

# CT-Series Reverse Osmosis Systems

**CT-Series Reverse Osmosis Systems** are designed for overall high performance, high recovery rates, minimal energy consumption and offer great savings with low maintenance and operation costs.

**CT-Series Reverse Osmosis Systems** feature a space saving expandable design, exceptional pre-filtration, quality components and allow for many options and upgrades to suit most applications.

**CT-Series Reverse Osmosis Systems** have been engineered for capacities ranging from 4000 – 7000 gallons per day.



**CT-7000  
Reverse Osmosis System**  
Front

## Benefits

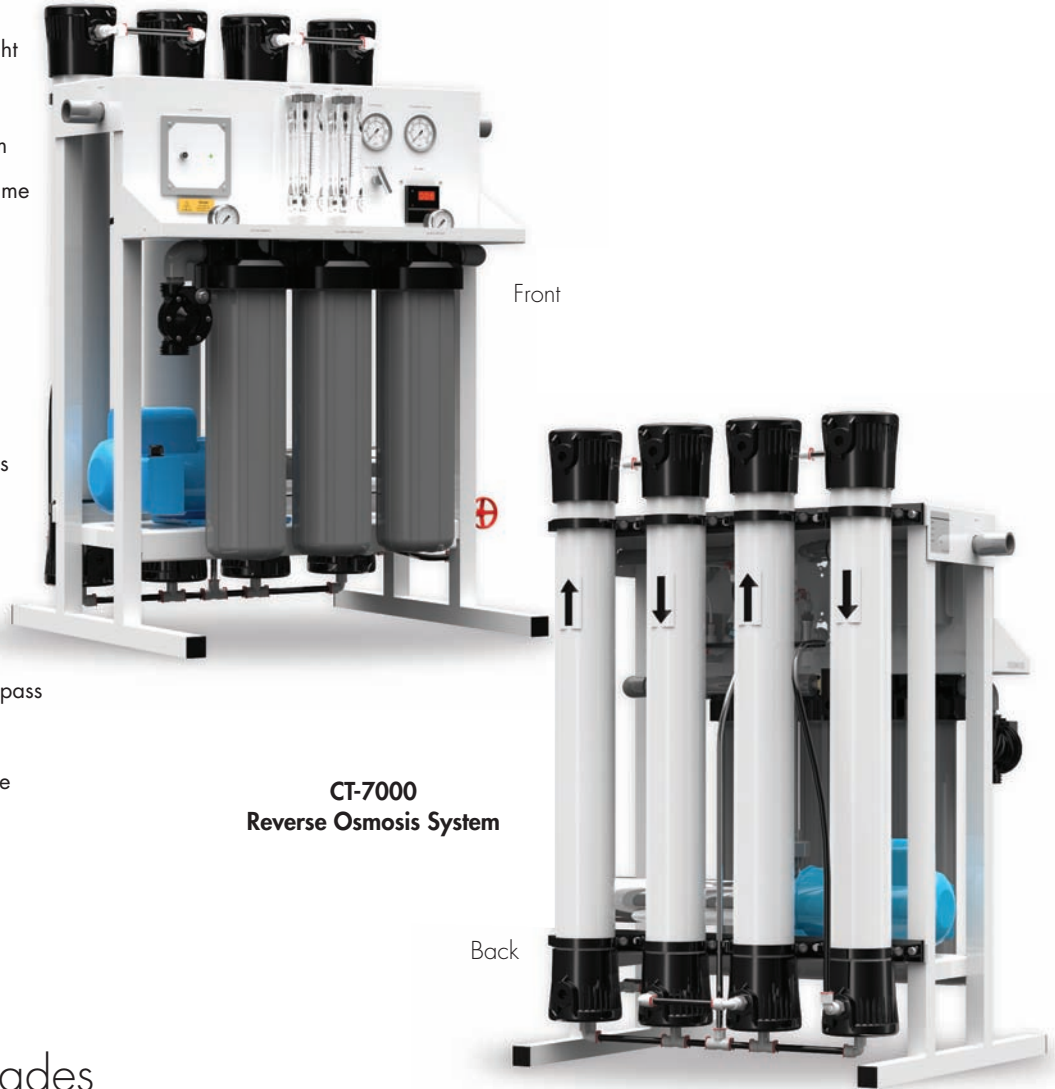
- Fully Equipped and Customizable
- Pre-Plumbed, Wired and Assembled
- Easy Maintenance and Servicing
- Expandable and Lightweight Design
- Factory Tested and Preserved
- CE Compliant †
- Compact Space Saving Design
- Low Operation Costs
- 1-Year Limited Warranty
- Components Easily Accessible
- Low Maintenance Costs
- Made in the U.S.A.

Engineered Membrane Solutions

# FLEXEON CT-Series Reverse Osmosis Systems

## Standard Features

- Minitrol Computer Controller
  - ◆ Multi Color LED Indicator Status Light
  - ◆ Pre-Treatment Lockout
  - ◆ Tank Level Input
  - ◆ Low Pressure Monitoring and Alarm
- White Powder Coated Aluminum Frame
- 5 Micron Sediment Pre-Filter
- 10 Micron Carbon Block Pre-Filter
- 1 Micron Sediment Pre-Filter
- Double O-Ring Filter Housings
- Goulds® Multi-Stage Booster Pump
- AXEON HF1 Low Energy Membranes
- AXEON PVC Membrane Housings
- Permeate Flow Meter
- Concentrate Flow Meter
- Feed Low Pressure Switch
- Feed Solenoid Valve with Manual Bypass
- HM Digital™ PS-100 TDS Controller
- 316 Stainless Steel Concentrate Valve
- 0-300 psi Pump Pressure Gauges
- 0-100 psi Pre-Filter Pressure Gauges
- John Guest® Push/Pull Fittings with Locking Safety Clips



## Options and Upgrades

- AXEON HF4 Extra Low Energy Membranes
- AXEON HF5 Ultra Low Energy Membranes
- AXEON NF3 Nanofiltration Membranes
- AXEON NF4 Nanofiltration Membranes
- Stainless Steel Membrane Housings
- Fiberglass Membrane Housings
- Concentrate Recycle Valve with Flow Meter
- HM Digital™ PS-200 Dual TDS Controller
- HM Digital PSC-150 TDS/Conductivity Controller
- Goulds® Multi-Stage Stainless Steel Booster Pump
- Minitrol IF Computer Controller with Feed Flush
- S150 Computer Controller with Feed Flush
- S150 Computer Controller Expander Board
- S150 Computer Controller with Dual TDS
- Pump Pressure Relief Valve †
- High Pressure Tank Switch
- Chemical Pump Outlet
- Blending Valve
- Permeate Sample Ports
- Single Wood Crate
- Double Wood Crate

# Reverse Osmosis System Packages

Models	CT-4000 / CT-5000 / CT-7000		
	STANDARD (S)	ADVANCED (A)	PREMIER (P)
<b>Frame</b>			
White Powder Coated Aluminum Frame	✓	✓	✓
<b>Controls</b>			
Minitrol Computer Controller	✓		
Minitrol IF Computer Controller		✓	
S150 Computer Controller			✓
Pre-Treatment Lockout	✓	✓	✓
Tank Level Input	✓	✓	✓
LED Controller Display	✓	✓	
LCD Controller Display			✓
Feed Solenoid Valve with Manual Bypass	✓	✓	✓
Concentrate Recycle Valve		✓	✓
Feed Low Pressure Switch 15-30 psi	✓	✓	✓
<b>Instrumentation</b>			
Permeate Flow Meter	✓	✓	✓
Concentrate Flow Meter	✓	✓	✓
Concentrate Recycle Flow Meter		✓	✓
316 Stainless Steel Concentrate Valve	✓	✓	✓
0-100 psi Pre-Filter In Pressure Gauge	✓	✓	✓
0-100 psi Pre-Filter Out Pressure Gauge	✓	✓	✓
0-300 psi Pump Pressure Gauge	✓	✓	✓
0-300 psi Final Concentrate Pressure Gauge	✓	✓	✓
HM Digital™ PS-100 Permeate TDS Controller	✓	✓	
Controller Permeate TDS Monitoring			✓
Controller Feed TDS Monitoring			✓
<b>Features</b>			
Feed Flush		✓	✓
5 Micron Sediment Pre-Filter	✓	✓	✓
10 Micron Carbon Pre-Filter	✓	✓	✓
1 Micron Sediment Pre-Filter	✓	✓	✓
Double O-Ring Filter Housings	✓	✓	✓
AXEON HF1 Low Energy RO Membranes	✓		
AXEON HF4 Extra Low Energy RO Membranes		✓	✓
AXEON PVC Pressure Vessels	✓	✓	✓
Goulds® Multi-Stage Booster Pump	✓	✓	
Goulds® Multi-Stage Stainless Steel Booster Pump			✓
Permeate Sample Valves			✓

**Note 1:** All 50Hz systems come standard with AXEON HF4 Extra Low Energy RO Membranes.

## Naming Matrix

- **C** = Frame Style
- **T** = Feed Water Type - Tap Water (T), Brackish Water (B), Sea Water (S)
- **XXXX** = Rated Production in Gallons Per Day Based on Standard Test Conditions
- **S, A, P** = System Package Identifiers

FLEXEON CT-Series	Standard (S)	Advanced (A)	Premier (P)
FLEXEON CT-4000	CT-4000S	CT-4000A	CT-4000P
FLEXEON CT-5000	CT-5000S	CT-5000A	CT-5000P
FLEXEON CT-7000	CT-7000S	CT-7000A	CT-7000P

# FLEXEON CT-Series Reverse Osmosis Systems

## Specifications

Models	CT - 4000	CT - 5000	CT - 7000
<b>Design</b>			
Configuration	Single Pass	Single Pass	Single Pass
Feed Water Source***	TDS <2000 ppm	TDS <2000 ppm	TDS <2000 ppm
Standard Recovery Rate†	48%	53%	62%
Recovery with Concentrate Recycle	Up to 75%	Up to 75%	Up to 75%
<b>Rejection and Flow Rates</b>			
Nominal Salt Rejection %	98.5	98.5	98.5
Permeate Flow* gpm (lpm)	2.78 (10.52)	3.47 (13.14)	4.86 (18.40)
Minimum Feed Flow gpm (lpm)	5.78 (21.00)	6.47 (24.50)	7.86 (29.80)
Maximum Feed Flow gpm (lpm)	14.00 (53.00)	14.00 (53.00)	14.00 (53.00)
Minimum Concentrate Flow gpm (lpm)	3.00 (11.36)	3.00 (11.36)	3.00 (11.36)
<b>Connections</b>			
Feed inch	1 FNPT	1 FNPT	1 FNPT
Permeate inch	1 FNPT	1 FNPT	1 FNPT
Concentrate inch	1 FNPT	1 FNPT	1 FNPT
<b>Membranes</b>			
Membrane(s) Per Vessel	1	1	1
Membrane Quantity	2	3	4
Membrane Size	4040	4040	4040
<b>Vessels</b>			
Vessel Array	1:1	1:1:1	1:1:1:1
Vessel Quantity	2	3	4
<b>Pumps</b>			
Pump Type	Multi-Stage	Multi-Stage	Multi-Stage
Motor HP	1.5	1.5	1.5
RPM @ 60 (50 Hz)	3450 (2900)	3450 (2900)	3450 (2900)
<b>Electrical</b>			
Standard Voltage	220V, 60HZ, 1PH, 8.3A	220V, 60HZ, 1PH, 8.3A	220V, 60HZ, 1PH, 8.3A
Voltage Options	220V, 50HZ, 1PH, 8.9A	220V, 50HZ, 1PH, 8.9A	220V, 50HZ, 1PH, 8.9A
	220V, 60HZ, 3PH, 5.1A	220V, 60HZ, 3PH, 5.1A	220V, 60HZ, 3PH, 5.1A
	220V, 50HZ, 3PH, 6.1A	220V, 50HZ, 3PH, 6.1A	220V, 50HZ, 3PH, 6.1A
	380V, 50HZ, 3PH, 4.5A	380V, 50HZ, 3PH, 4.5A	380V, 50HZ, 3PH, 4.5A
	460V, 60HZ, 3PH, 3.5A	460V, 60HZ, 3PH, 3.5A	460V, 60HZ, 3PH, 3.5A
<b>Systems Dimensions **</b>			
L x W x H inch (cm)	30x38x47 (76x96x119)	30x38x47 (76x96x119)	30x38x47 (76x96x119)
Weight lb. (kg)	235 (106.6)	250 (113.4)	265 (120.2)

\* Product Flow rates and recovery are based on equipment test parameters.

\*\* Does not include operating space requirements.

\*\*\* Treatment ability of the RO system is dependent on feed water quality. Performance projections must be run for each installation.

## Operating Limits

Maximum Feed Temperature °F (°C)	85 (29.00)	Maximum Free Chlorine ppm	0
Minimum Feed Temperature °F (°C)	40 (4.44)	Maximum TDS ppm	2000
Maximum Ambient Temperature °F (°C)	120 (48.89)	Maximum Hardness gpg††	0
Minimum Ambient Temperature °F (°C)	40 (4.44)	Maximum pH (Continuous)	11
Maximum Feed Pressure psi (bar)	85 (5.86)	Minimum pH (Continuous)	5
Minimum Feed Pressure psi (bar)	45 (3.10)	Maximum pH (Cleaning 30 Min.)	12
Maximum Operating Pressure psi (bar)	150 (10.34)	Minimum pH (Cleaning 30 Min.)	2
Maximum SDI Rating SDI	<3		
Maximum Turbidity NTU	1		

**Test Parameters:** 550 TDS Filtered (5 Micron), De-Chlorinated, Municipal Feed Water, 65 psi (4.50 bar) Feed Pressure, 150 psi (10.34 bar) Operating Pressure, 77 Degrees F (25 Degrees C), Recovery as stated, 7.0 pH. Data taken after 60 minutes of operation.

† Low temperatures and high feed water TDS levels will significantly affect systems production capabilities. Computer projections should be run for individual applications which do not meet or exceed minimum and maximum operating limits.

†† Scale prevention measures must be taken to prolong membrane life.