silt Density Index	SDI 5
Free Chlorine Tolerance ⁴	< 0.1 ppm

1. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
2. Refer to PPAQ™ Cleaning Guidelines
3. For recommended feed and permeate flow rates, flux, and recovery for various feed sources, refer to PPAQ™ Design Guidelines for multiple-element systems of 8-inch elements
4. Oxidation damage is not covered under warranty, PPAQ recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater for more information.

PPAQ™ BW4040
HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD
BRACKISH WATER REVERSE OSMOSIS MEMBRANE ELEMENT

Key Features

- Delivers consistent water quality and higher rejection and flow than previous generation BW product
- Based on historical BW Industry-standard RO membrane with decades of proven performance
- Excellent durability resulting in stable, long-term performance

Key Applications

- Demineralization for industrial applications, such as: Power Generation, Steel & Metal, Chemical & Petrochemical
- Municipal water purification

Typical Properties

PPAQ™ Element	Active Area ft ² (m ²)	Feed Spacer Thickness (mil)	Permeate Flow Rate gpd (m ³ /d)	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
BW4040	85 (7.9)	28	2,500 (9.5)	99.6	99.5

1. Permeate flow and salt rejection based on the following standard conditions: 2,000 ppm NaCl, 225 psi (15.5 bar), 77°F (25°C), pH 7.5-8 and 15% recovery.
2. Flow rates for individual elements may vary but will be no more than 15% below the value shown.
3. Sales specifications may vary as design revisions take place.

Suggested Operating Conditions

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	113°F (45°C)
Maximum Operating Pressure	600 psig (41.4 bar)
Maximum Pressure Drop	
Per Element	15 psig (1.0 bar)
Per Pressure Vessel (Minimum 4 Elements)	50 psig (3.5 bar)
pH Range	
Continuous Operation ¹	3 - 10
Short-Term Cleaning (30 min.) ²	1 - 13
Maximum Feed Flow ³	75 gpm (17 m ³ /hr)
Maximum Feed Silt Density Index	SDI 5
Free Chlorine Tolerance ⁴	< 0.1 ppm

1. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
2. Refer to PPAQ™ Cleaning Guidelines
3. For recommended feed and permeate flow rates, flux, and recovery for various feed sources, refer to PPAQ™ Design Guidelines for multiple-element systems of 4-inch elements
4. Oxidation damage is not covered under warranty, PPAQ recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater for more information.



PPAQ™ BW8040

HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD BRACKISH WATER REVERSE OSMOSIS MEMBRANE ELEMENT

Key Features

- Delivers consistent water quality and higher rejection and flow than previous generation BW product
- Based on historical BW Industry-standard RO membrane with decades of proven performance
- Excellent durability resulting in stable, long-term performance

Key Applications

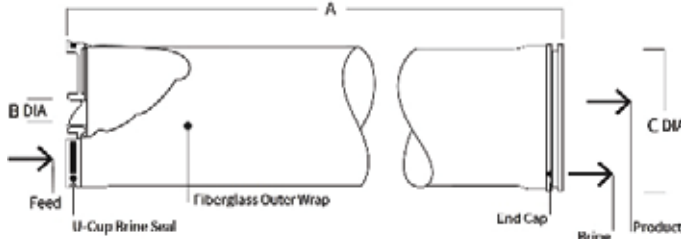
- Demineralization for industrial applications, such as: Power Generation, Steel & Metal, Chemical & Petrochemical
- Municipal water purification

Typical Properties

PPAQ™ Element	Active Area ft ² (m ²)	Feed Spacer Thickness (mil)	Permeate Flow Rate gpd (m ³ /d)	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
BW8040	400 (37.2)	28	10,500 (39.7)	99.6	99.5

1. Permeate flow and salt rejection based on the following standard conditions: 2,000 ppm NaCl, 225 psi (15.5 bar), 77°F (25°C), pH 7.5-8 and 15% recovery.
2. Flow rates for individual elements may vary but will be no more than 15% below the value shown.
3. Sales specifications may vary as design revisions take place.

Element Dimensions



filmTec™ supplies coupler part used as 313158 with each element. Each coupler includes two 3817 FPR O-rings (part number 151705).

PPAQ™ Element BW8040 Dimensions - inches (mm)


A	40.0 (1,016)
B	1.125 (29)
C	7.9 (201)

1. For element weight information refer to What is the weight of PPAQ™ elements as delivered?
2. For element packaging and shipping information refer to How are PPAQ™ elements packaged and shipped?

Suggested Operating Conditions

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	113°F (45°C)
Maximum Operating Pressure	600 psig (41.4 bar)
Maximum Pressure Drop	
Per Element	15 psig (1.0 bar)
Per Pressure Vessel (Minimum 4 Elements)	50 psig (3.5 bar)
pH Range	
Continuous Operation ¹	3 - 10
Short-Term Cleaning (30 min.) ²	1 - 13
Maximum Feed Flow ³	75 gpm (17 m ³ /hr)
Maximum Feed Silt Density Index	SDI 5
Free Chlorine Tolerance ⁴	< 0.1 ppm

1. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
2. Refer to PPAQ™ Cleaning Guidelines
3. For recommended feed and permeate flow rates, flux, and recovery for various feed sources, refer to PPAQ™ Design Guidelines for multiple-element systems of 8-inch elements
4. Oxidation damage is not covered under warranty, PPAQ recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater for more information.



PAYA PALA
— AVID QESHM —



PPAQ™ SW4040LE
HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD
SEAWATER REVERSE OSMOSIS MEMBRANE ELEMENT

Key Features

- Optimized combination of water production, permeate quality, and fouling resistance reducing the number of chemical cleanings
- Excellent durability resulting in stable long-term performance
- Longer storage time and warranty coverage with improved sustainability footprint versus our wet RO membrane elements
- More efficient cleaning of biofilm, organic compounds and scale, achieved through one of the widest pH range in cleaning

Typical Properties

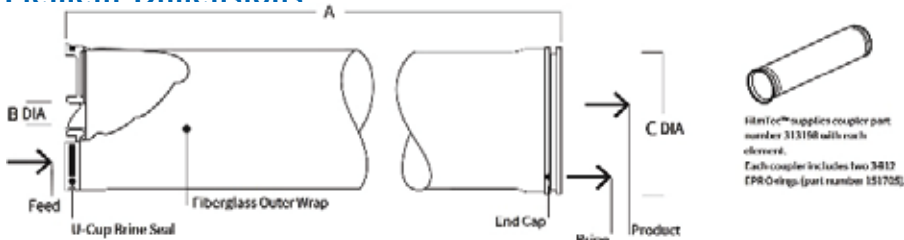
PPAQ™ Element	Active Area ft ² (m ²)	Feed Spacer Thickness (mil)	Permeate Flow Rate gpd (m ³ /d)	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
SW4040LE	95(8.8)	28	1900 (7.2)	99.7	99.5

Key Applications

- Seawater installations with challenging or high fouling feedwater conditions | Suitable for medium and high feed water salinity
- Offers balance between permeate quality and energy consumption

1. Permeate flow and salt rejection based on the following standard conditions: 32,000 ppm NaCl, 5 ppm boron, 800 psi (5.5 MPa), 77°F (25°C), pH 8, 8% recovery.
2. Permeate flows for individual elements may vary ± 15%.
3. Sales specifications may vary as design revisions take place.

Element Dimensions



PPAQ™

Element SW4040LE
Dimensions - inches (mm)

- A 40.0 (1,016)**
- B 0.75 (19)**
- C 3.9 (99)**

1. For element weight information refer to What is the weight of PPAQ™ elements as delivered?
2. For element packaging and shipping information refer to How are PPAQ™ elements packaged and shipped?

Suggested Operating Conditions

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	113°F (45°C)
Maximum Operating Pressure	1200 psig (83 bar)
Maximum Pressure Drop	
Per Element	15 psig (1.0 bar)
Per Pressure Vessel (Minimum 4 Elements)	50 psig (3.5 bar)
pH Range	
Continuous Operation ¹	2- 11
Short-Term Cleaning (30 min.) ²	1 - 13
Maximum Feed Silt Density Index	SDI 5
Free Chlorine Tolerance ⁴	< 0.1 ppm

1. For recommended feed and permeate flow rates, flux, and recovery for various feed sources, refer to PPAQ™ Design Guidelines for multiple-element systems of 8-inch elements.
2. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
3. Consult your PPAQ representative for advice on applications above 95°F (35°C). Relevant information regarding operation at high temperature and pressure: PPAQ™ Seawater Elements Operating Limits and Shimming Elements.
4. Refer to PPAQ™ Cleaning Guidelines.
5. Oxidation damage is not covered under warranty, PPAQ recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater for more information.

PPAQ™ SW8040HR-400
ULTRA HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD
SEAWATER REVERSE OSMOSIS MEMBRANE ELEMENT

Key Features

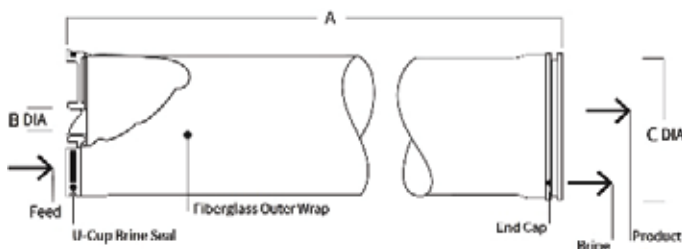
- Optimized combination of water production, permeate quality, and fouling resistance reducing the number of chemical cleanings
- Excellent durability resulting in stable long-term performance
- Longer storage time and warranty coverage with improved sustainability footprint versus our wet RO membrane elements
- More efficient cleaning of biofilm, organic compounds and scale, achieved through one of the widest pH range in cleaning

Typical Properties

PPAQ™ Element	Active Area ft ² (m ²)	Feed Spacer Thickness (mil)	Permeate Flow Rate gpd (m ³ /d)	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
SW8040HR-400	400(37.2)	28	7500 (28.4)	99.8	99.6

1. Permeate flow and salt rejection based on the following standard conditions: 32,000 ppm NaCl, 5 ppm boron, 800 psi (5.5 MPa), 77°F (25°C), pH 8, 8% recovery.
2. Permeate flows for individual elements may vary ± 15%.
3. Sales specifications may vary as design revisions take place.

Element Dimensions



FilmTec™ supplies coupling part number 313158 with each element. Each couple includes two 3417 EPR O-rings (part number 151705).

PPAQ™ Element SW8040HR-400 Dimensions - inches (mm)

A	40.0 (1,016)
B	1.125 (29)
C	7.9 (201)

1. For element weight information refer to [What is the weight of PPAQ™ elements as delivered?](#)
2. For element packaging and shipping information refer to [How are PPAQ™ elements packaged and shipped?](#)

Suggested Operating Conditions

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	113°F (45°C)
Maximum Operating Pressure	1200 psig (83 bar)
Maximum Pressure Drop	
Per Element	15 psig (1.0 bar)
Per Pressure Vessel (Minimum 4 Elements)	50 psig (3.5 bar)
pH Range	
Continuous Operation ¹	2- 11
Short-Term Cleaning (30 min.) ²	1 - 13
Maximum Feed Silt Density Index	SDI 5
Free Chlorine Tolerance ⁴	< 0.1 ppm

1. For recommended feed and permeate flow rates, flux, and recovery for various feed sources, refer to PPAQ™ Design Guidelines for multiple-element systems of 8-inch elements.
2. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
3. Consult your PPAQ representative for advice on applications above 95°F (35°C). Relevant information regarding operation at high temperature and pressure: PPAQ™ Seawater Elements Operating Limits and Shimmed Elements.
4. Refer to PPAQ™ Cleaning Guidelines.
5. Oxidation damage is not covered under warranty, PPAQ recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater for more information.

PPAQ™ SW8040LE-440

HIGH REJECTION AND HIGH PERFORMANCE INDUSTRY-STANDARD
SEAWATER REVERSE OSMOSIS MEMBRANE ELEMENT

Key Features

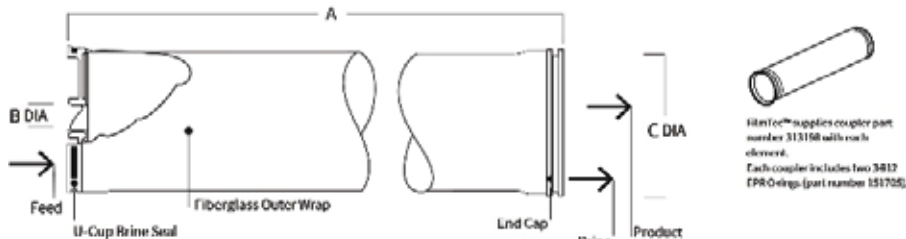
- Optimized combination of water production, permeate quality, and fouling resistance reducing the number of chemical cleanings
- Excellent durability resulting in stable long-term performance
- Longer storage time and warranty coverage with improved sustainability footprint versus our wet RO membrane elements
- More efficient cleaning of biofilm, organic compounds and scale, achieved through one of the widest pH range in cleaning

Typical Properties

PPAQ™ Element	Active Area ft ² (m ²)	Feed Spacer Thickness (mil)	Permeate Flow Rate gpd (m ³ /d)	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
SW8040LE-440	440(40.9)	28	9500 (35.9)	99.7	99.5

1. Permeate flow and salt rejection based on the following standard conditions: 32,000 ppm NaCl, 5 ppm boron, 800 psi (5.5 MPa), 77°F (25°C), pH 8, 8% recovery.
2. Permeate flows for individual elements may vary ± 15%.
3. Sales specifications may vary as design revisions take place.

Element Dimensions



PPAQ™

Element SW404OLE Dimensions - inches (mm)

A	40.0 (1,016)
B	1.125 (29)
C	7.9 (201)

1. For element weight information refer to [What is the weight of PPAQ™ elements as delivered?](#)
2. For element packaging and shipping information refer to [How are PPAQ™ elements packaged and shipped?](#)

Suggested Operating Conditions

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	113°F (45°C)
Maximum Operating Pressure	1200 psig (83 bar)
Maximum Pressure Drop	
Per Element	15 psig (1.0 bar)
Per Pressure Vessel (Minimum 4 Elements)	50 psig (3.5 bar)
pH Range	
Continuous Operation ¹	2- 11
Short-Term Cleaning (30 min.) ²	1 - 13
Maximum Feed Silt Density Index	SDI 5
Free Chlorine Tolerance ⁴	< 0.1 ppm

1. For recommended feed and permeate flow rates, flux, and recovery for various feed sources, refer to PPAQ™ Design Guidelines for multiple-element systems of 8-inch elements.
2. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
3. Consult your PPAQ representative for advice on applications above 95°F (35°C). Relevant information regarding operation at high temperature and pressure: PPAQ™ Seawater Elements Operating Limits and Shimming Elements.
4. Refer to PPAQ™ Cleaning Guidelines.
5. Oxidation damage is not covered under warranty, PPAQ recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater for more information.

PPAQ™ SW8040FR-400

HIGH PERFORMANCE AND FOULING RESISTANCE INDUSTRY-STANDARD SEAWATER REVERSE OSMOSIS MEMBRANE ELEMENT

Key Features

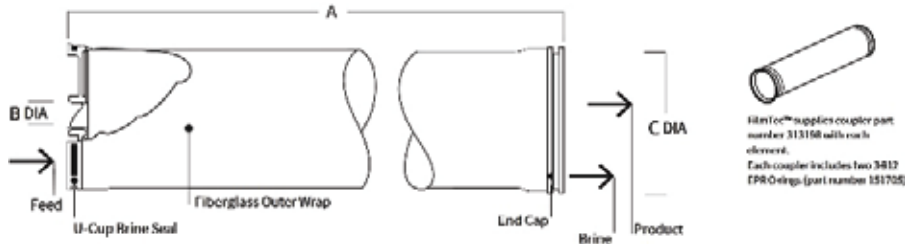
- Optimized combination of water production, permeate quality, and fouling resistance reducing the number of chemical cleanings
- Excellent durability resulting in stable long-term performance
- Longer storage time and warranty coverage with improved sustainability footprint versus our wet RO membrane elements
- More efficient cleaning of biofilm, organic compounds and scale, achieved through one of the widest pH range in cleaning

Typical Properties

PPAQ™ Element	Active Area ft ² (m ²)	Feed Spacer Thickness (mil)	Permeate Flow Rate gpd (m ³ /d)	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
SW8040FR-400	400(37.2)	34	8200 (31)	99.7	99.5

1. Permeate flow and salt rejection based on the following standard conditions: 32,000 ppm NaCl, 5 ppm boron, 800 psi (5.5 MPa), 77°F (25°C), pH 8, 8% recovery.
2. Permeate flows for individual elements may vary ± 15%.
3. Sales specifications may vary as design revisions take place.

Element Dimensions



PPAQ™ Element SW8040FR-400 Dimensions - inches (mm)

A	40.0 (1,016)
B	1.125 (29)
C	7.9 (201)

1. For element weight information refer to [What is the weight of PPAQ™ elements as delivered?](#)
2. For element packaging and shipping information refer to [How are PPAQ™ elements packaged and shipped?](#)

Suggested Operating Conditions

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	113°F (45°C)
Maximum Operating Pressure	1200 psig (83 bar)
Maximum Pressure Drop	
Per Element	15 psig (1.0 bar)
Per Pressure Vessel (Minimum 4 Elements)	50 psig (3.5 bar)
pH Range	
Continuous Operation ¹	2- 11
Short-Term Cleaning (30 min.) ²	1 - 13
Maximum Feed Silt Density Index	SDI 5
Free Chlorine Tolerance ⁴	< 0.1 ppm

1. For recommended feed and permeate flow rates, flux, and recovery for various feed sources, refer to PPAQ™ Design Guidelines for multiple-element systems of 8-inch elements.
2. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
3. Consult your PPAQ representative for advice on applications above 95°F (35°C). Relevant information regarding operation at high temperature and pressure: PPAQ™ Seawater Elements Operating Limits and Shimming Elements.
4. Refer to PPAQ™ Cleaning Guidelines.
5. Oxidation damage is not covered under warranty, PPAQ recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater for more information.



PPAQ™ SW8040XLE-440

HIGH REJECTION AND ULTRA HIGH PERFORMANCE INDUSTRY-STANDARD SEAWATER REVERSE OSMOSIS MEMBRANE ELEMENT

Key Features

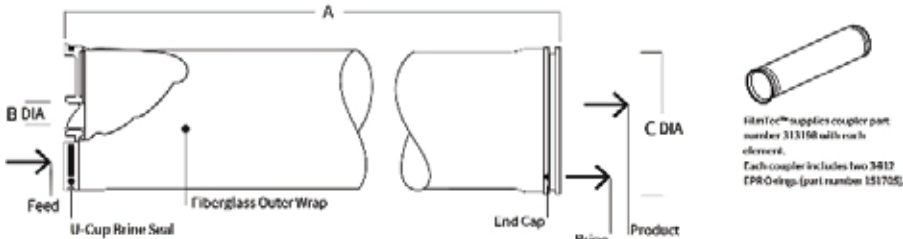
- Optimized combination of water production, permeate quality, and fouling resistance reducing the number of chemical cleanings
- Excellent durability resulting in stable long-term performance
- Longer storage time and warranty coverage with improved sustainability footprint versus our wet RO membrane elements
- More efficient cleaning of biofilm, organic compounds and scale, achieved through one of the widest pH range in cleaning

Typical Properties

PPAQ™ Element	Active Area ft ² (m ²)	Feed Spacer Thickness (mil)	Permeate Flow Rate gpd (m ³ /d)	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
SW8040XLE-440	440(40.9)	28	12100 (45.8)	99.7	99.5

1. Permeate flow and salt rejection based on the following standard conditions: 32,000 ppm NaCl, 5 ppm boron, 800 psi (5.5 MPa), 77°F (25°C), pH 8, 8% recovery.
2. Permeate flows for individual elements may vary ± 15%.
3. Sales specifications may vary as design revisions take place.

Element Dimensions



PPAQ™

Element SW8040XLE-440 Dimensions - inches (mm)

A	40.0 (1,016)
B	1.125 (29)
C	7.9 (201)

1. For element weight information refer to [What is the weight of PPAQ™ elements as delivered?](#)
2. For element packaging and shipping information refer to [How are PPAQ™ elements packaged and shipped?](#)

Suggested Operating Conditions

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	113°F (45°C)
Maximum Operating Pressure	1200 psig (83 bar)
Maximum Pressure Drop	
Per Element	15 psig (1.0 bar)
Per Pressure Vessel (Minimum 4 Elements)	50 psig (3.5 bar)
pH Range	
Continuous Operation ¹	2- 11
Short-Term Cleaning (30 min.) ²	1 - 13
Maximum Feed Silt Density Index	SDI 5
Free Chlorine Tolerance ⁴	< 0.1 ppm

1. For recommended feed and permeate flow rates, flux, and recovery for various feed sources, refer to PPAQ™ Design Guidelines for multiple-element systems of 8-inch elements.
2. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
3. Consult your PPAQ representative for advice on applications above 95°F (35°C). Relevant information regarding operation at high temperature and pressure: PPAQ™ Seawater Elements Operating Limits and Shimming Elements.
4. Refer to PPAQ™ Cleaning Guidelines.
5. Oxidation damage is not covered under warranty, PPAQ recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater for more information.



**MANUFACTURER AND TECHNOLOGY
DEVELOPMENT COMPANY**





تست‌های عملکردی:

اجرا، گزارش‌دهی و ارائه راهکارهای مبتنی بر انواع آتاپسی‌های عمومی و اختصاصی، تست‌های حین انجام کار در واحد مربوطه و تست‌های آزمایشگاهی در پیشرفته‌ترین آزمایشگاه تخصصی ممبران‌های آب شیرین‌کن کشور جهت ارزیابی کمی و کیفی ممبران‌ها از نظر انواع فاولینگ، آسیب‌های فیزیکی و پارامترهای عملیاتی نظیر طول عمر، بهترین چرخه شستشو، میزان افت بازدهی ممبران‌ها...

سرویس	حوزه ارائه
اجرا، گزارش‌دهی و ارائه راهکار	آتاپسی‌های عمومی آتاپسی‌های اختصاصی تست‌های حین انجام کار تست‌های آزمایشگاهی

FUNCTIONAL TESTS

تعویض تجهیزات و بهره‌برداری:

بهره‌برداری از واحدهای آب شیرین‌کن به صورت تخصصی با توجه به بهینه‌سازی‌های مد نظر در کل مجموعه مانند مواد مصرفی و تولید با حداکثر ظرفیت عملیاتی سیستم و تعویض بنا به درخواست کلیه تجهیزات و قطعات، بویژه ممبران‌های آب شیرین‌کن و راه‌اندازی مجدد تضمینی واحد در نظر گرفتن تمامی شرایط فنی، سلامت تجهیزات و HSE واحد

سرویس	حوزه ارائه
بهره‌برداری تخصصی آموزش پرسنل تعویض بنا به درخواست کلیه تجهیزات و قطعات بویژه ممبران‌ها راه‌اندازی مجدد تضمینی واحد	بهینه‌سازی مواد مصرفی تولید با حداکثر ظرفیت عملیاتی در نظر گرفتن تمامی شرایط فنی سلامت تجهیزات HSE واحد

EQUIPMENT REPLACEMENT AND OPERATION

پایش عملکرد:

ارائه خدمات تخصصی داده برداری، ساخت داشبوردهای کنترلی همزمان و آنالیز لحظه‌ای و دوره‌ای از تجهیزات آب شیرین‌کن و نگهداری شرایط بهره‌برداری در نقطه بهینه عملیاتی بصورت دائمی

سرویس	حوزه ارائه
داده برداری داشبوردهای کنترلی همزمان آنالیز لحظه‌ای و دوره‌ای نقطه بهینه عملیاتی	شناخت سیستم رصد عملکرد پیش‌بینی الزامات و نقاط چالش

PERFORMANCE MONITORING

نگهداری و تعمیرات:

بررسی، عیب‌یابی و رفع نقص تخصصی انواع واحدهای آب شیرین‌کن، به‌مراه خدمات مرتبط با نگهداشت اعم از شستشو، آنالیز شرایط تولیدی و بهینه‌سازی سیستمی فرآیند تولید با هدف افزایش تولید آب، افزایش کیفیت آب تولیدی و کاهش مصرف انرژی

سرویس	حوزه ارائه
بررسی و تحلیل وضعیت کنونی عیب‌یابی رفع نقص خدمات مرتبط با نگهداشت شستشو آنالیز شرایط تولیدی بهینه‌سازی سیستمی فرآیند	افزایش تولید آب افزایش کیفیت آب تولیدی کاهش مصرف انرژی

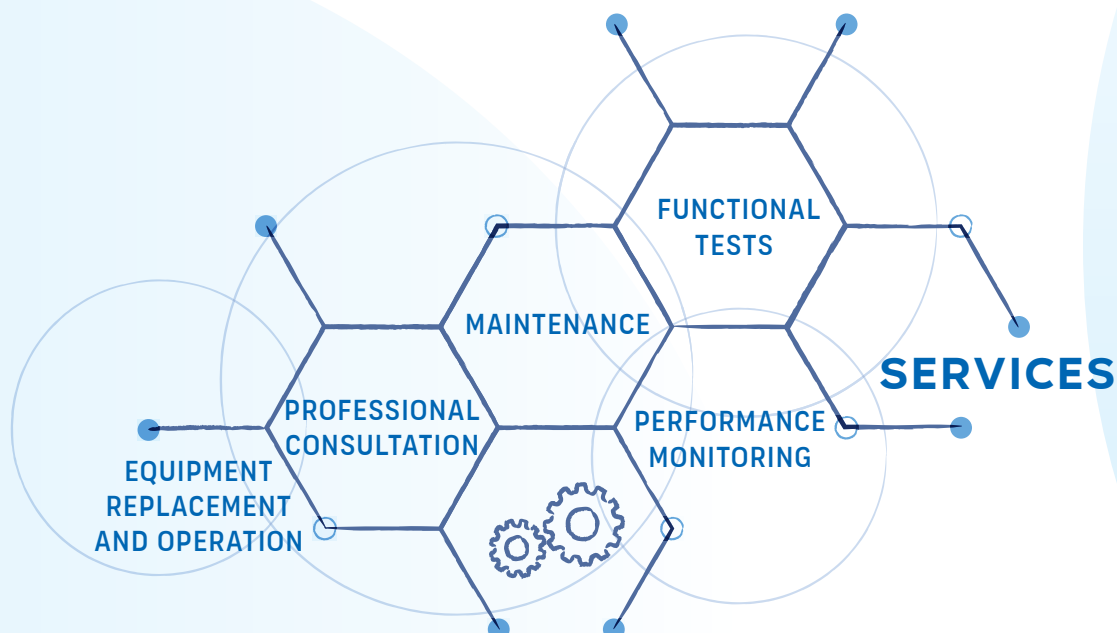
MAINTENANCE

مشاوره تخصصی:

مشاوره تخصصی پروژه‌های، مقیم یا آنلاین در تمام مقاطع تولید آب اعم از طراحی، تامین تجهیزات، بهره‌برداری، عیب‌یابی و پایش عملکرد واحدهای آب شیرین‌کن صنعتی با هدف کاهش زمان‌های خاموشی، افزایش بهره‌وری و برطرف نمودن مشکلات واحد

سرویس	حوزه ارائه
پروژه‌های، مقیم و آنلاین طراحی تامین تجهیزات بهره‌برداری عیب‌یابی پایش عملکرد	کاهش زمان‌های خاموشی افزایش بهره‌وری برطرف نمودن مشکلات واحد

PROFESSIONAL CONSULTATION



PAYA PALA AVID QESHM

«علاوه بر محصولات رایج مصرفی، که دیتاشیت و مشخصات عملکردی آن‌ها به تفصیل گفته شد، توان تولید محصولات اختصاصی متناسب با نیاز و درخواست واحدهای تولیدی یکی از مهمترین نقاط قوت و مزیت‌های رقابتی پایا پالا آوید قشم است. این اختصاصی‌سازی می‌تواند بر اساس جغرافیا، آنالیز آب ورودی، نوع محصول تولیدی، فرآیندهای تولیدی، سرمایه‌ی انسانی، فضا و سرمایه اقتصادی تخصیصی و ... انجام پذیرد»

"Besides common RO Membrane elements, for which their datasheets and performance specifications have been detailed, the production capacity of exclusive products is proportionate to the needs and requests of the Industrial units, making it one of the most significant strengths and competitive advantages of Paya Pala Avid Qeshm. This customization can be carried out based on geography, input water analysis, type of products, production processes, human capital, dedicated space, economic capital, and more.

Adress: Unit 501, 5th floor, no 20, Vosoogh St, Ales St, Zaferaniyeh, Tehran, Iran
Tel: +982122404690, +982122404660
P.o.Box: 1986813621
Website: Payapala.com
contact@payapala.com
Linkedin: Paya Pala Avid Qeshm



PAYA PALA AVID QESHM

تهران، زعفرانیه، خیابان الف، کوچه وثوق، پلاک ۲۰ طبقه ۵، واحد ۵۱ 

۰۲۱-۲۲۴۰۴۶۶۰  ۰۲۱-۲۲۴۰۴۶۹۰  ۰۲۱-۲۲۴۰۴۶۶۰ 

www.payapala.com  contact@payapala.com 