



Reverse Osmosis And Nanofiltration Elements

Product Manual



Catalogue

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Guangdong Ospura Co., Ltd, a majority-owned subsidiary of Wave Cyber(Shanghai), is a company specialized in producing reverse osmosis(RO)membranes for treatment units of home drinking water, brackish water and sea water. Advanced membrane technology, state of the art web handling production line, coupled with well-controlled element rolling, allows Ospura to produce RO Membrane Elements with stable performance.

Ospura has a professional team focused on research and development, with its own intellectual property rights and R& D capability.Ospura elements are uniquelyengineered to have a high level of salt rejection with minimum compromise in water flux.

Ospura RO Membrane Elements are certified by NSF (National Sanitation Foundation).



General Description for all Industrial Spiral wound elements:

Ospura reverse osmosis (RO) Industrial elements are some of the finest products in the industry. The state of the art coating line, coupled with advanced membrane technology, yields product of the highest quality and most stable performance. Ospura elements are uniquely engineered to have a high level of salt rejection with minimum compromise in water flux.

Membrane material: Polyamide thin film composite
Spirally wound element
Epoxy-based FRP overwrap (unless specified otherwise)

Important Operation Notes

- It is critical to follow approved start-up procedure to prevent membrane damage due to overfeeding or hydraulic shock. Before initiating a system, loading of the RO elements, instrument calibration, membrane pretreatment and other system checks should be conducted.
- Minimize any pressure shock or cross-flow fluctuation on the spiral elements at all times. During start-up, a gradual, incremental change from a standstill to operating state is recommended.
- Maximum pressure drop across an entire pressure vessel (housing) is 50 psi (3.4 bar).
- No static pressure should ever be built up on permeate side.
- Keep elements moist at all times after initial wetting.
- If operating limits and guidelines are not followed, the Limited Warranty will be void.
- In case of prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution to prevent bacteria growth.
- Permeate collected from first hour of operation should be discarded.
- It is customer's responsibility to make sure that the chemicals and lubricants do not have detrimental effects on RO elements.



8" Spiral Wound Elements for Sea Water

Description:

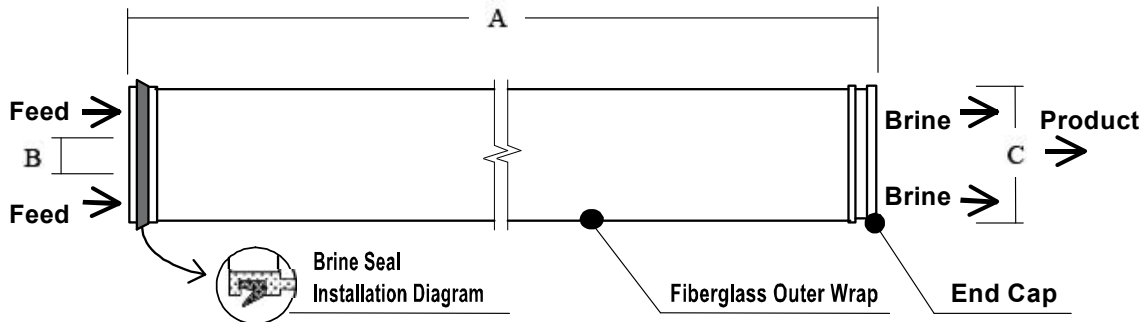
High Rejection, High Productivity:
High pressure application for sea water treatment

Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
SW-8040-HR	7500 (28)	400(37)	99.8%	99.6%	28(0.7)	800psi/32800ppm NaCl
SW-8040-HF	9200 (35)	400(37)	99.7%	99.5%	28(0.7)	800psi/32800ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 8% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:



Product	Dimensions – Inches (mm)		
	A	B	C
SW-8040-HR	40.0 (1016)	1.125 (29)	7.9 (201)
SW-8040-HF	40.0 (1016)	1.125 (29)	7.9 (201)

* 1 inch= 25.4 mm

**Operating Limits
for Design:**

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	1200psi(83bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	2-11
pH Range for Cleaning.....	1.2-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



8" Spiral Wound Elements for Brackish Water

Description:

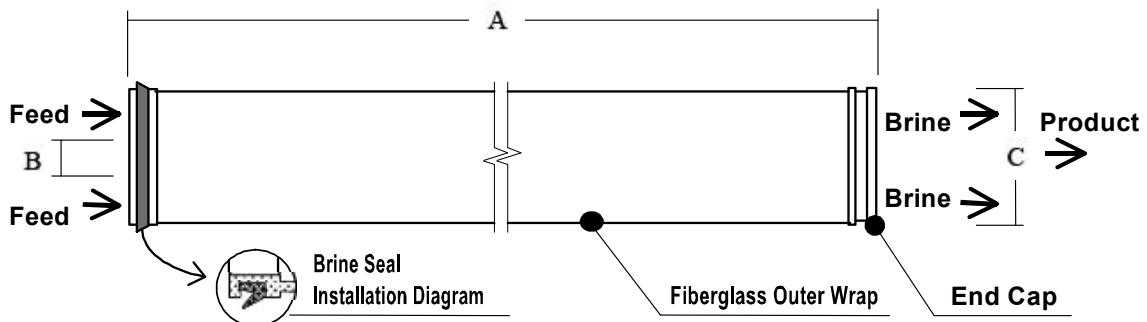
Low Pressure, High Productivity:
Low or ultra low pressure application for brackish water treatment

Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
BW-8040-400	11100(42)	400(37)	99.6%	99.4%	28(0.7)	225psi/2000ppm NaCl
BW-8040-HR	10500(40)	400(37)	99.7%	99.5%	28(0.7)	225psi/2000ppm NaCl
ULP-8040-400	11100(42)	400(37)	99.2%	99.0%	28(0.7)	150psi/2000ppm NaCl
ULP-8040-400- HR	10800(41)	400(37)	99.4%	99.2%	28(0.7)	150psi/2000ppm NaCl
ULP-8040-440	12300(47)	440(41)	99.2%	99.0%	28(0.7)	150psi/2000ppm NaCl
ULP-8040-440- HR	11800(45)	440(41)	99.4%	99.2%	28(0.7)	150psi/2000ppm NaCl
XULP-8040-400	10600(40)	400(37)	99.2%	99.0%	28(0.7)	100psi/500ppm NaCl
XULP-8040-440	11600(44)	440(41)	99.2%	99.0%	28(0.7)	100psi/500ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:



Product	Dimensions – Inches (mm)		
	A	B	C
BW-8040-400	40.0 (1016)	1.125 (29)	7.9 (201)
BW-8040-HR	40.0 (1016)	1.125 (29)	7.9 (201)
ULP-8040-400	40.0 (1016)	1.125 (29)	7.9 (201)
ULP-8040-400-HR	40.0 (1016)	1.125 (29)	7.9 (201)
ULP-8040-440	40.0 (1016)	1.125 (29)	7.9 (201)
ULP-8040-440-HR	40.0 (1016)	1.125 (29)	7.9 (201)
XULP-8040-400	40.0 (1016)	1.125 (29)	7.9 (201)
XULP-8040-440	40.0 (1016)	1.125 (29)	7.9 (201)

* 1 inch= 25.4 mm

**Operating Limits
for Design:**

Maximum Operating Temperature..... 45°C(113°F)
Maximum Operating Pressure..... 600psi(41bar)
Maximum Pressure Drop (single element)..... 15psi(1.0bar)
pH Range for Continuous Operation..... 2-11
pH Range for Cleaning(BW series)..... 1.2-12
pH Range for Cleaning(ULP&XULP series)..... 2-12
Chlorine tolerance..... <0.1ppm
Maximum Feed SDI..... 5



8" Fouling Resistant Spiral Wound Elements

Description:

Low Pressure, High Productivity:

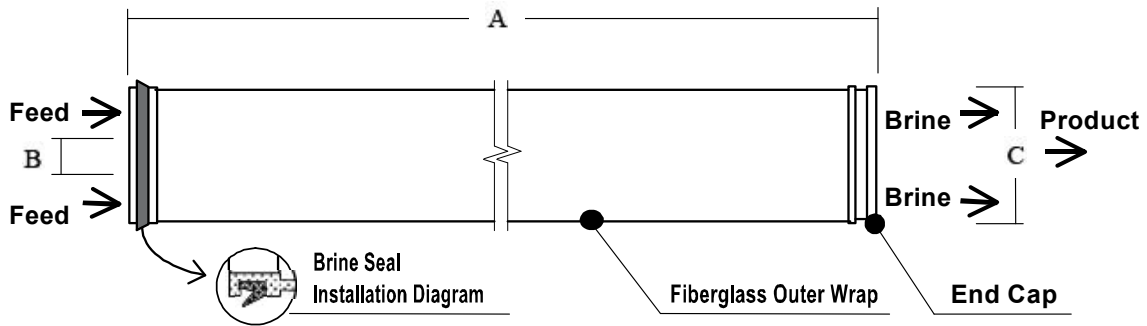
The FR type membrane surface is more hydrophilic due to the special treatment. It is specially designed for water treatment against biological and organic fouling. With build-in FR properties, this model of elements allows for effective cleaning, renewing active membrane surface thus extending the service life in the tough water conditions.

Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
FR-8040-400(34)	10500(40)	400(37)	99.5%	99.4%	34(0.85)	225psi/2000ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:



Product	Dimensions – Inches (mm)		
	A	B	C
FR-8040-400(34)	40.0 (1016)	1.125 (29)	7.9 (201)

* 1 inch= 25.4 mm

Operating Limits for Design:

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	600psi(41bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	2-11
pH Range for Cleaning.....	1.2-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



8" Spiral Wound Nanofiltration Elements

Description:

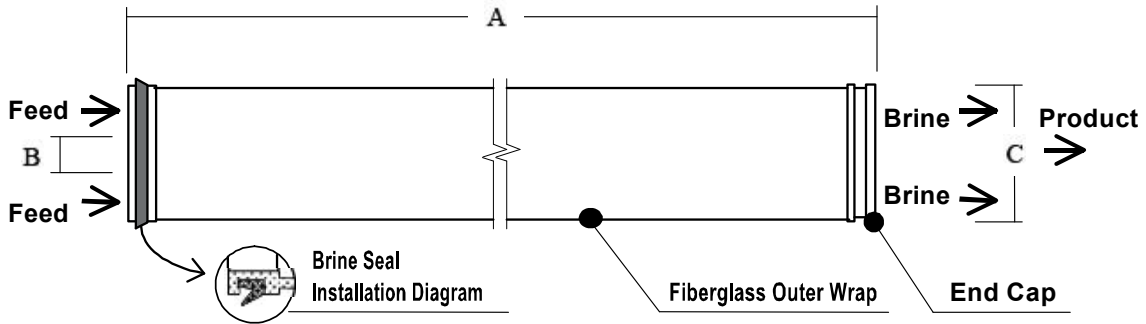
Low Pressure, High Productivity:
Low pressure application for nanofiltration

Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
NF-8040-400	11800 (45)	400 (37)	98%	97%	28 (0.7)	70psi/2000ppm MgSO ₄
	13800 (52)		40~60%			70psi/500ppm NaCl
NF-8040-400 (34)	11800 (45)	400 (37)	98%	97%	34 (0.85)	70psi/2000ppm MgSO ₄
	13800 (52)		40~60%			70psi/500ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:



Product	Dimensions – Inches (mm)		
	A	B	C
NF-8040-400	40.0 (1016)	1.125 (29)	7.9 (201)
NF-8040-400 (34)	40.0 (1016)	1.125 (29)	7.9 (201)

* 1 inch= 25.4 mm

Operating Limits for Design:

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	600psi(41bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	3-10
pH Range for Cleaning.....	2-11
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



8" Spiral Wound Nanofiltration Elements

Description:

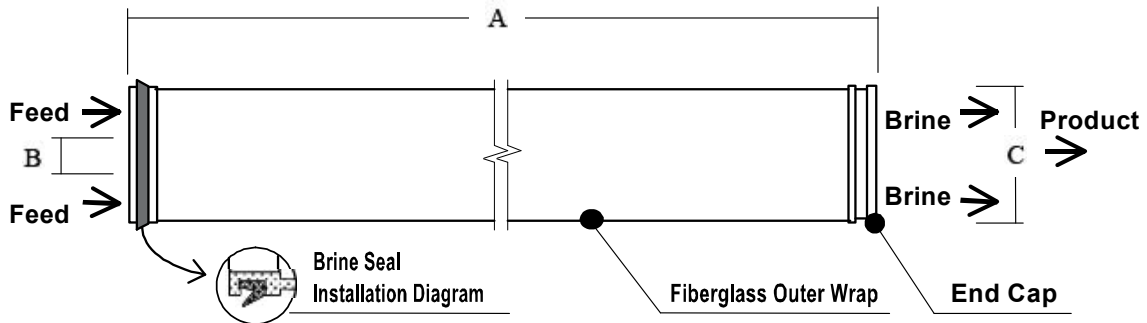
Low Pressure, High Productivity:
Low pressure application for nanofiltration

Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
NF-8040-400-HR	8600 (33)	400 (37)	99%	98%	28 (0.7)	100psi/2000ppm MgSO ₄
	8400 (32)		40~60%			70psi/500ppm NaCl
NF-8040-400-HR (34)	8600 (33)	400 (37)	99%	98%	34 (0.85)	100psi/2000ppm MgSO ₄
	8400 (32)		40~60%			70psi/500ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:



Product	Dimensions – Inches (mm)		
	A	B	C
NF-8040-400-HR	40.0 (1016)	1.125 (29)	7.9 (201)
NF-8040-400-HR(34)	40.0 (1016)	1.125 (29)	7.9 (201)

* 1 inch= 25.4 mm

Operating Limits for Design:

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	600psi(41bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	3-10
pH Range for Cleaning.....	2-11
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



8" Spiral Wound Nanofiltration Elements

Description:

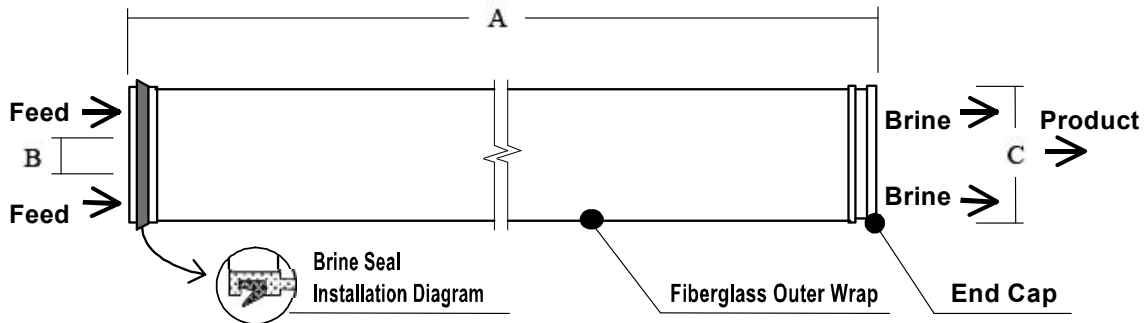
Low Pressure, High Productivity:
Low pressure application for nanofiltration

Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
NF-8040-400-HF	7900 (30)	400 (37)	95%	93%	28 (0.7)	30psi/2000ppm MgSO ₄
	9500 (36)		15~20%			30psi/500ppm NaCl
NF-8040-400-HF (34)	7900 (30)	400 (37)	95%	93%	34 (0.85)	30psi/2000ppm MgSO ₄
	9500 (36)		15~20%			30psi/500ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:



Product	Dimensions – Inches (mm)		
	A	B	C
NF-8040-400-HF	40.0 (1016)	1.125 (29)	7.9 (201)
NF-8040-400-HF(34)	40.0 (1016)	1.125 (29)	7.9 (201)

* 1 inch= 25.4 mm

**Operating Limits
for Design:**

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	600psi(41bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	3-10
pH Range for Cleaning.....	2-11
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



4" Spiral Wound Elements for Sea Water

Description:

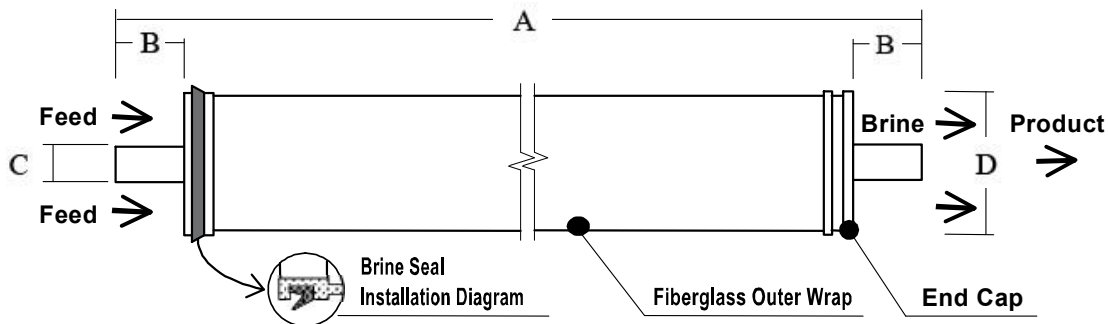
High Rejection, High Productivity:
High pressure application for sea water treatment

Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
SW- 4040	1900 (7)	90(8.4)	99.8%	99.6%	28(0.7)	800psi/32800ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 8% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:



Product	Dimensions – Inches (mm)			
	A	B	C	D
SW- 4040	40.0 (1016)	1.05 (26.7)	0.75 (19)	3.9 (99)

* 1 inch= 25.4 mm

**Operating Limits
for Design:**

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	1200psi(83bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	2-11
pH Range for Cleaning.....	1.2-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



4" Spiral Wound Elements for Brackish Water I

Description:

Low Pressure, High Productivity:
Low or ultra low pressure application for brackish water treatment

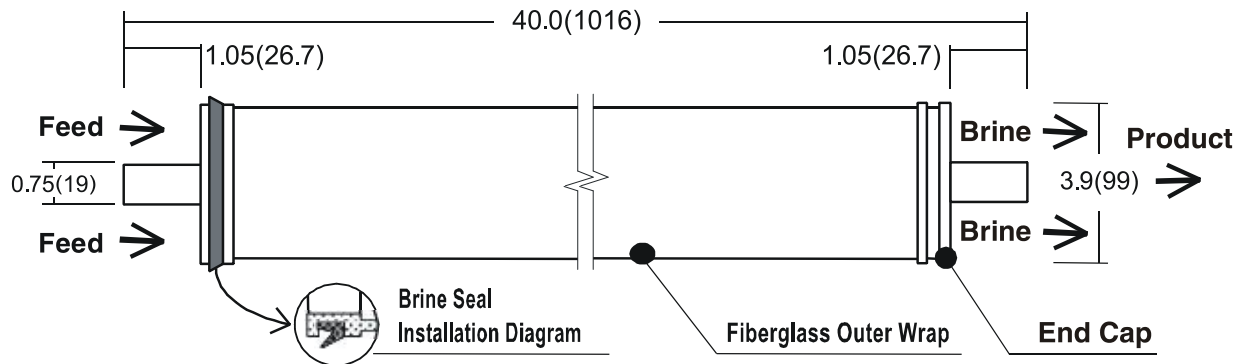
Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
BW- 4040	2400(9)	90(8.4)	99.6%	99.4%	28(0.7)	225psi/2000ppm NaCl
BW- 4040-HR	2200(8)	90(8.4)	99.7%	99.5%	28(0.7)	225psi/2000ppm NaCl
ULP- 4040-HF	2900(11)	90(8.4)	99.0%	98.6%	28(0.7)	150psi/2000ppm NaCl
ULP- 4040	2500(9)	90(8.4)	99.2%	99.0%	28(0.7)	150psi/2000ppm NaCl
ULP-4040-HR	2100(8)	90(8.4)	99.4%	99.2%	28(0.7)	150psi/2000ppm NaCl
XULP -4040	2400(9)	90(8.4)	99.2%	99.0%	28(0.7)	100psi/500ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:

* Unit: Inch (mm)
1 inch= 25.4 mm



**Operating Limits
for Design:**

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	600psi(41bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	2-11
pH Range for Cleaning(BW series).....	1.2-12
pH Range for Cleaning(ULP&XULP series).....	2-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



4" Spiral Wound Elements for Brackish Water II

Description:

Low Pressure, High Productivity:
 Low or ultra low pressure application for brackish water treatment

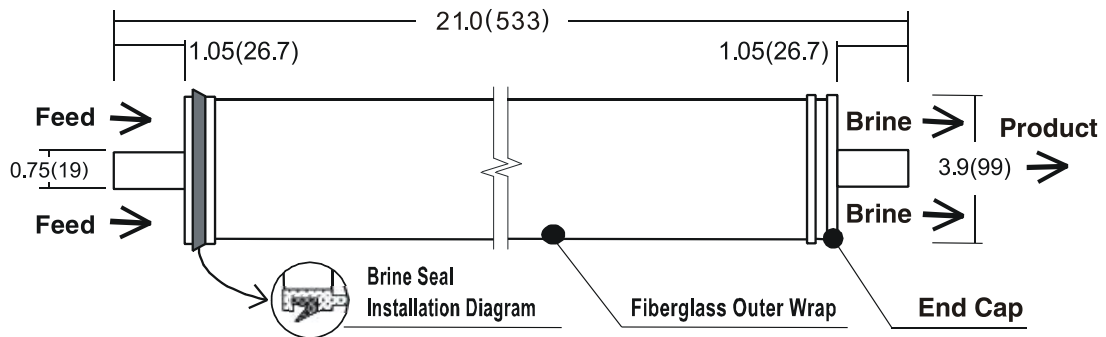
Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
BW- 4021	900(3.4)	36(3.3)	99.6%	99.4%	28(0.7)	225psi/2000ppm NaCl
ULP- 4021	1050(4.0)	36(3.3)	99.2%	99.0%	28(0.7)	150psi/2000ppm NaCl
XULP-4021	1050(4.0)	36(3.3)	99.2%	99.0%	28(0.7)	100psi/500ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:

* Unit: Inch (mm)
 1 inch= 25.4 mm



**Operating Limits
for Design:**

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	600psi(41bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	2-11
pH Range for Cleaning(BW series).....	1.2-12
pH Range for Cleaning(XULP&ULP series).....	2-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



4" Fouling Resistant Spiral Wound Elements

Description:

Low Pressure, High Productivity:

The FR type membrane surface is more hydrophilic due to the special treatment. It is specially designed for water treatment against biological and organic fouling. With build-in FR properties, this model of elements allows for effective cleaning, renewing active membrane surface thus extending the service life in the tough water conditions.

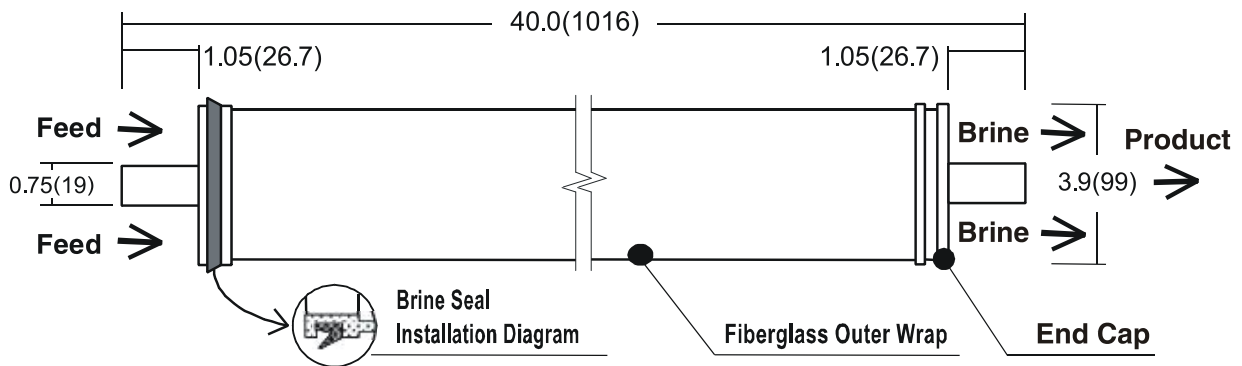
Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
FR- 4040	2400(9)	90(8.4)	99.5%	99.4%	28(0.7)	225psi/2000ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 8% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:

* Unit: Inch (mm)
1 inch= 25.4 mm



**Operating Limits
for Design:**

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	600psi(41 bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	2-11
pH Range for Cleaning.....	1.2-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



4" Spiral Wound Nanofiltration Elements

Description:

Low Pressure, High Productivity:
Low pressure application for nanofiltration

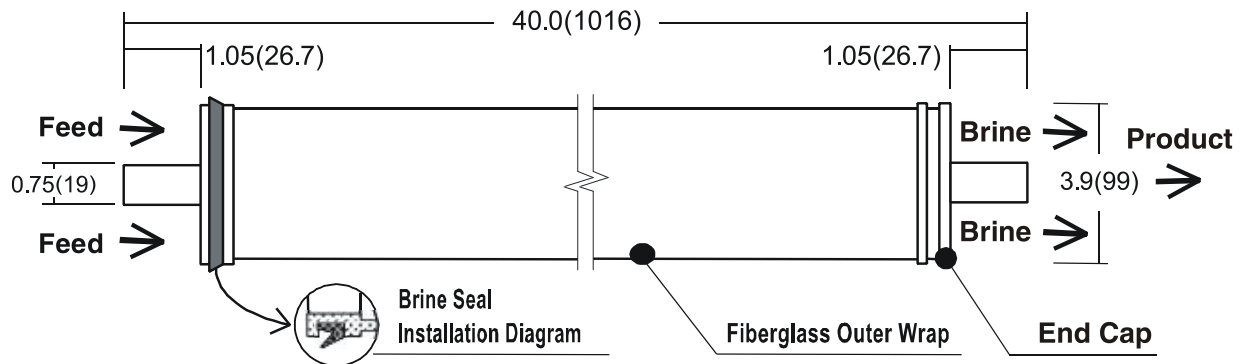
Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Minimum Salt Rejection	Feed spacer mil(mm)	Test Conditions
NF-4040	2800 (11)	90 (8.4)	98%	97%	28 (0.7)	70psi/2000ppm MgSO ₄
	3300 (12)		40~60%			70psi/500ppm NaCl
NF-4040-HR	2100 (8)	90 (8.4)	99%	98%	28 (0.7)	100psi/2000ppm MgSO ₄
	2000 (8)		40~60%			70psi/500ppm NaCl
NF-4040-HF	2100 (8)	90 (8.4)	95%	93%	28 (0.7)	30psi/2000ppm MgSO ₄
	2500 (9)		15~20%			30psi/500ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:

* Unit: Inch (mm)
1 inch= 25.4 mm



**Operating Limits
for Design:**

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	600psi(41bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	3-10
pH Range for Cleaning.....	2-11
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



2.5" Spiral Wound Elements for Sea Water I

Description: High Rejection, High Productivity:
High pressure application for sea water treatment

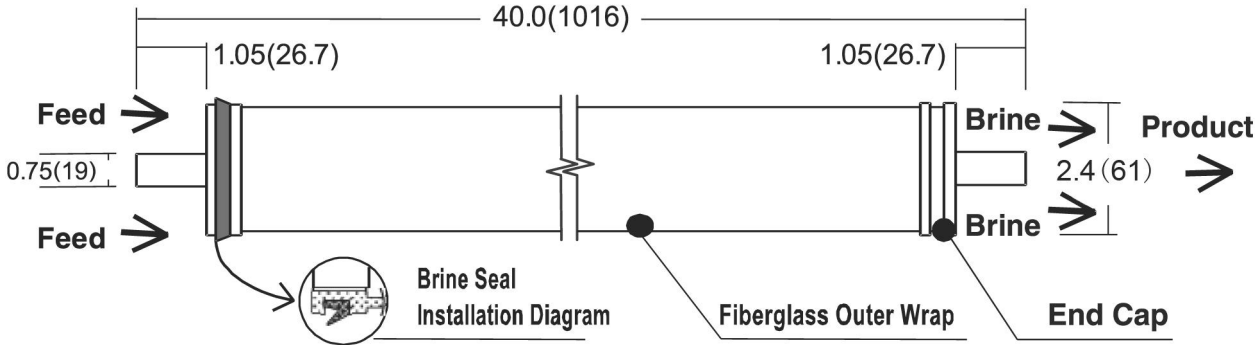
Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Feed spacer mil(mm)	Test Conditions
SW- 2540	700 (2.6)	27(2.5)	99.4%	28(0.7)	800psi/32800ppm NaCl

- 1. All performance data are collected at 25°C (77°F), pH7.5 and 8% recovery rate.
- 2. Permeate flows for single element may vary ±15%.

Element Dimension:

* Unit: Inch (mm)
1 inch= 25.4 mm



**Operating Limits
for Design:**

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	1200psi(83bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	2-11
pH Range for Cleaning.....	1.2-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



2.5" Spiral Wound Elements for Sea Water II

Description:

High Rejection, High Productivity:
High pressure application for sea water treatment

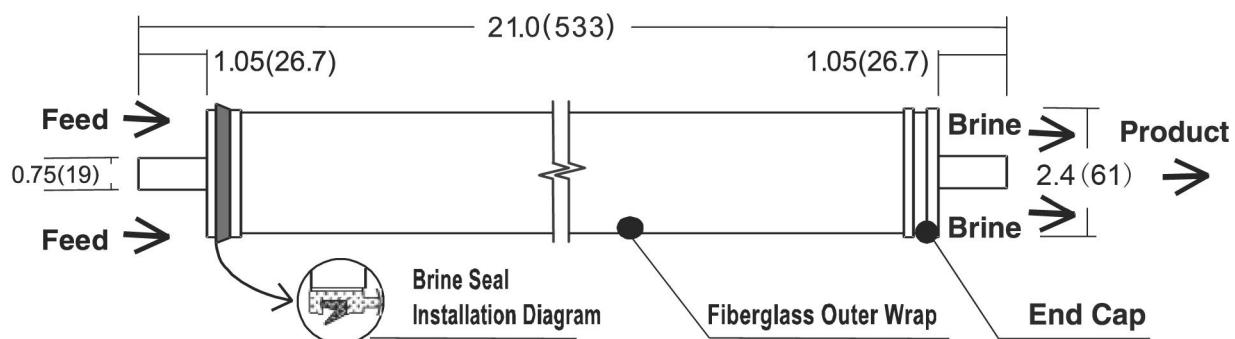
Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Feed spacer mil(mm)	Test Conditions
SW- 2521	300(1.1)	11(1.0)	99.4%	28(0.7)	800psi/32800ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 8% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:

* Unit: Inch (mm)
1 inch= 25.4 mm



**Operating Limits
for Design:**

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	1200psi(83bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	2-11
pH Range for Cleaning.....	1.2-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



2.5" Spiral Wound Elements for Brackish Water I

Description:

Low Pressure, High Productivity:
 Low or ultra low pressure application for brackish water treatment

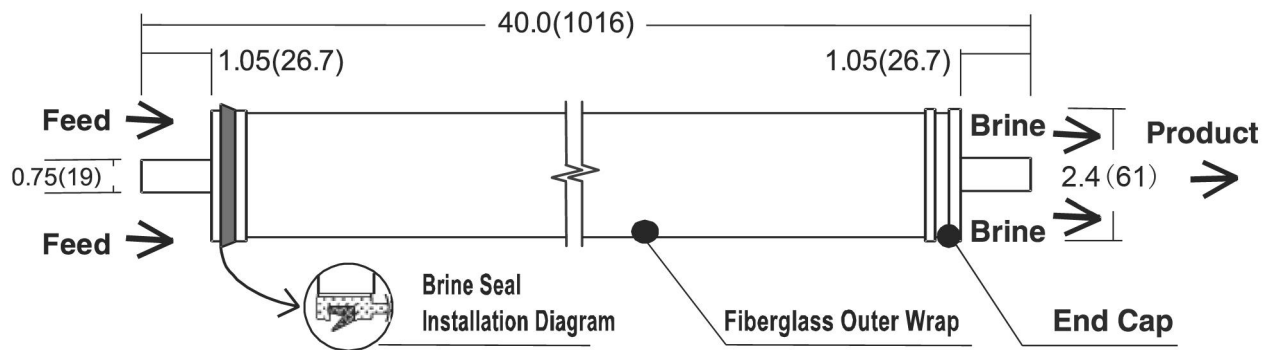
Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Feed spacer mil(mm)	Test Conditions
BW-2540	850(3.2)	27(2.5)	99.5%	28(0.7)	225psi/2000ppm NaCl
ULP-2540	758(2.9)	27(2.5)	99.2%	28(0.7)	150psi/2000ppm NaCl
XULP-2540	758(2.9)	27(2.5)	99.2%	28(0.7)	100psi/500ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:

* Unit: Inch (mm)
 1 inch= 25.4 mm



Operating Limits for Design:

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	600psi(41bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	2-11
pH Range for Cleaning(BW series).....	1.2-12
pH Range for Cleaning(ULP&XULP series).....	2-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



2.5" Spiral Wound Elements for Brackish Water II

Description:

Low Pressure, High Productivity:
Low or ultra low pressure application for brackish water treatment

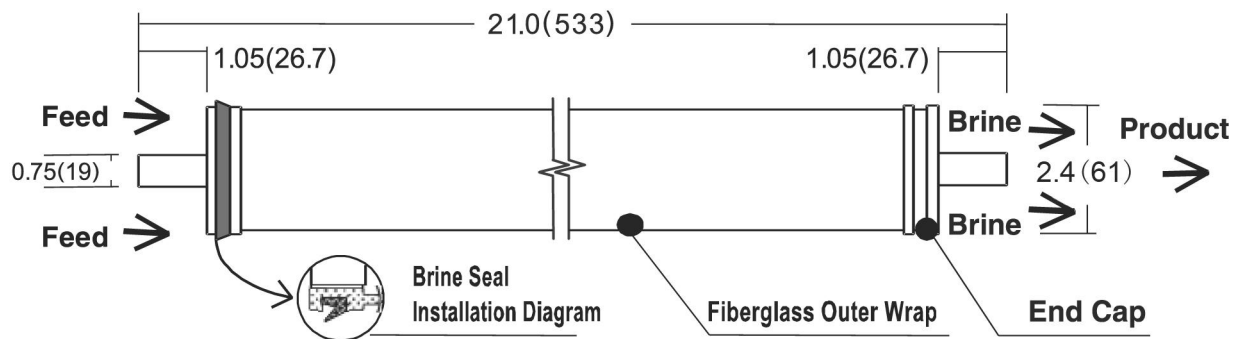
Specifications:

Model	Permeate Flow GPD(m ³ /day)	Active Membrane Area ft ² (m ²)	Stabilized Salt Rejection	Feed spacer mil(mm)	Test Conditions
BW-2521	318(1.2)	11(1)	99.5%	28(0.7)	225psi/2000ppm NaCl
ULP-2521	318(1.2)	11(1)	99.2%	28(0.7)	150psi/2000ppm NaCl
XULP-2521	365(1.4)	11(1)	99.2%	28(0.7)	100psi/500ppm NaCl

1. All performance data are collected at 25°C (77°F), pH7.5 and 15% recovery rate.
2. Permeate flows for single element may vary ±15%.

Element Dimension:

* Unit: Inch (mm)
1 inch= 25.4 mm



Operating Limits for Design:

Maximum Operating Temperature.....	45°C(113°F)
Maximum Operating Pressure.....	600psi(41bar)
Maximum Pressure Drop (single element).....	15psi(1.0bar)
pH Range for Continuous Operation.....	2-11
pH Range for Cleaning(BW series).....	1.2-12
pH Range for Cleaning(ULP&XULP series).....	2-12
Chlorine tolerance.....	<0.1ppm
Maximum Feed SDI.....	5



Residential RO Membrane Elements I

Introduction:

Ospura reverse osmosis (RO) membrane elements for household drinking water are some of the most reliable and consistent products in the industry. Advanced membrane technology, coupled with well-controlled element rolling, allows Ospura to produce RO Membrane Elements with stable performance. Ospura's first class RO Membrane Element quality helps customers develop and maintain brand recognition, along with a reputation for building systems that reliably provide low impurity drinking water. Ospura elements are uniquely engineered for their high level of salt rejection with minimum compromise in water flux. Ospura RO Membrane Elements have been certified by NSF (National Sanitation Foundation).

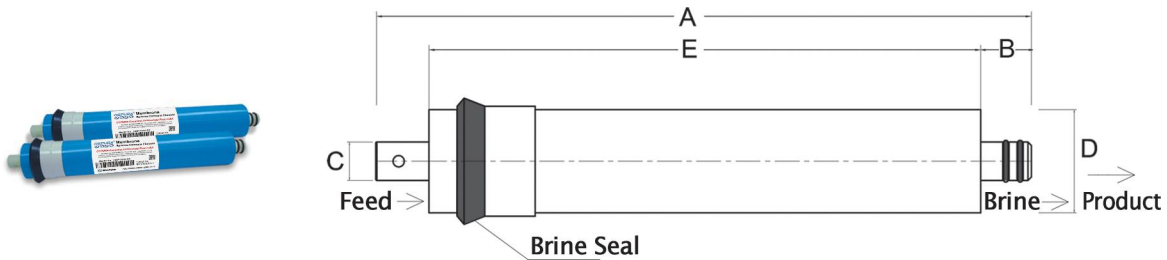
Specifications:

Specification Item	Specification						
	OSP-1812-24	OSP-1812-36	OSP-1812-50	OSP-1812-75	OSP-1812-100	OSP-1810-36	OSP-1810-50
Water Yield (GPD)	24	36	50	75	100	36	50
Stabilized Salt Rejection (%)	97	97	97	97	96	97	97

* Test Condition: 25°C, 250PPM NaCl solution, 60PSI and 35% recovery rate

* Permeate flows for single element may vary ±15%.

Dimension:



Model No.	Dimension- Inches (mm)				
	A	B	C	D	E
OSP-1812	11.75 (298)	0.87 (22)	0.68 (17)	1.75 (44.5)	10.00 (254)
OSP-1810	10.07 (256)	0.87 (22)	0.68 (17)	1.75 (44.5)	9.05 (230)

* Home Drinking Water elements seal at a standard 2.0 inch I.D. within pressure vessels

1 inch=25.4 mm

**Operating Limits
for Design:**

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	113°F /45°C
Maximum Operating Pressure	300psi(21bar)
pH range, Continuous Operation	2-11
pH range, Short-Term Cleaning (30 min)	1-12
Maximum Feed Silt Density Index(SDI)	5
Free Chlorine Tolerance	<0.1ppm

**Important
Operation Notes:**

- When this product is used for the first time, permeate water obtained from the first hour of use should be discarded.
- Keep elements moist at all times after initial wetting.
- If operating limits and guidelines given in this Product Information Bulletin are not strictly followed, the Limited Warranty will be null and void.
- To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution. Rinse out the preservative before use.
- The OEM is fully responsible for the effects of incompatible chemicals and lubricants on elements. Use of any such chemicals or lubricants will void the Limited Warranty.

Residential RO Membrane Elements II

Introduction:

Ospura reverse osmosis (RO) membrane elements for household drinking water are some of the most reliable and consistent products in the industry. Advanced membrane technology, coupled with well-controlled element rolling, allows Ospura to produce RO Membrane Elements with stable performance. Ospura's first class RO Membrane Element quality helps customers develop and maintain brand recognition, along with a reputation for building systems that reliably provide low impurity drinking water. Ospura elements are uniquely engineered for their high level of salt rejection with minimum compromise in water flux.

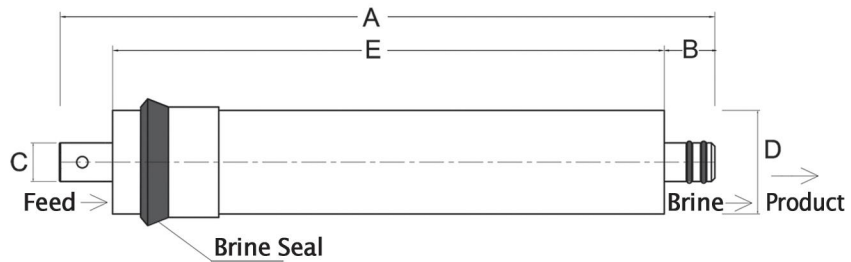
Specifications:

Specification Item	Specification					
	OSP-2812-200	OSP-2812-300	OSP-2813-400	OSP-3012-400	OSP-3012-500	OSP-3012-600
Water Yield (GPD)	200	300	400	400	500	600
Stabilized Salt Rejection (%)	95	95	95	95	95	95

* Test Condition: 25°C , 500PPM NaCl solution, 100PSI and 50% recovery rate .

* Permeate flows for single element may vary ±15%.

Dimension:



Model No.	Dimension- Inches (mm)				
	A	B	C	D	E
OSP-2812-200	11.75 (298)	0.87 (22)	0.68 (17)	2.60 (66)	10.00 (254)
OSP-2812-300	11.75 (298)	0.87 (22)	0.68 (17)	2.70 (68.5)	10.00 (254)
OSP-2813-400	12.99 (330)	0.98 (25)	0.68 (17)	2.70 (68.5)	11.02 (280)
OSP-3012-400	11.75 (298)	0.87 (22)	0.68 (17)	2.89 (73.5)	10.00 (254)
OSP-3012-500	11.75 (298)	0.87 (22)	0.68 (17)	3.05 (77.5)	10.00 (254)
OSP-3012-600	11.75 (298)	0.87 (22)	0.68 (17)	3.05 (77.5)	10.00 (254)

* Home Drinking Water elements seal at a standard 3.0 inch I.D. within pressure vessels

1 inch=25.4 mm

**Operating Limits
for Design:**

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature	113°F /45°C
Maximum Operating Pressure	300psi(21bar)
pH range, Continuous Operation	2-11
pH range, Short-Term Cleaning (30 min)	1-12
Maximum Feed Silt Density Index(SDI)	5
Free Chlorine Tolerance	<0.1ppm

**Important
Operation Notes:**

- When this product is used for the first time, permeate water obtained from the first hour of use should be discarded.
- Keep elements moist at all times after initial wetting.
- If operating limits and guidelines given in this Product Information Bulletin are not strictly followed, the Limited Warranty will be null and void.
- To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution. Rinse out the preservative before use.
- The OEM is fully responsible for the effects of incompatible chemicals and lubricants on elements. Use of any such chemicals or lubricants will void the Limited Warranty.

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RECOGNIZES

Shantou Ospura Co., Ltd.
China

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September 17, 2013
Certificate# C0161184 - 01

David Parkin
General Manager, Water Systems

NSF International

RECOGNIZES

Shantou Ospura Co., Ltd.
Facility: Guangdong, China

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September 17, 2013
Certificate# C0161187 - 01

David Parkin
General Manager, Water Systems



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