

# E8 Series 60 Hz

Reverse Osmosis Machine 57,000 to 144,000 gallons per day

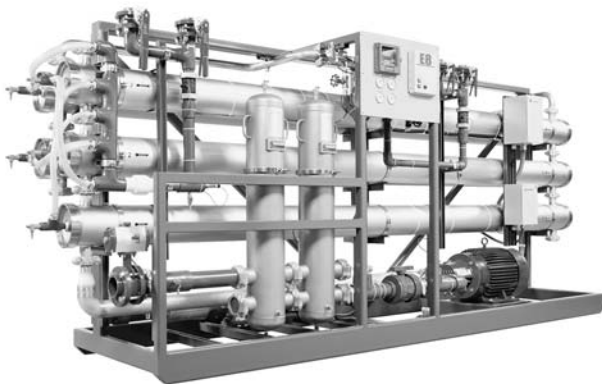


Figure 1: E8 Series 60 Hz

When you mention reverse osmosis (RO), GE Water & Process Technologies is the first name to come to mind. Our E-series RO machines (Figure 1) are designed for durable operation, high quality product water production, easy installation and straightforward control.

## General Properties

### Typical Applications

- Process ingredient water
- Safe drinking water
- Boiler feed water
- Ion exchange pre-treatment

### Standard Economy Features

- Energy saving 400 ft<sup>2</sup> (37.2 m<sup>2</sup>) membrane elements
- SS high-pressure piping
- 1-micron pre-filter and SS housing
- Automatic inlet shut-off valve
- PLC control

- Lakewood Instruments\* 2450 controller
  - Digital permeate and concentrate flow meters
  - Digital conductivity meter
  - Modem Monitoring
- ALARMS: Low inlet pressure, starter overload trip, high temperature [105°F (41°C)], high permeate conductivity
- Remote machine on/off capability
- Autoflush system
- Pre-filter, post-filter, primary, and final pressure gauges

### Deluxe (DLX) Features – in addition to ECN features

- Digital pH controller system
- Chemical dosing system
- Permeate purge
- Permeate purge disable capabilities
- ALARMS: High permeate pressure, high/low pH
- Clean-In-Place pump plumbed, wired and mounted; remote tank

Table 1: Operating Parameters

Operating Pressure	200-250 psig (13.8-17.2 bar)
Maximum Recovery	75%
Nominal Rejection	95-98%
Operating Temperature	55-85 °F (13-30 °C)
Minimum Inlet Pressure	30 psig (2 bar)
Design Temperature	77 °F (25 °C)



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**Table 2: Materials of Construction**

Frame	Painted Carbon Steel
Membrane Elements	Desal AG8040F-400
Membrane Housing	Stainless Steel
Low Pressure Pipe	Schedule 80 PVC
High Pressure Pipe	Stainless Steel
Control Enclosure	NEMA 12
Motor Starters	NEMA 4

**Table 3: Pump and Motor**

Pump Manufacturer	Tonkaflo
Pump Type	Multi-stage, centrifugal
Materials	SS shell/housing, Noryl* internals
Castings	SS inlet/discharge
Motor	3-phase, TEFC, 460 VAC

**Table 4: E8 Specifications - 60 Hz**

Model	E8-57K	E8-86K	E8-108K	E8-144K	
ECN	1202846	1202850	1202833	1202835	
DLX	1202284	1202286	1202287	1202288	
Flow Specifications					
Recovery Range:	66-75%	66-75%	66-75%	66-75%	
Permeate Rate: gpm (m <sup>3</sup> /h)	40 (9)	60 (14)	75 (17)	100 (23)	
Concentrate Rate: gpm (m <sup>3</sup> /h)	21-13 (5-3)	30-20 (7-5)	39-25 (9-6)	52-33 (12-8)	
Pump and Motor					
RO Pump Model	SS8510KA	SS8512KB	SS12508KC	SS12512KE	
RO Motor: HP (KW)	15 (11.2)	20 (15)	25 (18.7)	40 (29.8)	
CIP Pump Model: (DLX only)	SS5504G	SS5504G	SS8504G	SS8504G	
CIP Motor: HP (KW)	5 (3.7)	5 (3.7)	7.5 (5.6)	7.5 (5.6)	
Membrane Elements and Filters					
Membrane Quantity	8	12	15	20	
Array	1-1-1	2-1-1	3-2	3-2	
Pre-Filter Quantity	5, RO.Zs 01-30-XK	5, RO.Zs 01-40-XK	5, RO.Zs 01-40-XK	10, RO.Zs 01-30-XK	
Connections					
Inlet: inch (cm)	2.0(5.1)	2.0(5.1)	2.0(5.1)	3.0(7.6)	
Permeate: inch (cm)	1.5(3.8)	2.0(5.1)	2.0(5.1)	2.0(5.1)	
Concentrate: inch (cm)	1.5(3.8)	1.5(3.8)	1.5(3.8)	1.5(3.8)	
Dimensions & Weights					
Height: inch (cm)	72(138)	72(138)	72(138)	72(138)	
Width: inch (cm)	139(353)	139(353)	139(353)	179(455)	
Depth: inch (cm) ECN	40(102)	40(102)	40(102)	40(102)	
Depth: inch (cm) DLX	81(206)	81(206)	81(206)	91(231)	
Shipping Weight Estimate: lb (kg)	ECN	2600(1200)	3100(1400)	3400(1500)	3500(1600)
Shipping Weight Estimate: lb (kg)	DLX	3000(1400)	3600(1600)	3800(1700)	4000(1800)