

# HRO Seafari Escape Specification



## Product Water Produced per hour of operation:

+/-15% 850 psig / 56 Bar, 77°F / 25°C & 35,000 ppm TDS Feed Water Salinity

Model Number	Production Per Hour	Production Per 24 Hours
	U.S. gallons/liters	U.S. gallons/liters
SEM 200	8.3 / 31.5	200 / 757
SEM 300	12.5 / 47.3	300 / 1,136
SEM 400	16.7 / 63.1	400 / 1,514
SEM 500	20.8 / 78.9	500 / 1,893
SEM 600	25 / 94.6	600 / 2,271

## Salt Rejection (Chloride Ion):

Minimum 99.2%, Average 99.4%

## Product Water Temperature:

Ambient to feed water temperature.

## Salinity Monitoring:

Automatic computer controlled electronic monitoring. Temperature compensated with the Water Quality Indicator. The salinity monitoring components of the system give a continuous readout in micromhos per cubic centimeter, are temperature compensated and of a fail-safe design.

## Salinity Range:

Seawater use up to 50,000 ppm TDS (NaCl)  
(typical seawater salinity is 35,000 ppm)

## Temperature Range:

Min. 33°F / .5°C; Max. 122°F / 50°C

## Reverse Osmosis Membrane:

**Type:** Specifically selected High Rejection/High Yield aromatic tri-polyamind, thin film composite, spiral wound, single pass reverse osmosis membrane element.

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## Chlorine Tolerance:

0.1 ppm

## pH Range:

3-11 (typical seawater pH is 8)

## System Pressure:

### Feed Water From The Feed Water Pump

#### Inlet to the Energy Transfer Device:

Nominal at 35,000 ppm TDS feed water salinity and 77°F / 25°C

SEM 200	100 psi / 6.90 bar / 7.03 Kg/cm <sup>2</sup> / 689.5 kPa
SEM 300	110 psi / 7.58 bar / 7.73 Kg/cm <sup>2</sup> / 758.5 kPa
SEM 400	110 psi / 7.58 bar / 7.73 Kg/cm <sup>2</sup> / 758.5 kPa
SEM 500	150 psi / 10.34 bar / 10.55 Kg/cm <sup>2</sup> / 1,034.3 kPa
SEM 600	160 psi / 11.03 bar / 11.25 Kg/cm <sup>2</sup> / 1,103.2 kPa

### Operation Pressure at the R.O. Membrane Element:

Nominal at 35,000 ppm TDS feed water salinity and 77°F / 25°C

SEM 200	600 psi / 41.37 bar / 42.18 Kg/cm <sup>2</sup> / 4,137 kPa
SEM 300	625 psi / 43.09 bar / 43.94 Kg/cm <sup>2</sup> / 4,309 kPa
SEM 400	625 psi / 43.09 bar / 43.94 Kg/cm <sup>2</sup> / 4,309 kPa
SEM 500	765 psi / 52.75 bar / 53.78 Kg/cm <sup>2</sup> / 5,275 kPa
SEM 600	825 psi / 56.88 bar / 58.00 Kg/cm <sup>2</sup> / 5,688 kPa

## Weight:

Model Number	Weight
SEM 200	130 lbs / 59 Kg
SEM 300	138 lbs / 63 Kg
SEM 400	145 lbs / 66 Kg
SEM 500	153 lbs / 69 Kg
SEM 600	155 lbs / 70 Kg

## External Installation Water Connections:

Pipe sizes to be supplied by the installer for connection of the Horizon Reverse Osmosis supplied components.

Feed Inlet:	1/2" Male NPT
Brine Discharge:	1/2" Male NPT
Product:	1/4" Female NPT

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## Nominal Operating Power Consumption in Amperes:

Amperes listed are nominal operating amperes when the feed water conditions are

35,000 PPM TDS Salinity and 77°F / 25°C.

Power consumption will vary depending upon the condition of the R.O. Membrane Element, Feed Water Temperature and Feed Water Salinity.

Model Number	Voltage 12 VDC	24 VDC	100-115 VAC	220-230 VAC
SEM 200	13 amps	6.5 amps	4.5 amps	2.25 amps
SEM 300	20 amps	10 amps	5 amps	2.5 amps
SEM 400	22 amps	11 amps	6.3 amps	3.3 amps
SEM 500	N/A	18 amps	8 amps	4 amps
SEM 600	N/A	20 amps	8.3 amps	4.2 amps