

Alpha™ SW



Alpha™ brand Sea Water Reverse Osmosis systems from Winda Technologies provide the right combination of value and features required for any desalination application. Every Alpha™ R.O. system is manufactured from the highest quality components to the exacting standards of all Winda Technologies equipment. Standard Alpha™ R.O. models are available for any commercial application from 1,600 to over 150,000 GPD.

Alpha™ brand Sea Water Reverse Osmosis systems are designed to produce potable permeate water from sea water of up to 50,000 PPM of TDS. Alpha™ systems equipped with energy recovery systems as standard equipment are the most cost effective in the industry, capable of energy efficiencies below 3.0 kw-hrs/m³.



Experience and Technology – The Winda Difference

Alpha™ SW

Design Assumptions

- Feed Water of 36,000 mg/L TDS at 25° C, SDI < 5, Turbidity < 1
- 3rd year of operation allowing for Flux Decline and Salt Passage Increase
- Negligible permeate back pressure
- 99.5% Salt Rejection elements
- Flux, Minimum Brine Flow, and Recovery in accordance with membrane manufacturers recommendations

Standard Features

- High-Rejection Sea Water Membranes
- 316L Stainless Steel Valves, Pressure Gauges
- 904L Stainless Steel High-Pressure Piping*
- 60Hz/200V-460V, 3-phase motor*
- Automatic High and Low Feed Pressure Shut-off
- Permeate and Concentrate Flowmeters*
- 904L Stainless Steel Centrifugal Pump*
- Automatic Feed Water Shut-off Valve
- 5-micron Sediment Prefilter
- Fiberglass Pressure Vessels
- Prefilter Pressure Gauges
- Automatic Permeate Flush*
- Energy Recovery System*
- Stainless Steel Frame

Optional Features

- Chemical Dosing System
- Clean-in-Place System
- TDS, pH, Temperature, Turbidity Instruments
- PLC Control
- Special Color or Private Label
- 50Hz Motor
- Crating

* Standard Feature of Alpha-SW-5 and larger units, optional on Alpha-1 through Alpha-SW-4 systems.

System Specifications

Model	System Configuration						Approximate Shipping Dimensions			Approximate Skid Dimensions		
	Production GPD	Production m ³ /D	Recovery (%)	Number and Size Elements	Motor 60Hz (HP)	Motor 50Hz (KW)	(L x W x H) (inches)	(L x W x H) (cm)	Weight (lbs/Kg)	(L x W x H) (inches)	(L x W x H) (cm)	Weight (lbs/Kg)
Alpha-SW-1	1,600	6	20	1 (4")	3	2.2	32 x 26 x 57	81 x 66 x 145	155/70	26 x 20 x 50	66 x 51 x 127	140/64
Alpha-SW-2	3,200	12	20	5 (4")	9.5	7	38 x 26 x 57	97 x 66 x 145	190/86	32 x 20 x 50	81 x 51 x 127	175/80
Alpha-SW-3	4,800	18	30	7 (4")	11	8	120 x 40 x 72	315 x 102 x 183	1300/591	108 x 32 x 60	274 x 66 x 152	1000/455
Alpha-SW-4	6,400	24	35	10 (4")	11	8	120 x 40 x 72	315 x 102 x 183	1500/545	108 x 32 x 60	274 x 66 x 152	1200/545
Alpha-SW-5	7,200	30	20	2 (8")	10.5	9.1	156 x 60 x 72	396 x 152 x 183	1800/682	144 x 48 x 60	366 x 122 x 152	1500/682
Alpha-SW-10	14,400	50	20	4 (8")	12.5	12.5	156 x 60 x 72	396 x 152 x 183	2100/955	144 x 48 x 60	366 x 122 x 152	1800/818
Alpha-SW-15	21,600	80	27	6 (8")	14.5	13.1	180 x 60 x 72	457 x 152 x 183	2600/1182	168 x 48 x 60	427 x 122 x 152	2200/1000
Alpha-SW-20	28,800	110	33	8 (8")	19.5	15.1	228 x 60 x 72	579 x 152 x 183	3100/1409	216 x 48 x 60	549 x 122 x 152	2700/1227
Alpha-SW-25	36,000	130	38	10 (8")	24	21.6	276 x 60 x 72	701 x 152 x 183	3600/1636	264 x 48 x 60	671 x 122 x 152	3200/1455
Alpha-SW-30	43,200	170	36	12 (8")	34	25.0	228 x 60 x 72	579 x 152 x 183	4050/1841	216 x 48 x 60	549 x 122 x 152	3650/1659
Alpha-SW-45	64,800	250	42	18 (8")	50	44.0	300 x 60 x 72	762 x 152 x 183	4800/2182	288 x 48 x 60	732 x 122 x 152	4300/1955
Alpha-SW-60	86,400	330	40	24 (8")	60.5	47.5	300 x 72 x 72	762 x 183 x 183	5500/2500	288 x 60 x 60	732 x 152 x 152	4950/2250
Alpha-SW-75	100,800	410	40	30 (8")	67.5	55.0	300 x 72 x 84	762 x 183 x 213	6150/2795	288 x 60 x 72	732 x 152 x 183	5650/2568
Alpha-SW-90	129,600	490	42	36 (8")	77.5	69.5	300 x 84 x 84	762 x 183 x 213	7000/3182	288 x 72 x 72	732 x 183 x 183	6450/2932
Alpha-SW-110	158,400	600	40	42 (8")	92.5	73.0	300 x 84 x 84	762 x 183 x 213	7800/3545	288 x 72 x 72	732 x 183 x 183	7250/3295

