SHARK Desalination Reverse Osmosis Systems

The image may not exactly resemble end product. For Illustrative purposes only.

Product Overview

Desalination occurs when the water has more salinity than brackish or fresh water. Saltwater is desalinated to produce water suitable for human consumption or irrigation. One by-product of desalination is salt. Desalination is used on many seagoing ships and submarines. Contaminated water is diverted into the ocean without treatment. Most of the modern interest in desalination is focused on providing fresh water for human use. Because saltwater is hostile to the growth of most terrestrial plant species, without appropriate management it is damaging to the environment.

SHARK Series Commercial Reverse Osmosis Systems for Saltwater are designed for overall superior performance, high recovery rates, minimal energy consumption and offer great savings with low maintenance and operation costs.

SHARK Series Commercial Reverse Osmosis Systems for Saltwater feature a new, innovative and expandable design which utilizes fewer fittings and connections. These systems feature only the highest quality components, including a programmable computer controller with many built-in standard features, a stainless steel booster pump for high performance and corrosion resistance, low energy membranes and stainless steel membrane housings for enhanced performance and durability.

SHARK Series Commercial Reverse Osmosis Systems for Saltwater have been engineered for capacities ranging from 600 - 7,000 gallons per day.

Benefits

- Fully Equipped and Customizable
- Components Easily Accessible
- Pre-Plumbed, Wired, and Assembled
- Individually Tested and Preserved
- Low Operating and Maintenance Costs
- Easy Maintenance and Servicing
- 1-Year Limited Warranty
- Made in the U.S.A.

Options and Upgrades

- S150 Expander Board
- LCHR Membrane Elements\Pump Pressure Relief Valve
- Blending Valve
- Permeate Divert Valve
- Chemical Pump Outlet
- pH Controller
- ORP Controller

Standard Features*

- LCD Backlit Display (Controller)
- Pre-Treatment Lockout (Controller)
- Tank Level Input (Controller)
- Low-Pressure Monitoring Alarm (Controller)
- Dual TDS Monitoring (Controller)
- Feed Flush (Controller)
- Crystal Quest® Permeate and Concentrate Flow Meters
- Pre-Filter 0-100 psi Panel Mounted Glycerin Filled Gauges
- Crystal Quest Pump Discharge and Concentrate 0-600 psi
- Panel Mounted Glycerin Filled Gauges
- High Rejection Sea Water Membrane Elements
- Stainless Steel Membrane Housings
- 5-Micron Sediment Pre-Filter
- Single O-Ring Cartridge Housing
- 316 Stainless Steel Needle Valve
- SS Feed Low Pressure Switch
- SS Pump High Pressure Switch
- Pressure Relief Valve
- High Pressure Hose
- Pulsation Dampener
- 316L High Pressure Pump
- Motor with Thermal Motor Protection
- High Pressure 316 Stainless Steel Tubing and Fittings
- High Pressure Hose with Reusable SS Fittings
- White Powder Coated Aluminum Frame

**Design and specifications are subject to change without notice.*

Array Specifications

Model	Vessel Array	Vessel Size	Vessel Quantity	Membrane Size	Membrane Quantity
CQE-SW-02975	1	2540	1	2540	1
CQE-SW-02976	1:1	2540	2	2540	2
CQE-SW-02977	1:1:1	2540	3	2540	3
CQE-SW-02978	1:1:1:1	2540	4	2540	4
CQE-SW-02988	1:1:1:1	4040	4	4040	4
CQE-SW-02989	1:1:1:1:1	4040	5	4040	5
CQE-SW-02990	1:1:1:1:1:1	4040	6	4040	6

Systems Specifications

CQE-	SW-02975	SW-02976	SW-02977	SW-02978	SW-02988	SW-02989	SW-02990
System Capacity gpd(lpd)	600 (2,271)	1,200 (4,542)	1,800 (6,813)	2,200 (9,327)	3,000 (11,356)	5,000 (18,927)	7,000 (2,6497)
Configuration	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass
Feed Water Source	TDS < 45,000 ppm	TDS < 45,000 ppm	TDS < 45,000 ppm	TDS < 45,000 ppm	TDS < 45,000 ppm	TDS < 45,000 ppm	TDS < 45,000 ppm
Standard Recovery Rate	15%	20%	25%	36%	36%	40%	40%

Rejection and Flow Rates

CQE-	SW-02975	SW-02976	SW-02977	SW-02978	SW-02988	SW-02989	SW-02990
Nominal Salt Rejection %	99.2%	99.2%	99.2%	99.2%	99.2%	99.2%	99.2%
Permeate Flow* gpm (lpm)	.416 (1.57)	.833 (3.15)	1.25 (4.73)	1.52 (5.75)	2.08 (7.87)	3.47 (13.13)	4.86 (18.39)
Minimum Feed Flow gpm (lpm)	4.04 (15.3)	5.08 (19.2)	6.13 (23.2)	7.17 (27.1)	8.21 (31.1)	9.25 (35.0)	14.58 (55.17)
Maximum Feed Flow gpm (lpm)	14.00 (53.0)	14.00 (53.0)	14.00 (53.0)	14.00 (53.0)	14.00 (53.0)	14.00 (53.0)	14.00 (53.0)

Connections

CQE-	SW-02975	SW-02976	SW-02977	SW-02978	SW-02988	SW-02989	SW-02990
Feed Inch	1/2 FNPT	1/2 FNPT	1/2 FNPT	1/2 FNPT	1 FNPT	1 FNPT	1 FNPT
Permeate Inch	3/8 FNPT	3/8 FNPT	3/8 FNPT	3/8 FNPT	3/4 FNPT	1 FNPT	1 FNPT
Concentrate Inch	3/8 FNPT	3/8 FNPT	3/8 FNPT	3/8 FNPT	3/4 FNPT	1 FNPT	1 FNPT

Membranes

CQE-	SW-02975	SW-02976	SW-02977	SW-02978	SW-02988	SW-02989	SW-02990
Membrane Per Vessel	1	1	1	1	1	1	1
Membrane Quantity	1	2	3	4	4	5	6
Membrane Size	2540	2540	2540	2540	4040	4040	4040

Vessels

CQE-	SW-02975	SW-02976	SW-02977	SW-02978	SW-02988	SW-02989	SW-02990
Vessel Array	1	1:1	1:1:1	1:1:1:1	1:1:1:1	1:1:1:1:1	1:1:1:1:1:1
Vessel Quantity	1	2	3	4	4	5	6

Pump

CQE-	SW-02975	SW-02976	SW-02977	SW-02978	SW-02988	SW-02989	SW-02990
Pump Type	Multistage	Multistage	Multistage	Multistage	Multistage	Multistage	Multistage
Motor Hp	3	3	3	5	5	5	5
Rpm @60 (50 Hz)	3450	3450	3450	3450	3450	3450	3450

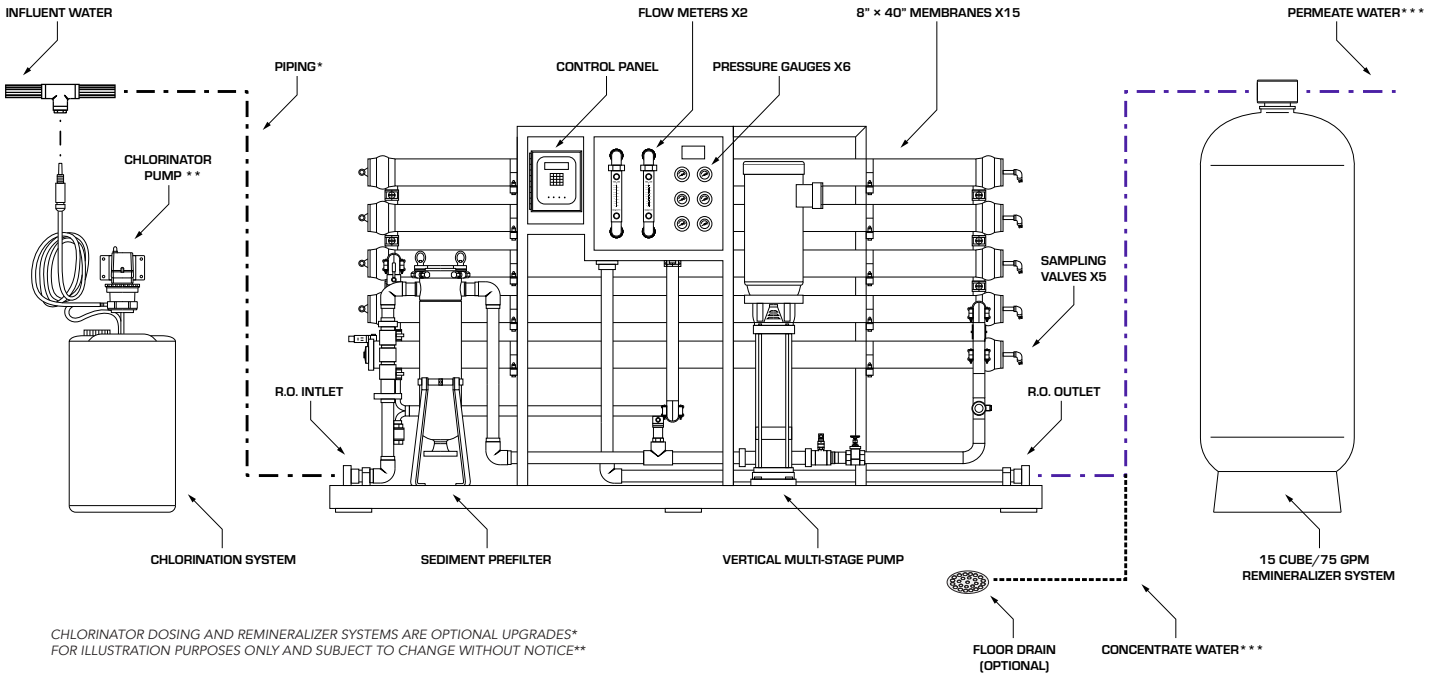
Electric

CQE-	SW-02975	SW-02976	SW-02977	SW-02978	SW-02988	SW-02989	SW-02990
Standard Voltage	220V, 60Hz, 1Ph, 14.6A	220V, 60Hz, 1Ph, 14.6A	220V, 60Hz, 1Ph, 14.6A	220V, 60Hz, 1Ph, 14.6A	220V, 60Hz, 3Ph, 14.6A	220V, 60Hz, 3Ph, 14.6A	220V, 60Hz, 3Ph, 14.6A
Voltage Options	220V, 50Hz, 1Ph,17.4A, 220V, 50Hz, 3Ph, 10.6A 220V, 60Hz, 3Ph,9A 460V, 60Hz, 3Ph, 5A	220V, 50Hz, 1Ph,17.4A, 220V, 50Hz, 3Ph, 10.6A 220V, 60Hz, 3Ph,9A 460V, 60Hz, 3Ph, 5A	220V, 50Hz, 1Ph,17.4A, 220V, 50Hz, 3Ph, 10.6A 220V, 60Hz, 3Ph,9A 460V, 60Hz, 3Ph, 5A	220V, 50Hz, 3Ph,16.1A4 460V,60Hz, 3Ph,7A	220V, 50Hz, 3Ph,16.1A4 460V,60Hz, 3Ph,7A	220V, 50Hz, 3Ph,16.1A4 460V,60Hz, 3Ph,7A	220V, 50Hz, 3Ph,16.1A4 460V,60Hz, 3Ph,7A

Overall System Dimensions

CQE-	SW-02975	SW-02976	SW-02977	SW-02978	SW-02988	SW-02989	SW-02990
L X W X H Inch (Cm)	48 x 24 x 19 (122 x 61 x 47)	48 x 24 x 19 (122 x 61 x 47)	48 x 24 x 19 (122 x 61 x 47)	48 x 24 x 19 (122 x 61 x 47)	60 x 26 x 48 (152 x 66 x 122)	60 x 26 x 48 (152 x 66 x 122)	60 x 26 x 48 (152 x 66 x 122)
Weight Lb. (Kg)	145 (66)	155 (70)	165 (75)	175 (80)	300 (136)	340 (154)	600 (272)

Technical Drawing



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