BT – Series Reverse Osmosis Systems

FLEXEON BT – Series Commercial Reverse Osmosis Systems further expand the FLEXEON commercial reverse osmosis lineup with three models designed for 1,500, 1,800 and 2,000 gallons per day. Featuring 4.0" 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

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 Costs
- Low Maintenance Costs
- Easy Maintenance and Servicing
- 1–Year Limited Warranty

Know Higher Standards™

Features

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

BT – 2000
Reverse Osmosis System

Front

Back

Options

- 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
- AXEON SS – Series Membrane Housings
- AXEON FRP – Series Membrane Housings
- Concentrate Recycle Valve with Flow Meter
- 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
- S – 150 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
- Wooden Shipping Crate

Product Specifications			
Models	**BT – 1500**	**BT – 1800**	**BT – 2000**
Design			
Configuration	Single Pass	Single Pass	Single Pass
Feedwater Source†	TDS <2000 ppm	TDS <2000 ppm	TDS <2000 ppm
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 %	99	99	99
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	4.25 / 16.10	2.35 / 8.89
Maximum Feed Flow (gpm / lpm)	3.00 / 22.70	6.00 / 22.71	6.00 / 22.70
Minimum Concentrate Flow (gpm / lpm)	1.00 / 3.78	3.00 / 11.36	1.00 / 3.78
Connections			
Feed (in)	1 FNPT	1 FNPT	1 FNPT
Permeate (in)	3/8 QC	3/8 QC	3/8 QC
Concentrate (in)	3/8 QC	3/8 QC	3/8 QC
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	Rotary Vane 1001 Brass	Rotary Vane 1001 Brass
Motor HP	3/4	3/4	3/4
RPM @ 60 Hz (50 Hz)	1725 (1465)	1725 (1465)	1725 (1465)
System Electrical			
Standard Voltage + Amp Draw	110V, 60Hz, 1PH, 11.0A**	110V, 60Hz, 1PH, 11.0A**	110V, 60Hz, 1PH, 11.0A**
High Voltage Service + Amp Draw	220V, 60Hz, 1PH, 5.6A** 220V, 50Hz, 1PH, 5.6 A**	220V, 60Hz, 1PH, 5.6A** 220V, 50Hz, 1PH, 6.6A**	220V, 60Hz, 1PH, 5.6A** 220V, 50Hz, 1PH, 6.6A**
Systems Dimensions			
Approximate Dimensions* 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	19 x 23 x 46 / 48 x 58 x 116
Approximate Weight (lbs / kg)	105 / 47.63	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.

* Does not include operating space requirements.

** Varies with motor manufacturer.

Note 1: All 50Hz systems come standard with AXEON HF4 – Series Extra Low Energy Membrane Elements.

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

Operating Limits††

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

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

††† Product flow and maximum recovery rates are based on feedwater conditions as stated above. Do not exceed recommended permeate flow.