

# STERLING

WATER TREATMENT

## ***CRO Series***

### ***Commercial Reverse Osmosis Systems***

CRO and CRO-HP Series Reverse Osmosis Systems are designed as a competitive solution for capacities ranging from 2,400 – 9,600 gallons per day. Ideal for water purification applications for private residences, restaurants, cafes, car washes, hydroponics, misting and more.

#### **Benefits:**

- ***Compact Design***
- ***Instrumentation Easily Accessible***
- ***Pre-Plumbed, Wired and Assembled***
- ***Easy Maintenance and Servicing***
- ***Low Operation and Maintenance Costs***
- ***Individually Tested***
- ***1-Year Limited Warranty***
- ***Made in North America***

## **Product Features**

- Digital Programmable System Controller
  - LCD Backlit Display
  - Pre-Treat Lockout
  - Extensive Flush Options
  - Low Pressure Monitoring and Alarm
  - Manual Flush
  - Tank Level Input
- Permeate Flow Meter
- TDS Meter
- Reject Flow Meter with Integrated Drain Line Flow Control (DLFC for CRO; SST Needle Valve for CRO-HP)
- Pre and Post Filter Gauges 0 – 100 psi (Panel Mounted)
- Operating Pressure Gauges 0 - 300 psi (Panel Mounted)
- Steel Series Membrane Housings - FRP Available
- 20" Filter Housing (4 1/2" diameter)
- 5 Micron Sediment Pre-Filter
- Multi-Stage Stainless Steel Booster Pump
- Normally Closed Stainless Steel Feed Solenoid
- Stainless Steel Throttle Valve
- Feed Low Pressure Switch
- Optional High Pressure Tank Switch
- Push/Pull Quick Connect Fittings
- White Powder Coated Aluminum Frame
- Optional Permeate Flush Kit



# Product Specifications

Models	CRO-2400	CRO-4800	CRO-7200	CRO-9600	CRO-2400HP	CRO-4800HP	CRO-7200HP	CRO-9600HP
<b>Design</b>	Tap Water Application				Brackish Water Application			
Configuration	Single Pass							
Feedwater TDS max ppm	1,500				3,000			
Standard Recovery %†	60% at <1000 TDS 40% at > 1000 TDS				60% at <2000 TDS 40% at > 2000 TDS			
<b>Flow Rates</b>								
Permeate Flow Rate (gpd / lpd) †	2,304 / 8,721	4,608 / 17,443	6,912 / 26,164	9,216 / 34,886	1920 / 7268	3840 / 14536	5760 / 21804	7860 / 29753
Permeate Flow Rate (gpm / lpm) †	1.6 / 6	3.2 / 12	4.8 / 18	6.4 / 24	1.3 / 4.9	2.6 / 9.8	3.9 / 14.7	5.2 / 19.6
Minimum Concentrate Flow Rate (gpm / lpm)	0.8 / 3	1.6 / 6	2.4 / 9	3.2 / 12	0.65 / 2.5	1.3 / 4.9	1.7 / 6.4	2.35 / 8.9
Drain Line Flow Control Rate (gpm / lpm)	10 / 37.85							
<b>Connections</b>								
Feed (inch)	1 FNPT							
Permeate (inch)	3 / 8" Push Fit							
Concentrate (inch)	3 / 4" NPTF							
<b>Membranes</b>								
Membrane Quantity	1	2	3	4	1	2	3	4
Membrane Size	4040							
Membrane Vessels	1	2	3	4	1	2	3	4
Vessel Array	1	1:1	2:1	2:2	1	1:1	2:1	2:2
Nominal TDS Rejection %	98				98.50			
<b>Pumps</b>								
Pump Type	Multi-Stage SST Booster							
Motor HP	3/4	3/4	1.5	1.5	2.0	2.0	2.0	2.0
RPM @ 60 Hz	3480							
<b>System Electrical</b>								
Standard Voltage	230 Vac 1Ph 60 Hz							
Amperage at Standard Voltage	8.45	8.45	13.68	13.68	13.68	13.68	13.68	13.68
<b>System Dimensions</b>								
Approximate Dimensions † † L x W x H (in / cm)	24 x 31 x 50 / 61 x 79 x 127							
Approximate Weight † † † (lbs / kg)	96 / 44	114 / 52	132 / 60	154 / 70	104 / 42.1	122 / 55.3	140 / 63.5	162 / 72.5

† Product rate @ feed water of 500 ppm NaCl, 77°F / 25°C, average system pressure 130 psi, 60% recovery, inlet pressure of 50 psi. Do not exceed the recommended permeate flow. PH of 7.2. Maximum recovery rate per membrane 15%.

†† Does not include operating space requirements.

††† Does not include membrane(s).

**To Obtain the System's Maximum Recovery** please contact your local dealer in order to provide details on the specific application and feed water composition. Maximum recovery of the system varies depending on feed water composition and temperature.

## Operating Limits\*

Design Temperature, °F / °C	77 / 25	Maximum Turbidity, NTU	1
Maximum Feed Temperature, °F / °C	95 / 35	Maximum SDI Rating	<5.0
Minimum Feed Temperature, °F / °C	40 / 4 †††	Maximum Free Chlorine, ppm	<0.1
Maximum Ambient Temperature, °F / °C	95 / 35	Maximum TDS, ppm	<2,000 ††††
Minimum Ambient Temperature, °F / °C	40/4	Maximum Hardness, gpg / mg/l	<6 / 103
Maximum Feed Pressure, PSI	65	Maximum pH (continuous)	9.5
Minimum Feed Pressure, PSI	40	Minimum pH (continuous)	5.5
Maximum Operating Pressure, PSI	150	Maximum pH (cleaning 30 minutes)	12
Nominal Operating Pressure, PSI (Standard /HP)	130 / 225 ††††	Minimum pH (cleaning 30 minutes)	2
Operating Range, PSI	130 ††††		

††† Low temperatures and feedwater quality, such as high TDS levels will significantly affect the systems production capabilities and performance. Computer projections must be run for individual applications which do not meet or exceed minimum and maximum operating limits for such conditions.

†††† System Operating Pressure is based on 60 psi feed pressure, minimum concentrate flow as stated and an average of 2000 gpd flow per membrane at 77°F.

\*If any of the feed water parameters are not within the limits given, consult your local dealer or distributor for assistance.

