

T-SERIES REVERSE OSMOSIS SYSTEMS

AXEON® AT-Series Reverse Osmosis Systems set the industry standard with a compact, space saving design with high quality components. These systems are available in capacities of 500 and 1,000 gallons per day and feature 4.5" diameter sediment and carbon block pre-filters, low energy membranes, a high pressure pump and a solenoid valve all mounted onto a corrosion-resistant, powder-coated aluminum frame.

AXEON AT-Series Reverse Osmosis Systems can also be upgraded for higher recovery rates by adding the concentrate recycle option.



AT-1000
Reverse Osmosis System

BENEFITS

- Fully Equipped and Customizable
- Lightweight Design
- Compact Space Saving Design
- Components Easily Accessible
- Pre-Plumbed, Wired and Assembled
- Factory Tested and Preserved
- Low Operation and Maintenance Costs
- Easy Maintenance and Servicing
- 1-Year Limited Warranty



AT-1000 (Back)
Reverse Osmosis System

FEATURES

- Manual On and Off Control Switch
- AXEON HF1–Series Low Energy Membrane Elements
- AXEON 5-Micron Sediment Pre-Filter
- AXEON 10-Micron Carbon Block Pre-Filter
- SS–Series Membrane Housings
- Pentek® Single O-Ring Filter Housings
- Fluid-O-Tech™ Low Lead Brass Rotary Vane High Pressure Pump
- 316L Stainless Steel Concentrate Valve
- Composite Feed Solenoid Valve
- Feed Low Pressure Switch 15-30 psi
- Permeate and Concentrate Flow Meter
- Pre-Filter Pressure Gauges 0-100 psi
- Pump Pressure Gauge 0-300 psi
- ODP High Efficiency Carbonator Motor
- John Guest® Push/Pull Fittings with Locking Safety Clips
- White Powder Coated Aluminum Frame

OPTIONS

- Minitrol Computer Controller
- Minitrol IF Computer Controller with Feed Flush
- S–150 Computer Controller with Feed Flush
- AXEON HF4–Series Extra Low Energy Membrane Elements
- AXEON HF5–Series Ultra Low Energy Membrane Elements
- AXEON NF3–Series Nanofiltration Membrane Elements
- AXEON NF4–Series Nanofiltration Membrane Elements
- FRP–Series Membrane Housings
- Fluid-O-Tech™ Stainless Steel Rotary Vane Pump
- Blending Valve
- Chemical Pump Outlet
- Concentrate Recycle Valve with Flow Meter
- High Pressure Tank Switch
- HM Digital™ PSC–150 TDS/Conductivity Controller
- Permeate Flush with Pressure Tank
- Permeate Flush with Atmospheric Tank
- Permeate Flush with Mechanical Float
- Permeate Sample Ports
- Wooden Shipping Crate



AT–1000 (Front)
Reverse Osmosis System

SPECIFICATIONS

MODELS	AT-500	AT-1000
Design		
Configuration	Single Pass	Single Pass
Feedwater Source (ppm) ^A	TDS < 2000	TDS < 2000
Standard Recovery Rate %	26	41
Recovery with Concentrate Recycle %	Up to 75	Up to 75
Flow Rates^B		
Permeate Flow (gpm / lpm)	0.35 / 1.32	0.69 / 2.61
Minimum Feed Flow (gpm / lpm)	1.35 / 5.11	1.69 / 6.40
Minimum Concentrate Flow (gpm / lpm)	1 / 3.78	1 / 3.78
Connections		
Feed (in)	1 FNPT	1 FNPT
Permeate (in)	3/8 QC	3/8 QC
Concentrate (in)	3/8 QC	3/8 QC
Membranes		
Membranes Per Vessel	1	1
Membrane Quantity	2	3
Membrane Size	2521	2521
Nominal Salt Rejection %	99	99
Vessels		
Vessel Array	1:1	1:1:1
Vessel Quantity	2	3
Pumps		
Pump Type	Rotary Vane 401 Brass	Rotary Vane 601 Brass
Motor HP	1/3	1/2
RPM @ 60Hz (50 Hz)	1725 (1465)	1725 (1465)
System Electrical		
Standard Voltage + Amp Draw ^C	110V, 60Hz, 1PH, 6.6A	110V, 60Hz, 1PH, 8.2A
High Voltage Service + Amp Draw ^C	220V, 60Hz, 1PH, 3.2A 220V, 50Hz, 1PH, 3.7A	220V, 60Hz, 1PH, 3.9A 220V, 50Hz, 1PH, 4.1A
System Dimensions		
Approximate Dimensions ^D L x W x H (in / cm)	14 x 20 x 27 / 36 x 51 x 69	14 x 20 x 27 / 36 x 51 x 69
Approximate Weight (lbs / kg)	65 / 29.5	70 / 31.75

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

Note: All 50Hz systems come standard with AXEON HF4-Series Extra Low Energy Membrane Elements.

- A. 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.
- B. Product flow and maximum recovery rates are based on feedwater conditions as stated above. Do not exceed recommended permeate flow.
- C. Varies with motor manufacturer.
- D. Does not include operating space requirements.

OPERATING LIMITS^E

Maximum Feed Temperature (°F / °C)	85 / 29	Maximum Turbidity (NTU)	1
Minimum Feed Temperature (°F / °C)	40 / 4	Maximum Free Chlorine (ppm)	0
Maximum Ambient Temperature (°F / °C)	120 / 49	Maximum TDS (ppm)	2000
Minimum Ambient Temperature (°F / °C)	40 / 4	Maximum Hardness (gpg)	0
Maximum Feed Pressure (psi / bar)	85 / 6	Maximum pH (Continuous)	11
Minimum Feed Pressure (psi / bar)	45 / 3	Minimum pH (Continuous)	2
Maximum Operating Pressure (psi / bar)	150 / 10	Maximum pH (cleaning 30 minutes)	13
Maximum Feed Silt Density Index (SDI)	< 3	Minimum pH (cleaning 30 minutes)	1

E. System pressure is variable due to water conditions. Permeate flow will increase at a higher temperature and will decrease at a lower temperature.

AXEON BT-Series Reverse Osmosis Systems further expand the AXEON commercial reverse osmosis lineup with two models designed for 1,500 and 2,000 gallons per day. Featuring 4.5" diameter sediment and carbon block pre-filters, low energy membranes and a high pressure pump, the BT-Series sets the industry standard for high-performance reverse osmosis systems. These models can also be upgraded with options for higher recovery rates by adding the concentrate recycle option.



BT-2000
Reverse Osmosis System



BT-2000 (Back)
Reverse Osmosis System

BENEFITS

- Fully Equipped and Customizable
- Expandable and Lightweight Design
- Compact Space Saving Design
- Components Easily Accessible
- Pre-Plumbed, Wired and Assembled
- Factory Tested and Preserved
- Low Operation and Maintenance Costs
- Easy Maintenance and Servicing
- 1-Year Limited Warranty

FEATURES

- Manual On and Off Control Switch
- AXEON HF1–Series Low Energy Membrane Elements
- AXEON 5-Micron Sediment Pre-Filter
- AXEON 10-Micron Carbon Block Pre-Filter
- SS–Series Membrane Housings
- Pentek® Single O-Ring Filter Housings
- Fluid-O-Tech™ Low Lead Brass Rotary Vane High Pressure Pump
- 316L Stainless Steel Concentrate Valve
- Composite Feed Solenoid Valve
- Feed Low Pressure Switch 15-30 psi
- Permeate and Concentrate Flow Meter
- Pre-Filter Pressure Gauges 0-100 psi
- Pump Pressure Gauge 0-300 psi
- ODP High Efficiency Carbonator Motor
- John Guest® Push/Pull Fittings with Locking Safety Clips
- White Powder Coated Aluminum Frame



BT-2000 (Front)
Reverse Osmosis System

OPTIONS

- Minitrol Computer Controller
- Minitrol IF Computer Controller with Feed Flush
- S-150 Computer Controller with Feed Flush
- AXEON HF4–Series Extra Low Energy Membrane Elements
- AXEON HF5–Series Ultra Low Energy Membrane Elements
- AXEON NF3–Series Nanofiltration Membrane Elements
- AXEON NF4–Series Nanofiltration Membrane Elements
- FRP–Series Membrane Housings
- Fluid-O-Tech™ Stainless Steel Rotary Vane Pump
- Blending Valve
- Chemical Pump Outlet
- Concentrate Recycle Valve with Flow Meter
- High Pressure Tank Switch
- HM Digital™ PSC-150 TDS/Conductivity Controller
- Permeate Flush with Pressure Tank
- Permeate Flush with Atmospheric Tank
- Permeate Flush with Mechanical Float
- Permeate Sample Ports
- Wooden Shipping Crate

SPECIFICATIONS

MODELS	BT-1500	BT-2000
Design		
Configuration	Single Pass	Single Pass
Feedwater Source (ppm) ^A	TDS < 2000	TDS < 2000
Standard Recovery Rate %	41	63
Recovery with Concentrate Recycle %	Up to 75	Up to 75
Flow Rates^B		
Permeate Flow (gpm / lpm)	1.04 / 3.93	1.38 / 5.22
Minimum Feed Flow (gpm / lpm)	2.04 / 7.72	2.35 / 8.89
Minimum Concentrate Flow (gpm / lpm)	1 / 3.78	1 / 3.78
Connections		
Feed (in)	1 FNPT	1 FNPT
Permeate (in)	3/8 QC	3/8 QC
Concentrate (in)	3/8 QC	3/8 QC
Membranes		
Membranes Per Vessel	1	1
Membrane Quantity	2	3
Membrane Size	2540	2540
Nominal Salt Rejection %	99	99
Vessels		
Vessel Array	1:1	1:1:1
Vessel Quantity	2	3
Pumps		
Pump Type	Rotary Vane 601 Brass	Rotary Vane 1001 Brass
Motor HP	3/4	3/4
RPM @ 60Hz (50 Hz)	1725 (1465)	1725 (1465)
System Electrical		
Standard Voltage + Amp Draw ^C	110V, 60Hz, 1PH, 11.0A	110V, 60Hz, 1PH, 11.0A
High Voltage Service + Amp Draw ^C	220V, 60Hz, 1PH, 5.6A 220V, 50Hz, 1PH, 6.6A	220V, 60Hz, 1PH, 5.6A 220V, 50Hz, 1PH, 6.6A
System Dimensions		
Approximate Dimensions ^D L x W x H (in / cm)	19 x 23 x 46 / 48 x 58 x 116	19 x 23 x 46 / 48 x 58 x 116
Approximate Weight (lbs / kg)	105 / 47.63	115 / 52.16

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

Note: All 50Hz systems come standard with AXEON HF4-Series Extra Low Energy Membrane Elements.

- A. 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.
- B. Product flow and maximum recovery rates are based on feedwater conditions as stated above. Do not exceed recommended permeate flow.
- C. Varies with motor manufacturer.
- D. Does not include operating space requirements.

OPERATING LIMITS^E

Maximum Feed Temperature (°F / °C)	85 / 29	Maximum Turbidity (NTU)	1
Minimum Feed Temperature (°F / °C)	40 / 4	Maximum Free Chlorine (ppm)	0
Maximum Ambient Temperature (°F / °C)	120 / 49	Maximum TDS (ppm)	2000
Minimum Ambient Temperature (°F / °C)	40 / 4	Maximum Hardness (gpg)	0
Maximum Feed Pressure (psi / bar)	85 / 6	Maximum pH (Continuous)	11
Minimum Feed Pressure (psi / bar)	45 / 3	Minimum pH (Continuous)	2
Maximum Operating Pressure (psi / bar)	150 / 10	Maximum pH (cleaning 30 minutes)	13
Maximum Feed Silt Density Index (SDI)	< 3	Minimum pH (cleaning 30 minutes)	1

E. System pressure is variable due to water conditions. Permeate flow will increase at a higher temperature and will decrease at a lower temperature.

AXEON CT-Series Reverse Osmosis Systems are designed for high performance and are equipped with many standard features in a cost-efficient, compact design. **AXEON CT-Series Reverse Osmosis Systems** have been engineered for capacities ranging from 4,000 to 7,000 gallons per day. These models include a microprocessor controller with low-pressure monitoring and alarm, pre-treatment lockout, and tank level input. A TDS monitor, multi-stage booster pump, low energy membranes and three pre-filters are all part of the standard features. Upgrades such as feed flush and a concentrate recycle loop to increase recovery rates are also available.



CT-7000
Reverse Osmosis System

CT-7000 (Back)
Reverse Osmosis System



BENEFITS

- Fully Equipped and Customizable
- Compact Space Saving Design
- Components Easily Accessible
- Pre-Plumbed, Wired and Assembled
- Factory Tested and Preserved
- Low Operation and Maintenance Costs
- Easy Maintenance and Servicing
- 1-Year Limited Warranty

FEATURES

- Minitrol Computer Controller
 - Multi Color LED Indicator Status Light
 - Pre-Treatment Lockout
 - Tank Level Input
 - Low Pressure Monitoring and Alarm
- AXEON HF1–Series Low Energy Membrane Elements
- AXEON 5-Micron Sediment Pre-Filter
- AXEON 10-Micron Carbon Block Pre-Filter
- AXEON 1-Micron Sediment Pre-Filter
- SS–Series Membrane Housings
- Pentek® Single O-Ring Filter Housings
- Goulds® Multi–Stage Booster Pump
- 316L Stainless Steel Concentrate Valve
- Composite Feed Solenoid Valve
- Feed Low Pressure Switch 15-30 psi
- HM Digital™ PSC–150 TDS/Conductivity Controller
- Permeate and Concentrate Flow Meter
- Pre-Filter Pressure Gauges 0-100 psi
- Pump Pressure Gauge 0-300 psi
- Concentrate Pressure Gauge 0-300 psi
- John Guest® Push/Pull Fittings with Locking Safety Clips
- White Powder Coated Aluminum Frame

OPTIONS

- Minitrol IF Computer Controller with Feed Flush
- S–150 Computer Controller with Feed Flush and Dual TDS
- S–150 Computer controller Expander Board I/O
- AXEON HF4–Series Extra Low Energy Membrane Elements
- AXEON HF5–Series Ultra Low Energy Membrane Elements
- AXEON NF3–Series Nanofiltration Membrane Elements
- AXEON NF4–Series Nanofiltration Membrane Elements
- FRP–Series Membrane Housings
- Goulds® Multi-Stage Stainless Steel Booster Pump
- Blending Valve
- Chemical Pump Outlet
- Concentrate Recycle Valve with Flow Meter
- High Pressure Tank Switch
- Permeate Sample Ports
- Pump Pressure Relief Valve
- Single Wooden Shipping Crate
- Double Wooden Shipping Crate



CT-7000 (Front)
Reverse Osmosis System

SPECIFICATIONS

MODELS	CT-4000	CT-5000	CT-7000
Design			
Configuration	Single Pass	Single Pass	Single Pass
Feedwater Source (ppm) ^A	TDS < 2000	TDS < 2000	TDS < 2000
Standard Recovery Rate %	48	53	62
Recovery with Concentrate Recycle %	Up to 75	Up to 75	Up to 75
Flow Rates^B			
Permeate Flow (gpm / lpm)	2.78 / 10.52	3.47 / 13.14	4.86 / 18.40
Minimum Feed Flow (gpm / lpm)	5.78 / 21.88	6.47 / 24.50	7.86 / 29.75
Minimum Concentrate Flow (gpm / lpm)	3 / 11.36	3 / 11.36	3 / 11.36
Connections			
Feed (in)	1 FNPT	1 FNPT	1 FNPT
Permeate (in)	1 FNPT	1 FNPT	1 FNPT
Concentrate (in)	1 FNPT	1 FNPT	1 FNPT
Membranes			
Membranes Per Vessel	1	1	1
Membrane Quantity	2	3	4
Membrane Size	4040	4040	4040
Nominal Salt Rejection %	99	99	99
Vessels			
Vessel Array	1:1	1:1:1	1:1:1:1
Vessel Quantity	2	3	4
Pumps			
Pump Type	Multi-Stage	Multi-Stage	Multi-Stage
Motor HP	1.5	1.5	1.5
RPM @ 60Hz (50 Hz)	3450 (2900)	3450 (2900)	3450 (2900)
System Electrical			
Standard Voltage + Amp Draw ^C	220V, 60Hz, 1PH, 8.3A	220V, 60Hz, 1PH, 8.3A	220V, 60Hz, 1PH, 8.3A
High Voltage Service + Amp Draw ^C	220V, 50Hz, 1PH, 8.9A 220V, 60Hz, 3PH, 5.1A 220V, 50Hz, 3PH, 6.1A 380V, 50Hz, 3PH, 4.5A 460V, 60Hz, 3PH, 3.5A	220V, 50Hz, 1PH, 8.9A 220V, 60Hz, 3PH, 5.1A 220V, 50Hz, 3PH, 6.1A 380V, 50Hz, 3PH, 4.5A 460V, 60Hz, 3PH, 3.5A	220V, 50Hz, 1PH, 8.9A 220V, 60Hz, 3PH, 5.1A 220V, 50Hz, 3PH, 6.1A 380V, 50Hz, 3PH, 4.5A 460V, 60Hz, 3PH, 3.5A
System Dimensions			
Approximate Dimensions ^D L x W x H (in / cm)	30 x 38 x 47 / 76 x 96 x 119	30 x 38 x 47 / 76 x 96 x 119	30 x 38 x 47 / 76 x 96 x 119
Approximate Weight (lbs / kg)	235 / 106.60	250 / 113.40	265 / 120.20

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

Note: All 50Hz systems come standard with AXEON HF4-Series Extra Low Energy Membrane Elements.

- A. 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.
 B. Product flow and maximum recovery rates are based on feedwater conditions as stated above. Do not exceed recommended permeate flow.
 C. Varies with motor manufacturer.
 D. Does not include operating space requirements.

OPERATING LIMITS^E

Maximum Feed Temperature (°F / °C)	85 / 29	Maximum Turbidity (NTU)	1
Minimum Feed Temperature (°F / °C)	40 / 4	Maximum Free Chlorine (ppm)	0
Maximum Ambient Temperature (°F / °C)	120 / 49	Maximum TDS (ppm)	2000
Minimum Ambient Temperature (°F / °C)	40 / 4	Maximum Hardness (gpg)	0
Maximum Feed Pressure (psi / bar)	85 / 6	Maximum pH (Continuous)	11
Minimum Feed Pressure (psi / bar)	45 / 3	Minimum pH (Continuous)	2
Maximum Operating Pressure (psi / bar)	150 / 10	Maximum pH (cleaning 30 minutes)	13
Maximum Feed Silt Density Index (SDI)	< 3	Minimum pH (cleaning 30 minutes)	1

E. System pressure is variable due to water conditions. Permeate flow will increase at a higher temperature and will decrease at a lower temperature.