



## PRODUCT INFORMATION

### SEAWATER RO MEMBRANE ELEMENTS 2.5", 4" AND 8"

AquaGuard® Seawater(SW) Thin Film Reverse Osmosis elements are made of Spiral Wound Composite Polyamide membrane, and are fiberglass wrapped for durability, ideal for both land-based and sea-based RO desalination systems.

#### Features:

- Proven reliable and consistent throughout years of operation.
- Handles water quality with a wide range of contaminants.
- Advanced membrane technology handling Seawater.
- High GPD water production, high salt rejection, & high pH tolerance.
- Available in Dry-type or Wet-type elements.



#### Specifications\*:

Model Dry Elements	Permeate Flow <sup>^</sup> GPD (m <sup>3</sup> /d)	Active Area ft <sup>2</sup> (m <sup>2</sup> )	Applied Pressure PSIG (bar)	Stabilized Salt Rejection <sup>†</sup> %	Minimum Salt Rejection <sup>†</sup> %
AQ-SW2521	200 (0.76)	12 (1.1)	800 (55.2)	99.2	99.0
AQ-SW2540	500 (1.89)	29 (2.7)	800 (55.2)	99.2	99.0
AQ-SW4021	750 (2.8)	33 (3.1)	800 (55.2)	99.2	99.0
AQ-SW4040	1,400 (5.3)	84 (7.8)	800 (55.2)	99.5	99.2
AQ-SW8040-335	5,000 (18.9)	335 (31.6)	800 (55.2)	99.7	99.5
AQ-SW8040-380	6,000 (22.7)	380 (35.3)	800 (55.2)	99.7	99.5

\* Based on internal testing results

<sup>†</sup> Salt rejection and actual results will vary depending on operating conditions

\* Add -W after model for Wet-type elements

<sup>^</sup> Permeate flow per element may vary +/- 20%

#### Test Conditions:

TDS of Feed Water NaCl	32,800 PPM
Applied Pressure	800 PSI (55.2 bar)
Temperature	77 F (25 C)
Permeate Recovery 40" Elements	8%
Permeate Recovery 21" Elements	4%
pH Value	7.5

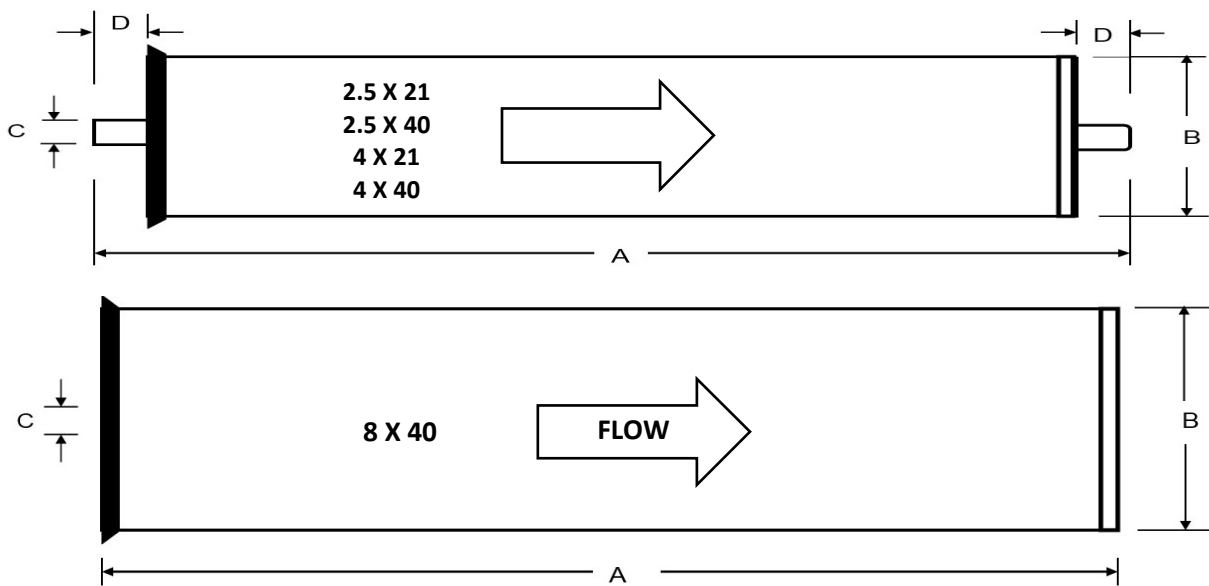
Sample collected after 60 minutes of operation.

#### Operating Limits:

Maximum Applied Pressure	1,000 PSI (69.0 bar)
Maximum Free Chlorine Concentration <sup>~</sup>	<0.1 PPM
Maximum Temperature <sup>‡</sup>	113 F (45 C)
Maximum Feed Flow 2.5" Elements / 4"X21" Elements	6 GPM (1.4 m <sup>3</sup> /h) / 12 GPM (2.8 m <sup>3</sup> /h)
Maximum Feed Flow 4"X40" Elements / 8" Elements	16 GPM (3.6 m <sup>3</sup> /h) / 80 GPM (18.1 m <sup>3</sup> /h)
pH Range During Operation <sup>‡</sup>	3 – 10
Allowable pH Range During Short Term Cleaning <sup>‡</sup>	2 – 12
Maximum Feed Water Turbidity	1.0 NTU
Maximum Feed Water SDI	5
Maximum Pressure Drop of Single 21" Element / Entire Vessel	10 PSI (0.7 bar) / 40 PSI (2.8 bar)
Maximum Pressure Drop of Single 40" Element / Entire Vessel	15 PSI (1 bar) / 50 PSI (3.5 bar)

<sup>‡</sup> If feed water has pH above 9.5, then maximum temperature for continuous operation is 95 F (35 C)

<sup>~</sup> Must remove free chlorine from feed water prior to membrane exposure



**Nominal dimensions and weight:**

Model	A in (mm)	B in (mm)	C in (mm)	D in (mm)	WEIGHT <sup>w</sup> lbs. (kg)
AQ-SW2521 <sup>a</sup>	21" (533)	2.4" (61)	0.75" (19.0)	1.19" (30.2)	2 (0.9)
AQ-SW2540 <sup>a</sup>	40" (1,016)	2.4" (61)	0.75" (19.0)	1.19" (30.2)	3 (1.4)
AQ-SW4021 <sup>b</sup>	21" (533)	3.9" (99)	0.75" (19.0)	1.05" (26.7)	4 (1.8)
AQ-SW4040 <sup>b</sup>	40" (1,016)	3.9" (99)	0.75" (19.0)	1.05" (26.7)	7 (3.2)
AQ-SW8040-335 <sup>+</sup>	40" (1,016)	7.95" (202)	1.125" (28.6)	-	30 (13.6)
AQ-SW8040-380 <sup>+</sup>	40" (1,016)	7.95" (202)	1.125" (28.6)	-	32 (14.5)

<sup>a</sup>Fits standard 2.5" ID membrane housings. <sup>b</sup>Fits standard 4" ID membrane housings. <sup>+</sup>Fits standard 8" ID membrane housings. <sup>w</sup>Dry weight is approximate

**Important Notices and Essential Information:**

- Proper system start-up is essential to prepare the membranes for proper operation and to prevent membrane damage due to overfeeding or hydraulic shock.
- Keep elements moist at all times after initial wetting.
- The membrane has some tolerance to short-term chlorine exposure (hypochlorite) within limits as noted above, but continuous exposure will damage the membrane and should be avoided.
- All local plumbing codes (or any other governing agency laws) must be adhered to before and during the installation/use of this product.
- Do not install this product on water that is microbiologically unsafe or of unknown source.
- The use of this product does not guarantee the removal of cysts and pathogens from water supply.
- All wet-type membrane elements are sealed in a PE bag containing less than 1.0% sodium meta-bisulfite solution. Propanediol may be added in winter.
- Rinse and discard permeate water produced from first hour of operation. Do not use this initial permeate water for drinking or food preparation.
- This Product Information and all data herein are reviewed on a regular basis, and are subject to change without notice. Please request updated information before ordering.
- Aqua General, Inc. believes the information and data contained herein to be useful. This information and data are offered in good faith for reference only, without guarantee. We cannot control the conditions and methods of use of our products. Aqua General, Inc. assumes no liability for actual results obtained or damages incurred through the application or use of Aqua General, Inc. and/or AquaGuard® products, the presented information, and/or this data. It is the user's responsibility to determine the appropriateness of Aqua General, Inc. and/or AquaGuard® products for a particular application.

**Limited Warranty:**

This product has a 1-year pro-rated limited warranty. Under the condition that this product is operated within the specified Operating Limits, Aqua General, Inc. warrants this product to the OEM to be free of defects in manufacturing, materials, and workmanship for a period of 12 months from date of installation or 15 months from date of shipment, whichever comes first. If Operating Limits are not followed, this Limited Warranty will be null and void. The OEM is fully responsible for the effects of incompatible chemicals and lubricants on these elements; use of which will void warranty. Aqua General, Inc.'s limited warranty is subject to its sole discretion and will only be considered after receiving the product back, freight prepaid, for warranty consideration. Aqua General, Inc. is not responsible for consequential damage or damage sustained out of the use of its products. In any case, this warranty is limited only to the replacement cost of such element if found by Aqua General, Inc. to be defective at its sole discretion.

**AquaGuard® Membranes**

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