

SeaPRO Series 60 Hz

Seawater Desalination Machines

35,000 ppm NaCl 100-300 gpm (22.7-68.1 m³/hr)



Basic Features (BAS)

- GE Fanuc Quick Panel 6-inch color display. Primarily text operating screens, Touchscreen controls.
- GE Fanuc Micro VersaMax processor
- 4-20 mA instruments displayed on instrument center
- Variable frequency drive (VFD) for high pressure pump
- Motor starter for boost pump
- Stand alone master control enclosure, skid mounted local control enclosure with terminal strips
- Membrane/energy recovery device (ERD)/boost pump and pump/prefilter located on separate skids

Premium Features (PRE)

- GE Fanuc QuickPanel 12-inch color display. Text and pictorial operating screens. Touchscreen controls.
- GE Fanuc VersaMax processor
- 4-20 mA instruments on touchscreen
- Primary and final pressure transmitters
- Variable frequency drive (VFD) for high pressure pump
- Motor starter for boost pump
- Automated valves and control for feed flush upon shut down
- Stand alone master control enclosure, local control enclosure with remote I/O
- Membrane/energy recovery device (ERD)/boost pump and pump/prefilter located on separate skids

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Operating Parameters

Design Feed TDS	35,000 ppm NaCl
Maximum Recovery	45%
Nominal Rejection	95-98%
Operating Temperature	35 to 85°F (1.6 to 29.4°C)
Minimum Inlet Pressure	30 psig (2 Bar)
Design Temperature	77°F (25°C)

Instrumentation

Flow Meters.....Permeate, concentrate, low pressure (LP) ERD inlet, high pressure (HP) ERD outlet

Conductivity.....Permeate

pHFeed

Pressure.....Pre-filter, post-filter, primary, final, permeate, concentrate, LP ERD inlet, LP ERD outlet, HP ERD inlet, HP ERD outlet (PRE Feature= Primary, Final transmitter)

Pressure Switches.....Feed, permeate, concentrate, primary

Instrument CenterThornton 770 MAX

Materials of Construction

Frame	Painted Carbon Steel
Cartridge Filter	RO.Zs 05-40, 5-micron nominal
Cartridge Filter Housing	GRP (glass reinforced plastic)
Membrane Elements	GE SW-RO-400-HR-WT
Membrane Housing	FRP
Low Pressure Pipe	Schedule 80 PVC
High Pressure Pipe	Duplex 2205
Enclosures	NEMA 4

Options Available

- Multi-Media filters
- Clean-in-Place (CIP) units
- Chemical feed systems
- Transfer pumps and storage tanks

Documentation Included

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

SeaPRO Models

MODEL	SeaPRO-42	SeaPRO-63	SeaPRO-84	SeaPRO-126
Permeate rate:	144k gpd 100 gpm (22.7 m ³ /hr)	216k gpd 150 gpm (34.1 m ³ /hr)	288k gpd 200 gpm (45.4 m ³ /hr)	432k gpd 300 gpm (68.1 m ³ /hr)
Concentrate Rate:	122 gpm (27.7 m ³ /hr)	183 gpm (41.6 m ³ /hr)	244 gpm (55.4 m ³ /hr)	367 gpm (83.4 m ³ /hr)
Feed Rate:	222 gpm (50.4 m ³ /hr)	333 gpm (75.6 m ³ /hr)	444 gpm (100.8 m ³ /hr)	667 gpm (151.5 m ³ /hr)
Pumps and Motors				
Manufacturer:	Fedco	Fedco	Fedco	Fedco
Quantity:	2	2	2	2
HP Pump HP and type:	100 Hp (75 kW) TEFC	150 Hp (110 kW) TEFC	200 Hp (150 kW) TEFC	250 Hp (186 kW) TEFC
Boost Pump HP and Type:	15 Hp (11.1 kW) TEFC	10 Hp (7.5 kW) TEFC	30 Hp (22.5 kW) TEFC	20 Hp (15 kW) TEFC
Energy Recovery Booster				
Model:	PX-140S	PX-220	PX-140S	PX-140S
Manufacturer:	ERI	ERI	ERI	ERI
Quantity:	1	1	2	3
Membrane Elements and Housings				
Membranes Quantity:	42	63	84	126
Memb. Housing Style:	7 element long, 4 port	7 element long, 4 port	7 element long, 4 port	7 element long, 4 port
Banking Arrangement:	6, parallel	9, parallel	12, parallel	18, parallel

MODEL	SeaPRO-42	SeaPRO-63	SeaPRO-84	SeaPRO-126
Cartridge Filtration				
Cartridge Filter: Filter Length: Filter Quantity:	ROZs05-40XK 40" (102 cm) 22 per change out	ROZs05-40XK 40" (102 cm) 54 per change out	ROZs05-40XK 40" (102 cm) 54 per change out	ROZs05-40XK 40" (102 cm) 108 per change out
Installation and Utility Requirements				
Inlet: Permeate: Concentrate: Inlet Water Pressure: Air Pressure: Drain to be Sized for: Power: Control Circuit:	4.0" flange 3.0" flange 3.0" flange 30 psig, minimum 100 psig, oil-free 223 gpm (50.6 m ³ /hr) 230/460 VAC, 3-phase, 60Hz 120 VAC, 1-phase, 60Hz	4.0" flange 3.0" flange 3.0" flange 30 psig, minimum 100 psig, oil-free 334 gpm (75.9 m ³ /hr) 230/460 VAC, 3-phase, 60Hz 120 VAC, 1-phase, 60Hz	6.0" flange 3.0" flange 4.0" flange 30 psig, minimum 100 psig, oil-free 445 gpm (101.1 m ³ /hr) 230/460 VAC, 3-phase, 60Hz 120 VAC, 1-phase, 60Hz	6.0" flange 4.0" flange 4.0" flange 30 psig, minimum 100 psig, oil-free 667 gpm (151.5 m ³ /hr) 230/460 VAC, 3-phase, 60Hz 120 VAC, 1-phase, 60Hz
SeaPRO Skid				
Membrane/ERD Skid Height: Width: Depth: Weight Estimate for Shipping Purposes:	87" (221 cm) 77" (196 cm) 324" (823 cm) 8,215 lb (3,725 kg)	87" (221 cm) 77" (196 cm) 324" (823 cm) 10,055 lb (4,560 kg)	87" (221 cm) 77" (196 cm) 324" (823 cm) 12,260 lb (5,560 kg)	87" (221 cm) 90" (229 cm) 324" (823 cm) 15,410 lb (6,990 kg)
Pump/Prefilter Skid Height: Width: Depth: Weight Estimate for Shipping Purposes: Membranes:	101" (257 cm) 77" (196 cm) 210" (533 cm) 4,895 lb (2,220 kg) 1,680 lb (760 kg)	101" (257 cm) 77" (196 cm) 210" (533 cm) 5,885 lb (2,670 kg) 2,520 lb (1,140 kg)	101" (257 cm) 77" (196 cm) 210" (533 cm) 6,270 lb (2,845 kg) 3,360 lb (1,525 kg)	101" (257 cm) 77" (196 cm) 210" (533 cm) 7,095 lb (3,220 kg) 5,040 lb (2,285 kg)

