FLEXEON™

BT-Series Reverse Osmosis Systems

BT-Series Reverse Osmosis Systems have been engineered for capacities ranging from 1500 – 2000 gallons per day and feed water up to 2000 TDS.

BT-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.

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

BT-2000
Reverse Osmosis System
Pictured

Benefits:

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

FLEXEON™

Engineered Water Treatment Solutions

FLEXEON™

BT-Series Reverse Osmosis Systems

Features:

- Manual On/Off Control Switch
- White Powder Coated Aluminum Frame
- 5 Micron Sediment Pre-filter
- 10 Micron Carbon Block Pre-filter
- Double O-Ring Filter Housings
- Fluid-O-Tech™ Brass Rotary Vane High Pressure Pump
- ODP High Efficiency Carbonator Motor
- AXEON® HF1 Low Energy Membranes
- AXEON® PVC Pressure Vessels
- Permeate Flow Meter
- Concentrate Flow Meter
- Feed Low Pressure Switch
- Feed Solenoid Valve with Manual Bypass
- 316 Stainless Steel Concentrate Valve
- 0-300 psi Pump Pressure Gauge
- 0-100 psi Prefilter Pressure Gauges
- John Guest® Push/Pull Fittings with Locking Safety Clips

BT-2000
Reverse Osmosis System

Options & Upgrades:

- AXEON® HF4 Extra Low Energy Membranes
- AXEON® NF3 Nanofiltration Membranes
- AXEON® NF4 Nanofiltration Membranes
- Stainless Steel Pressure Vessels
- Concentrate Recycle Valve with Flow Meter
- HM Digital™ PS-100 TDS Controller
- HM Digital™ PS-200 Dual TDS Controller
- HM Digital™ PSC-150 TDS/Conductivity Controller
- Fluid-O-Tech™ Stainless Steel Rotary Vane Pump
- Minitrol Computer Controller
- Minitrol IF Computer Controller with Feed Flush
- S150 Computer Controller with Feed Flush
- High Pressure Tank Switch
- Chemical Pump Outlet
- Blending Valve
- Permeate Flush with Pressure Tank
- Permeate Flush with Atmospheric Tank
- Permeate Flush with Mechanical Float
- Permeate Sample Ports
- Single Wood Crate

Reverse Osmosis System Packages:

Models	BT-1500 / BT-1800 / BT-2000		
	STANDARD (S)	ADVANCED (A)	PREMIER (P)
Frame			
White Powder Coated Aluminum Frame	✓	✓	✓
Controls			
Manual On/Off Control Switch	✓		
Minitrol Computer Controller		✓	
Minitrol IF Computer Controller			✓
Pre-Treatment Lockout		✓	✓
Tank Level Input		✓	✓
LED Controller Display		✓	✓
Feed Solenoid Valve with Manual Bypass	✓	✓	✓
Concentrate Recycle Valve		✓	✓
Feed Low Pressure Switch 15-30 psi	✓	✓	✓
Instrumentation			
Permeate Flow Meter	✓	✓	✓
Concentrate Flow Meter	✓	✓	✓
Concentrate Recycle Flow Meter		✓	✓
316 Stainless Steel Concentrate Valve	✓	✓	✓
0-100 psi Prefilter In Pressure Gauge	✓	✓	✓
0-100 psi Prefilter Out Pressure Gauge	✓	✓	✓
0-300 psi Pump Pressure Gauge	✓	✓	✓
HM Digital™ PS-100 Permeate TDS Controller		✓	
HM Digital™ PS-202 Dual Permeate & Feed TDS Controller			✓
Standard Options			
Auto Flush			✓
5 Micron Sediment Pre-filter	✓	✓	✓
10 Micron Carbon Block Pre-filter	✓	✓	✓
Double O-Ring Filter Housings	✓	✓	✓
AXEON® HF1 Low Energy RO Membranes	✓		
AXEON® HF4 Extra Low Energy RO Membranes		✓	✓
AXEON® PVC Membrane Housings	✓	✓	✓
Fluid-O-Tech™ Brass Rotary Vane Pump	✓	✓	
Fluid-O-Tech™ Stainless Steel Rotary Vane Pump			✓
ODP Carbonator Motor	✓	✓	✓

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

Note 2: BT-1800 RO Systems come standard with the Concentrate Recycle Valve and Flow Meter options in order to achieve a higher recovery rate.

Naming Matrix:

- **B =** 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™ BT-Series	Standard (S)	Advanced (A)	Premier (P)
FLEXEON™ BT-1500	BT-1500S	BT-1500A	BT-1500P
FLEXEON™ BT-1800	BT-1800S	BT-1800A	BT-1800P
FLEXEON™ BT-2000	BT-2000S	BT-2000A	BT-2000P

FLEXEON™ BT-Series Reverse Osmosis Systems

Specifications:

Models	BT-1500	BT-1800	BT-2000
Design			
Configuration	Single Pass	Single Pass	Single Pass
Feed Water Source	City or Well Water	City or Well Water	City or Well Water
Standard Recovery Rate	41%	30%	63%
Recovery with Concentrate Recycle	Up to 75%	Up to 75%	Up to 75%
Rejection and Flow Rates			
Nominal Salt Rejection %	98.5	98.5	98.5
Permeate Flow* gpm (lpm)	1.04 (3.93)	1.25 (4.73)	1.38 (5.22)
Minimum Feed Flow gpm (lpm)	2.04 (7.72)	4.30 (16.28)	2.50 (9.46)
Maximum Feed Flow gpm (lpm)	3.00 (11.36)	5.00 (18.93)	5.00 (18.93)
Minimum Concentrate Flow gpm (lpm)	1.00 (3.78)	3.00 (11.36)	1.00 (3.78)
Connections			
Feed inch	1 FNPT	1 FNPT	1 FNPT
Permeate inch	3/8 Tube	3/8 Tube	3/8 Tube
Concentrate inch	3/8 Tube	3/8 Tube	3/8 Tube
Membranes			
Membrane(s) Per Vessel	1	1	1
Membrane Quantity	2	1	3
Membrane Size	2540	4040	2540
Vessels			
Vessel Array	1:1	1	1:1:1
Vessel Quantity	2	1	3
Pumps			
Pump Type	Rotary Vane 601 Brass or 611 SS	Rotary Vane 1001 Brass or 1011 SS	Rotary Vane 1001 Brass or 1011 SS
Motor HP (kw)	3/4 (0.55)	3/4 (0.55)	3/4 (0.55)
RPM @ 60 (50 Hz)	1725 (1465)	1725 (1465)	1725 (1465)
Electrical			
Standard Voltage	110V 60Hz 1 PH	110V 60Hz 1 PH	110V 60Hz 1 PH
Voltage Options	220V 60Hz 1 PH 220V 50Hz 1 PH	220V 60Hz 1 PH 220V 50Hz 1 PH	220V 60Hz 1 PH 220V 50Hz 1 PH
Voltage Amp Draw (110V 60Hz / 220V 60Hz / 220V 50Hz)	11 / 5.6 / 6.6	11 / 5.6 / 6.6	11 / 5.6 / 6.6
Systems Dimensions **			
L x W x H inch (cm)	19 x 23 x 46 (48 x 58 x 116)	19 x 23 x 46 (48 x 58 x 116)	19 x 23 x 46 (48 x 58 x 116)
Weight lb. (kg)	105 (47.63)	105 (47.63)	115 (52.16)

*Product Flow rates are based on equipment test parameters.
**Does not include operating space requirements.

Operating Limits:

Maximum Feed Temperature °F (°C)	105 (40.96)	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	15
Minimum Ambient Temperature °F (°C)	35 (1.66)	Maximum pH (Continuous)	11
Maximum Feed Pressure psi (bar)	85 (5.86)	Minimum pH (Continuous)	3
Minimum Feed Pressure psi (bar)	35 (2.41)	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, Softened City Feed Water, 35 psi (2.41 bar) Feed Pressure, 150 psi (10.34 bar) (HF1 Membranes) 100 psi (6.89 bar) (HF4 Membranes) or 70 psi (4.83 bar) (NF3 & NF4 Membranes) Operating Pressure, 77 Degrees F (25 Degrees C), Recovery as stated, 7.0 pH. Data taken after 30 minutes of operation.

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

800.320.4074 ■ 760.723.5417 ■ **www.flexeonsystems.com**
F: 760.728.5062 ■ **E:** info@flexeonsystems.com ■ 541 Industrial Way, Suite 1, Fallbrook, CA 92028