

E8 Series 50 Hz

Reverse Osmosis Machine 9-23 cubic meters per hour



Figure 1: E8 Series

When you mention reverse osmosis (RO), GE's 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 37.2 m² (400 ft²) membrane elements
- SS high-pressure piping
- 1-micron pre-filter with 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 pH, high permeate pressure

Table 1: Operating Parameters

| | |
|------------------------|---------------------|
| Operating Pressure | 14-15 bar |
| Maximum Recovery | 75% |
| Nominal Rejection | 95-98% |
| Operating Temperature | 13-30 °C (55-85 °F) |
| Minimum Inlet Pressure | 2 bar (30 psig) |
| Design Temperature | 25 °C (77 °F) |



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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, 380 VAC |

Table 4: E8 Specifications - 50 Hz

| Model | E8-57K | E8-86K | E8-108K | E8-144K |
|---|-------------------|-------------------|-------------------|-------------------|
| ECN | 1202845 | 1202849 | 1202831 | 1202834 |
| DLX | 1202292 | 1202294 | 1202295 | 1202296 |
| Flow Specifications | | | | |
| Recovery Range: | 66-75% | 66-75% | 66-75% | 66-75% |
| Permeate Rate: m ³ /h (gpm) | 9 (40) | 14 (60) | 17 (75) | 23 (100) |
| Concentrate Rate: m ³ /h (gpm) | 5-3 (21-13) | 7-5 (30-20) | 9-6 (39-25) | 12-8 (52-33) |
| Pump and Motor | | | | |
| RO Pump Model | SS8516KB | SS12512KC | SS24009KE | SS24009KE |
| RO Motor: KW (HP) | 11.2 (15) | 18.7 (25) | 29.8 (40) | 29.8 (40) |
| CIP Pump Model: (DLX only) | SS5504G | SS5504G | SS12502G | SS12504D |
| CIP Motor: KW (HP) | 2.2 (3) | 3.7 (5) | 5.6 (7.5) | 5.6 (7.5) |
| Membrane Elements and Filters | | | | |
| 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 |
| Connections | | | | |
| Inlet: cm (inch) | 5.1 (2.0) | 5.1 (2.0) | 5.1 (2.0) | 7.6 (3.0) |
| Permeate: cm (inch) | 3.8 (1.5) | 5.1 (2.0) | 5.1 (2.0) | 5.1 (2.0) |
| Concentrate: cm (inch) | 3.8 (1.5) | 3.8 (1.5) | 3.8 (1.5) | 3.8 (1.5) |
| Dimensions & Weights | | | | |
| Height: cm (inch) | 193 (76) | 193 (76) | 193 (76) | 193 (76) |
| Width: cm (inch) | 388 (153) | 388 (153) | 388 (153) | 388 (153) |
| Depth: cm (inch) ECN | 107 (42) | 107 (42) | 107 (42) | 107 (42) |
| Depth: cm (inch) DLX | 231 (91) | 231 (91) | 231 (91) | 262 (103) |
| Shipping Weight Estimate: kg (lb) | ECN | 1200 (2600) | 1360 (3000) | 1500 (3400) |
| Shipping Weight Estimate: kg (lb) | DLX | 1300 (2800) | 1500 (3300) | 1700 (3700) |