

# E4H Series 60 Hz

Reverse Osmosis Machine 15,200 to 43,200 gallons per day



Figure 1: E4H 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

- 5-micron pre-filter and housing, 20 Inch (50.80 cm)
- Automatic inlet shutoff valve
- Motor thermal protection
- Pre/Post-filter and primary/final pressure gauges

- Lakewood Instruments\* 2450 controller
  - Digital permeate and concentrate flow meters
  - Digital conductivity meter
  - Modem monitoring
- ALARMS: Low inlet pressure, high amp draw, high permeate conductivity
- Autoflush system
- Remote machine on/off capability

### Deluxe (DLX) Features – In addition to ECN Features

- Upgraded PLC control package
- Digital pH probe system
- Chemical dosing pump for pH adjustment
- Clean in Place (CIP) system, 5HP (3.7 KW)
- ALARMS: High-low pH

Table 1: Operating Parameters

Operating Pressure	220 psig (15 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 AG4040
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: E4H Specifications - 60 Hz**

Model	E4H-16K	E4H-21K	E4H-27K	E4H-38K	E4H-43K	
ECN	1163776	1163782	1163788	1163794	1163797	
DLX	1200055	1200061	1200067	1200073	1200076	
Flow Specifications						
Recovery Range:	75%	75%	75%	75%	75%	
Permeate Rate: gpm (m <sup>3</sup> /h)	11.2 (2.56)	15 (3.4)	18.8 (4.3)	26.2 (5.9)	30 (6.8)	
Concentrate Rate: gpm (m <sup>3</sup> /h)	3.4 (0.9)	5.0 (1.1)	6.3 (1.4)	8.8 (2.0)	10.0 (2.3)	
Pump and Motor						
RO Pump Model	SS2823G	SS2823G	SS2828D	SS5512KA	SS5512KA	
RO Motor: HP (KW)	7.5 (5.6)	7.5 (5.6)	10 (7.4)	15 (11.2)	15 (11.2)	
CIP Pump Model: (DLX only)	SS2805AZ	SS2805AZ	SS2805AZ	SS5503G	SS5503G	
CIP Motor: HP (KW)	2 (1.5)	2 (1.5)	2 (1.5)	5 (3.7)	5 (3.7)	
Membrane Elements and Filters						
Membrane Quantity	9	12	15	21	24	
Array	2-1	2-2	3-2	4-3	5-3	
Pre-Filter Quantity	2	2	2	2	2	
Connections						
Inlet: inch (cm)	1.5 (3.8)	1.5 (3.8)	1.5 (3.8)	1.5 (3.8)	1.5 (3.8)	
Permeate: inch (cm)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	
Concentrate: inch (cm)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	
Dimensions & Weights						
Height: inch (cm)	61 (154)	61 (154)	61 (154)	61 (154)	61 (154)	
Width: inch (cm)	132 (335)	132 (335)	132 (335)	132 (335)	132 (335)	
Depth: inch (cm)	34 (86)	34 (86)	34 (86)	34 (86)	34 (86)	
Shipping Weight Estimate: lb (kg)	ECN	700 (300)	1300 (600)	1500 (700)	1700 (800)	2000 (900)
Shipping Weight Estimate: lb (kg)	DLX	1200 (500)	1800 (800)	2000 (900)	2200 (1000)	2500 (1100)

NOTE: Models shown are 460 VAC. Also available in 208 and 230 VAC. Contact factory for more information.