

# SeaPRO E-Series

## 1500 m<sup>3</sup>/day (275 gpm) Seawater Desalination Machine

### General Features

- Major components skid-mounted for easy installation and dependable operation
- Variable frequency drive (VFD) for high pressure pump optimal control, energy efficiency and constant water production
- Simple manual control for the system, and Hand/Auto control for remote starting and stopping of the system

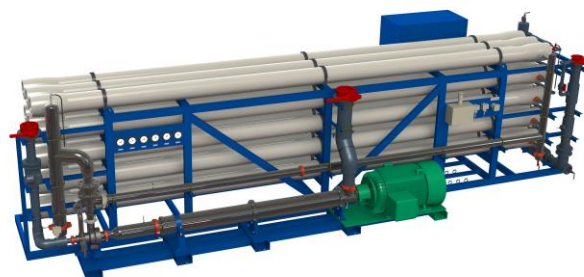


Figure 1. SeaPRO-E-105 General Layout (reference only)

### Operating Parameters

Recovery ..... 45%  
 Design temp..... 25°C (77°F)  
 Operating range ..... 15-32°C (59-90°F) <sup>1)</sup>  
 Design Feed TDS..... 45k ppm  
 System Nominal rejection..... 99%  
 Minimum inlet pressure ..... 2 bar (30 PSIG)

<sup>1)</sup> Varying the operating temperature may affect permeate rate

- Standard package includes energy recovery device for operating cost savings
- Flow and Conductivity 4-20mA signals available for remote monitoring/recording

### Materials of Construction

High-pressure piping..... Sch 40 SS Duplex 2205  
 Low-pressure piping..... Sch 80 PVC-U DIN PN10/16  
 Frame..... Anti-corrosion treated carbon steel  
 Frame Finish ..... 2-coat epoxy painted & blue finish  
 Enclosures..... IP54 carbon steel  
 Membranes..... AD-440  
 Membrane Housing ..... FRP 8in-1200psi-7M (82 bar)  
 Cartridge Filters..... 5-micron nominal, Hytrex\*  
 Cartridge Filter Housing ..... FRP

Table 1: Standard Instrumentation

Flow (magnetic)	Permeate, Concentrate
Conductivity	Permeate
Pressure Switch	Feed LP, Feed HP, Concentrate, Permeate
Pressure Indicators	Pump suction, Pump discharge, ERD HP discharge, ERD LP discharge, Permeate, Concentrate

**Table 2: Pump and Motor**

HP Pump Model	MSS-16015
Manufacturer	FEDCO
Quantity	1
HP Pump Motor	220 kW

**Table 3: Energy Recovery Device**

Model	HPBe-160
Manufacturer	FEDCO
Quantity	1

**Options:**

Contact sales for pricing and lead time.

- PLC Control
- 35% Recovery Design
- Alternate high-pressure pump manufacturers
- Pressure transmitters for remote monitoring/recording
- Control circuit transformer for 110 VAC, 1-phase, 60 Hz operation

**Table 4: Model SeaPRO-E-105 Specifications**

Systems Flow Rates	
Permeate rate:	1500 m <sup>3</sup> /day (275 gpm)
Concentrate Rate:	1834 m <sup>3</sup> /day (337 gpm)
Feed Rate:	3334 m <sup>3</sup> /day (612 gpm)
Membrane Elements and Housings	
Membranes Quantity:	105
Memb. Housing Style:	10 housings – 7M long, 4 port and 5 housings - 7M long 2 port
Banking Arrangement:	3 x 5, parallel
Cartridge Filtration	
Cartridge Filter:	50FTPV-5
Filter Length:	50" (127 cm)
Filter Quantity:	50 per change out
Installation and Utility Requirements	
Filter Feed:	DIN DN150 PN10/16 flange
Filter Outlet:	DIN DN150 PN10/16 flange
RO Feed:	DIN DN200 PN10/16 flange
Permeate:	DIN DN125 PN10/16 flange
Concentrate:	DIN DN150 PN10/16 flange
Power:	380/420 VAC, 3-phase, 50/60Hz
General Dimensional Information	
<u>System Footprint:</u>	
Width:	8130 mm (320 inches)
Depth:	2700 mm (107 inches)
<u>Membrane Skid Size:</u>	
Height:	2390 mm (95 inches)
Width:	7790 mm (307 inches)
Depth:	1655 mm (65 inches)