

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

- 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	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	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, 460/230 VAC

Table 4: E4H Specifications - 60 Hz

Model		E4H-16K	E4H-21K	E4H-27K	E4H-38K	E4H-43K
230 VAC	ECN	1163775	1163781	1163787	1163793	1163796
	DLX	1200054	1200060	1200066	1200072	1200075
460 VAC	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 ³ /h)		11.2 (2.56)	15 (3.4)	18.8 (4.3)	26.2 (5.9)	30 (6.8)
Concentrate Rate: gpm (m ³ /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)		62 (158)	62 (158)	62 (158)	62 (158)	62 (158)
Width: inch (cm)		132 (335)	132 (335)	132 (335)	132 (335)	132 (335)
Depth: inch (cm)		36 (92)	36 (92)	36 (92)	36 (92)	36 (92)
Shipping Weight Estimate: lb (kg)	ECN	1000 (500)	1050 (500)	1550 (700)	1700 (800)	1800 (820)
Shipping Weight Estimate: lb (kg)	DLX	11500 (530)	1250 (570)	1750 (800)	1900 (870)	2000 (910)

