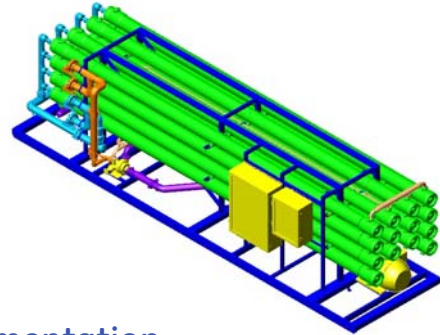


# SWRO Series 50 Hz

Seawater Desalination Machines  
35,000 ppm NaCl  
100-300 m<sup>3</sup>/day (20-60 gpm)



## Basic Features (BAS)

- GE Fanuc Quick Panel 6"  
6-inch color display  
Primarily text operating screens  
Touchscreen controls
- GE Fanuc Micro VersaMax  
Communication: RS232/DH485  
Analog output: 6 points
- 4-20 mA instruments displayed on instrument center
- Variable frequency drive (VFD) for high pressure pump
- Stand alone master control enclosure, skid mounted local control enclosure with terminal strips

## Premium Features (PRE)

- GE Fanuc QuickPanel 12"  
12-inch color display  
Text and pictorial operating screens  
Touchscreen controls
- GE Fanuc VersaMax  
Communication: RS232/DH485/Ethernet  
Analog output: 4 points
- 4-20 mA instruments on PanelView
- Primary and final pressure transmitters
- Variable frequency drive (VFD) for high pressure pump
- Automated valves and control for full permeate flush upon shut down
- Stand alone master control enclosure, skid mounted local control enclosure with remote I/O

## Instrumentation

Flow Meters	Permeate, concentrate
Conductivity	Permeate
pH	Feed
Pressure	Pre-filter, post-filter, primary, final, permeate, concentrate, pump discharge (PRE Feature= Primary, Final transmitter)
Pressure Switch	Feed, permeate, concentrate
Instrument center	Thornton 770 MAX

## Options Available

- Allen Bradley control system
- Multi-Media filters
- Clean-in-Place (CIP) units
- Chemical feed systems

## Documentation Included

- Operation and maintenance manual
- Control narrative
- Drawings: piping and instrumentation, electrical and general dimensional

## Operating Parameters

Recovery	40 - 45%
Design temp.	25°C (77°F)
Design Feed TDS.	35,000 ppm NaCl
Operating range	2 to 30°C (35 to 85°F)
Minimum inlet pressure	2 Bar (30 psi)



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PFE1019EN 0507

## Materials of Construction

High-pressure piping	Sch. 10, Duplex 2205
Low-pressure piping	Sch. 80, PVC
Frame	Painted carbon steel
Local Enclosure	FRP, NEMA 4X
Main Enclosure	Painted carbon steel, NEMA 4
VFD Enclosure	Painted carbon steel, NEMA 4
Clamps/fittings	Zinc-plated

## Membrane Elements and Housings

Style	Spiral-wound elements
Membrane type	TFC HR (Polyamide)
Element Area	37 m <sup>2</sup>
Average membrane flux	13.5-17 l/mh
Housing material	FRP, 80 Bar (1200 psi)
Housing closure type	Ring and plate style closure

## Cartridge Filtration

Housing material	GRP (glass reinforced plastic)
Cartridge filter	5-micron nominal, ROsave.Z*s

## GE Infrastructure Water & Process Technologies SWRO Models

MODEL	SWRO-8	SWRO-16	SWRO-28
Permeate rate:	100 m <sup>3</sup> /day (18.3 gpm)	200 m <sup>3</sup> /day (36.7 gpm)	300 m <sup>3</sup> /day (55.0 gpm)
Concentrate Rate:	150 m <sup>3</sup> /day (27.5 gpm)	244 m <sup>3</sup> /day (44.8 gpm)	367 m <sup>3</sup> /day (67.3 gpm)
Feed Rate:	250 m <sup>3</sup> /day (45.8 gpm)	444 m <sup>3</sup> /day (81.5 gpm)	667 m <sup>3</sup> /day (122.3 gpm)
Pumps and Motors			
Model:	MSS 1547	MSS 2026	MSS 3024
Manufacturer:	Osmonics/FEDCO®	Osmonics/FEDCO®	Osmonics/FEDCO®
Quantity:	1	1	1
Motor HP and type:	29.9 kW (40 Hp) TEFC	37.3 kW (50 Hp) TEFC	74.6 kW (100 Hp) TEFC
Design Flow Rate:	10.5 m <sup>3</sup> /hr (46.28 gpm)	18.5 m <sup>3</sup> /hr (81.5 gpm)	28 m <sup>3</sup> /hr (123.3 gpm)
Design boost pressure:	45.9 Bar (665 psig)	46.2 Bar (670 psig)	45.5 Bar (660 psig)
Energy Recovery Booster			
Model:	HPB 20	HPB 20	HPB 30
Manufacturer:	Osmonics/FEDCO®	Osmonics/FEDCO®	Osmonics/FEDCO®
Quantity:	1	1	1
Design boost pressure:	17.9 Bar (260 psig)	18.6 Bar (255 psig)	18.6 Bar (270 psig)
Membrane Elements and Housings			
Membranes quantity:	8	16	26
Memb. housing style:	4 element long, 4 port	4 element long, 4 port	4 element long, 4 port
Banking Arrangement:	1→1	2→2	4→3
Cartridge Filtration			
Cartridge Filter:	ROZs05-40XK	ROZs05-40XK	ROZs05-40XK
Filter Length:	40" (102 cm)	40" (102 cm)	40" (102 cm)
Filter Quantity:	6 per change out	10 per change out	22 per change out
Installation and Utility Requirements			
Inlet:	1.5" flange	2.0" flange	3.0" flange
Permeate:	1.0" flange	1.5" flange	2.0" flange
Concentrate:	1.5" flange	1.5" flange	2.0" flange
Inlet Water Pressure:	2 Bar, minimum	2 Bar, minimum	2 Bar, minimum
Air Pressure:	7 Bar, oil-free	7 Bar, oil-free	7 Bar, oil-free
Drain to be Sized for:	250 m <sup>3</sup> /day (45.9 gpm)	444 m <sup>3</sup> /day (81.5 gpm)	667 m <sup>3</sup> /day (122.3 gpm)
Power:	220/380 VAC, 3-phase, 50Hz	220/380 VAC, 3-phase, 50Hz	220/380 VAC, 3-phase, 50Hz
Control Circuit:	220 VAC, 1-phase, 50Hz	220 VAC, 1-phase, 50Hz	220 VAC, 1-phase, 50Hz
SWRO Skid			
Height:	224 cm (88")	224 cm (88")	224 cm (88")
Width:	132 cm (52")	132 cm (52")	132 cm (52")
Depth:	506 cm (199")	506 cm (199")	506 cm (199")
Weight Estimate for Shipping Purposes:	1542 kg (3400 lb)	1814 kg (4000 lb)	2041 kg (4500 lb)