

# E8 Series 60 Hz

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

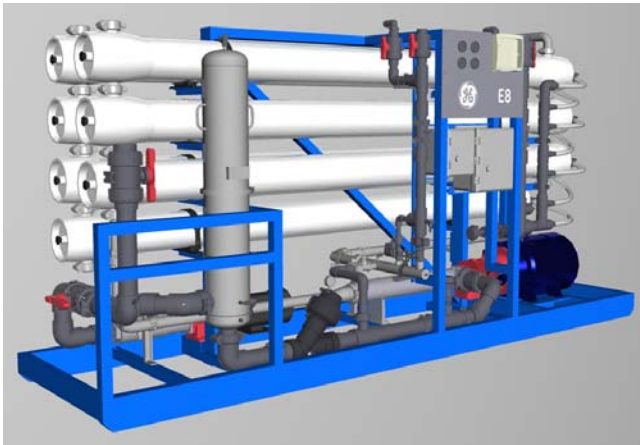


Figure 1: E8 Series 60 Hz

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

- Accutrak RO microprocessor controller
  - Permeate and concentrate paddlewheel flow sensors
  - Permeate conductivity sensor
  - Permeate tank level monitoring
  - SD card for collection of operating data
  - ALARMS: Low inlet pressure, high concentrate pressure, high temperature, high permeate conductivity, motor fault, and fill-time exceeded
  - Remote machine on/off capability
- Feed water flush on shut down
- Panel-mounted pre-filter, post-filter, primary, and final pressure gauges

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

- Inlet pH sensor
- Chemical dosing pump for antiscalant dosing or pH adjustment
- Clean-In-Place pump plumbed, wired and mounted; remote tank
- ALARMS: Same as above plus high/low inlet pH, high permeate pressure

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   | FRP                  |
| Low Pressure Pipe  | Schedule 80 PVC      |
| High Pressure Pipe | Stainless Steel      |
| 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           |
| <b>Flow Specifications</b>                |                   |                   |                   |                   |
| 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)      |
| <b>Pump and Motor</b>                     |                   |                   |                   |                   |
| RO Pump Model                             | SS8510KA          | SS8512KB          | SS12508KC         | SS24006KE         |
| 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)         |
| <b>Membrane Elements and Filters</b>      |                   |                   |                   |                   |
| Membrane Quantity                         | 8                 | 12                | 15                | 21                |
| Array                                     | 1-1-1             | 2-1-1             | 3-2               | 3-2-2             |
| Pre-Filter Quantity                       | 7, RO.Zs 01-40-XK | 7, RO.Zs 01-40-XK | 7, RO.Zs 01-40-XK | 7, RO.Zs 01-40-XK |
| <b>Connections</b>                        |                   |                   |                   |                   |
| 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)          |
| <b>Dimensions &amp; Weights</b>           |                   |                   |                   |                   |
| Height: inch (cm)                         | 76(193)           | 76(193)           | 76(193)           | 76(193)           |
| Width: inch (cm)                          | 153(388)          | 153(388)          | 153(388)          | 153(388)          |
| Depth: inch (cm) ECN                      | 42(107)           | 42(107)           | 42(107)           | 42(107)           |
| Depth: inch (cm) DLX                      | 91(231)           | 91(231)           | 91(231)           | 103(262)          |
| Shipping Weight Estimate: lb (kg)         | ECN               | 2600(1200)        | 3000(1360)        | 3400(1500)        |
| Shipping Weight Estimate: lb (kg)         | DLX               | 2800(1300)        | 3300(1500)        | 3700(1700)        |
|   |                   |                   |                   | 4200(1900)        |