

## Sea Water RO Systems

### SWROL Commercial Series

Martin SWROL Commercial series are available with capacities ranging from 400 GDP to 1600 GDP. Designed to convert seawater to drinking water, these systems use our proven technology to give reliable performance and meet the demanding requirements of the marine environment. Their compact design makes them ideal for use on yachts, boats, cruise ships, and resorts.

#### Standard Features

- Thin Film Composite Seawater RO Membranes
- FRP Seawater Membrane Housing
- Aluminium Bronze or Stainless Steel High Pressure Pumps
- Permeate and Concentrate Flow Meters
- Low and High Pressure Switch
- Compact Powder Coated Frame
- Automatic Operation with Level Controls
- Stainless Steel Back Pressure Control
- 5 Micron Sediment Filter and Housing
- High Pressure Relief Valve
- Auto feed Shut-Off
- Liquid Filled System Pressure Gauge
- Microprocessor Controller for Automatic Operation



MODEL	Capacity (Minimum)	Membrane Quantity	Inlet / Outlet	Motor	DIMENSION LxWxH (CM)	Ship weight (kg)
SWROL-400	400 GPD (1.5Ton/day)	2540X1	3/4" / 3/8"	1.5 HP	120X55X55	75
SWROL-800	800 GPD (3.0Ton/day)	2540X2	3/4" / 3/8"	1.5 HP	120X55X55	90
SWROL-1200	1200 GPD (4.5Ton/day)	2540X3	3/4" / 3/8"	2.0 HP	120X55X55	105
SWROL-1600	1600 GPD (6.0Ton/day)	2540X4	3/4" / 3/8"	3.0 HP	120X55X55	120



### System Working Conditions:

- Based on 35,000 ppm seawater at 77°F (25°C).
- Recovery in the range of 10-15%.
- Operating pressure 800-1000 psi (57-71 kg/cm<sup>2</sup>).

Martin Seawater RO Systems are available in a variety of voltages. Please select the desired voltage code as below. The three-digit code will be added to the end of the Seawater RO System Model number.

Example: SWRO-400-116 = 110v/1ph/60Hz. Voltage Codes (available for all models):

-116 = 110V/1Ph/60Hz

-216 = 220-240V/1Ph/60Hz

-215 = 220-240V/1Ph/50Hz

-235 = 220-240V/3Ph/50Hz

-236 = 220V-240V/3Ph/60Hz

-335 = 380V-420V/3Ph/50Hz

Remark: All weights and dimensions are approximate. Other custom designs are available upon request

### SWRO Industrial Series

SWRO industrial series are available with capacities ranging from 2000 GDP to 132000 GDP. Designed to convert seawater to drinking water, these systems use our proven technology to give reliable performance and meet the demanding requirements of the marine environment. By using high quality reverse osmosis seawater membranes in the water purification process, the product water is used in a variety of areas including hotels, resorts, navy, and off-shore platforms, etc.



### Standard Features

- Thin Film Composite Seawater Membranes
- FRP Seawater Pressure Vessels
- Prefilter & Housing
- 316 Stainless Steel Pressure Gauges
- 316 Stainless Steel Low and High Pressure Switches
- 316 Stainless Steel Back Pressure Regulator
- Low and High Pressure Safeguards
- Stainless Steel High Pressure Pumps
- Pulsation Dampener
- Pressure Relief Valve
- Auto Operation with Level Controls
- Reset Switch to Restart

- Powder Coated Skid
- Permeate and Concentrate Flow meters
- PLC Controls

### OPTIONAL

- Ultraviolet Sterilizer\*
- Sodium Bisulfite or Chlorine Injection System
- Differential Pressure Gauge
- Energy Recovery
- Turbidity Meter
- ORP Meter
- Duplex Stainless Steel High Pressure Pump
- Multimedia Filters

### Energy Recovery (Optional)

- Energy recovery systems recover energy from the waste stream of seawater reverse osmosis (SWRO) systems at up to 98% efficiency.
- Energy recovery will normally pay for itself in energy savings and especially make economical sense in areas where electricity costs are high.
- Main high pressure pump is sized to only the permeate flow rather than the full membrane inlet flow allowing energy savings almost 50% over 20-35% from other manufacturers.

### System Working Conditions:

- Based on 35,000 ppm seawater at 77°F (25°C).
- Recovery in the range of 10-40% depending on the system size.
- Operating pressure 800-1000 psi (57-71 kg/cm<sup>2</sup>).

Model	Capacity		Mem. Quantity	Line sizes						Dimensions			Ship. Weight Kgs
	GPD	m3/day		Inlet		Perm		Conc		L cm.	W cm.	H cm.	
			in.	cm.	in.	cm.	in.	cm.					
SWRO-2000	2,000	6	4040x2	3/4"	2	3/4"	2	3/4"	2	264	95	185	564
SWRO-3000	3,000	11	4040x3	3/4"	2	3/4"	2	3/4"	2	264	95	185	610
SWRO-4000	4,000	15	4040x4	1.5	3.8	3/4"	2	1.5	3.8	264	95	185	650
SWRO-6000	6,000	23	4040x6	1.5	3.8	3/4"	2	1.5	3.8	350	95	185	790
SWRO-10000	10,000	40	8040x2	1.5	3.8	3/4"	2	1.5	3.8	350	116	185	845
SWRO-15000	15,000	60	8040x3	2	5.1	3/4"	2	2	5.1	350	116	185	1650
SWRO-20000	20,000	75	8040x4	2	5.1	1	2.5	2	5.1	350	116	185	1770
SWRO-25000	25,000	95	8040x6	2	5.1	1.5	3.8	2	5.1	350	116	185	1885
SWRO-35000	35,000	130	8040x9	3	7.6	1.5	3.8	3	7.6	455	116	185	2700
SWRO-50000	50,000	190	8040x12	3	7.6	2	5.1	3	7.6	780	116	185	3365
SWRO-75000	75,000	284	8040x18	6	15.2	2.5	6.4	6	15.2	780	116	185	1610
SWRO-100K	100,000	380	8040x24	6	15.2	2.5	6.4	6	15.2	780	116	185	5485
SWRO-132K	132,000	500	8040x30	6	15.2	3	7.6	6	15.2	780	116	185	6370



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