

# E4H Series 50 Hz

Reverse Osmosis Machine 2.6-6.8 cubic meters per hour



Figure 1: E4H Series

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

- Permeate and concentrate flow rotameters
- Permeate conductivity meter
- ALARMS: Low inlet pressure, high amp draw
- Feed water flush on shut down

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

- Accutrak RO microprocessor controller
- SD card for collection of operating data
- Permeate and concentrate paddlewheel flow sensors
- Inlet pH sensor
- Permeate tank level monitoring
- Chemical dosing pump for antiscalant dosing or pH adjustment
- Clean in Place (CIP) system, 5 HP (3.7 KW)
- ALARMS: Low inlet pressure, high concentrate and permeate pressure, high temperature, high permeate conductivity, high/low pH, motor fault, and fill-time exceeded

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 AG4040
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: E4H Specifications - 50 Hz**

Model	E4H-16K	E4H-21K	E4H-27K	E4H-38K	E4H-43K	
ECN	1163816	1163820	1163824	1163828	1163830	
DLX	1200080	1200084	1200088	1200092	1200094	
<b>Flow Specifications</b>						
Recovery Range:	66-75%	66-75%	66-75%	66-75%	66-75%	
Permeate Rate: m <sup>3</sup> /h (gpm)	2.56 (11.2)	3.4 (15)	4.3 (18.8)	5.9 (26.2)	6.8 (30)	
Concentrate Rate: m <sup>3</sup> /h (gpm)	0.9 (3.4)	1.1 (5.0)	1.4 (6.3)	2.0 (8.8)	2.3 (10)	
<b>Pump and Motor</b>						
RO Pump Model	SS2834D	SS2834D	SS5512D	SS5518KB	SS5522KB	
RO Motor: KW (HP)	5.6 (7.5)	5.6 (7.5)	7.4 (10)	11.2 (15)	11.2 (15)	
CIP Pump Model: (DLX only)	SS2808AZ	SS2808AZ	SS5503G	SS5503G	SS5503G	
CIP Motor: KW (HP)	1.5 (2)	1.5 (2)	2.2 (3)	2.2 (3)	2.2 (3)	
<b>Membrane Elements and Filters</b>						
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	
<b>Connections</b>						
Inlet: cm (inch)	3.8 (1.5)	3.8 (1.5)	3.8 (1.5)	3.8 (1.5)	3.8 (1.5)	
Permeate: cm (inch)	2.5 (1.0)	2.5 (1.0)	2.5 (1.0)	2.5 (1.0)	2.5 (1.0)	
Concentrate: cm (inch)	2.5 (1.0)	2.5 (1.0)	2.5 (1.0)	2.5 (1.0)	2.5 (1.0)	
<b>Dimensions &amp; Weights</b>						
Height: cm (inch)	158 (62)	158 (62)	158 (62)	158 (62)	158 (62)	
Width: cm (inch)	335 (132)	335 (132)	335 (132)	335 (132)	335 (132)	
Depth: cm (inch)	92 (36)	92 (36)	92 (36)	92 (36)	92 (36)	
Shipping Weight Estimate: kg (lb)	ECN	500 (1000)	500 (1050)	700 (1550)	800 (1700)	820 (1800)
Shipping Weight Estimate: kg (lb)	DLX	530 (1150)	570 (1250)	800 (1750)	870 (1900)	910 (2000)

