

DT-Series Reverse Osmosis Systems

DT-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.

DT-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.

DT-Series Reverse Osmosis Systems have been engineered for capacities ranging from 10000 – 20000 gallons per day.



DT-20000
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.

FLEXEON DT-Series Reverse Osmosis Systems

Standard Features

- S150 Computer Controller
 - LCD Backlit Display
 - Pre-Treatment Lockout
 - Tank Level Input
 - Low Pressure Monitoring and Alarm
 - Controller Permeate TDS Monitoring
 - Feed Flush
- White Powder Coated Aluminum Frame
- AXEON® 10 Micron Filter Bag
- AXEON® Bag Filter Housing
- AXEON® 5 Micron Sediment Pre-Filter
- AXEON® by Pentek Single O-Ring Filter Housing
- Goulds® Multi-Stage Booster Pump
- AXEON® HF1 Low Energy Membranes
- AXEON® PVC Membrane Housings
- AXEON® Permeate Flow Meter
- AXEON® Concentrate Flow Meter
- Feed Low Pressure Switch
- Feed Solenoid Valve
- AXEON® 316 Stainless Steel Concentrate Valve
- AXEON® 0-300 psi Pump Pressure Gauges
- AXEON® 0-100 psi Pre-Filter Pressure Gauges
- Single Wood Crate



DT-20000
Reverse Osmosis System



Options and Upgrades

- AXEON® HF4 Extra Low Energy Membranes
- AXEON® HF5 Ultra Low Energy Membranes
- AXEON® NF3 Nanofiltration Membranes
- AXEON® NF4 Nanofiltration Membranes
- AXEON® Stainless Steel Membrane Housings
- AXEON® Fiberglass Membrane Housings
- Concentrate Recycle Valve with Flow Meter
- Hanna® BL 981411 pH Controller
- Hanna® BL 982411 ORP Controller
- Goulds® Multi-Stage Stainless Steel Booster Pump
- S150 Computer Controller Expander Board
- S150 Computer Controller Feed TDS Monitoring
- Pump Pressure Relief Valve †
- High Pressure Tank Switch
- Chemical Pump Outlet
- Blending Valve
- Permeate Sample Ports
- Double Wood Crate

Reverse Osmosis System Packages

Models	DT - 10000	DT - 15000	DT - 20000
	STANDARD (S)	ADVANCED (A)	PREMIER (P)
Frame			
White Powder Coated Aluminum Frame	✓	✓	✓
Controls			
S150 Computer Controller	✓	✓	✓
LCD Controller Display	✓	✓	✓
Pre-Treatment Lockout	✓	✓	✓
Tank Level Input	✓	✓	✓
Feed Solenoid Valve	✓	✓	✓
Concentrate Recycle Valve		✓	✓
Feed Low Pressure Switch 15-30 psi	✓	✓	✓
Instrumentation			
AXEON® Permeate Flow Meter	✓	✓	✓
AXEON® Concentrate Flow Meter	✓	✓	✓
Concentrate Recycle Flow Meter		✓	✓
AXEON® 316 Stainless Steel Concentrate Valve	✓	✓	✓
AXEON® 0-100 psi Pre-Filter In Pressure Gauge	✓	✓	✓
AXEON® 0-100 psi Pre-Filter Out Pressure Gauge	✓	✓	✓
AXEON® 0-300 psi Pump Pressure Gauge	✓	✓	✓
0-300 psi Final Concentrate Pressure Gauge	✓	✓	✓
Controller Permeate TDS Monitoring	✓	✓	✓
Controller Feed TDS Monitoring			✓
Features			
Feed Flush	✓	✓	✓
AXEON® 10 Micron Filter Bag	✓	✓	✓
AXEON® 5 Micron Sediment Pre-Filter	✓	✓	✓
AXEON® by Pentek Single O-Ring Filter Housing	✓	✓	✓
AXEON® HF1 Low Energy RO Membranes	✓		
AXEON® HF4 Extra Low Energy RO Membranes		✓	✓
AXEON® PVC Membrane Housings	✓	✓	✓
Goulds® Multi-Stage Booster Pump	✓	✓	
Goulds® Multi-Stage Stainless Steel Booster Pump			✓
Chemical Pump Outlet		✓	✓
Permeate Sample Valves			✓

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

Naming Matrix

- **D** = 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 DT-Series	Standard (S)	Advanced (A)	Premier (P)
FLEXEON DT-10000	DT-10000S	DT-10000A	DT-10000P
FLEXEON DT-15000	DT-15000S	DT-15000A	DT-15000P
FLEXEON DT-20000	DT-20000S	DT-20000A	DT-20000P

FLEXEON DT-Series Reverse Osmosis Systems

Specifications

Models	DT - 10000	DT - 15000	DT - 20000
Design			
Configuration	Single Pass	Single Pass	Single Pass
Feed Water Source***	TDS <2000 ppm	TDS <2000 ppm	TDS <2000 ppm
Standard Recovery Rate†	55%	55%	55%
Recovery with Optional 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)	6.94 (26.27)	10.42 (39.44)	13.89 (52.57)
Minimum Feed Flow gpm (lpm)	12.94 (49.00)	16.42 (62.1)	19.89 (75.30)
Maximum Feed Flow gpm (lpm)	28.00 (106.00)	28.00 (106.00)	28.00 (106.00)
Minimum Concentrate Flow gpm (lpm)	6.00 (22.71)	6.00 (22.71)	6.00 (22.71)
Connections			
Feed inch	2 FNPT	2 FNPT	2 FNPT
Permeate inch	1 FNPT	1 FNPT	1 FNPT
Concentrate inch	1 FNPT	1 FNPT	1 FNPT
Membranes			
Membrane(s) Per Vessel	1	1	1
Membrane Quantity	6	8	10
Membrane Size	4040	4040	4040
Vessels			
Vessel Array	2-2-2	2-2-2-2	2-2-2-2-2
Vessel Quantity	6	8	10
Pumps			
Pump Type	Multi-Stage	Multi-Stage	Multi-Stage
Motor HP	3	3	5
RPM @ 60 (50 Hz)	3450 (2900)	3450 (2900)	3450 (2900)
Electrical			
Standard Voltage	220V, 60HZ, 1PH, 16.9A 220V, 50HZ, 1PH, 17.0A	220V, 60HZ, 1PH, 16.9A 220V, 50HZ, 1PH, 17.0A	220V, 60HZ, 3PH, 14.7A
Voltage Options	220V, 60HZ, 3PH, 8.1A 220V, 50HZ, 3PH, 9.1A 380V, 50HZ, 1PH, 5.3A 460V, 60HZ, 3PH, 4.6A	220V, 60HZ, 3PH, 8.1A 220V, 50HZ, 3PH, 9.1A 380V, 50HZ, 1PH, 5.3A 460V, 60HZ, 3PH, 4.6A	220V, 50HZ, 3PH, 15.9A 380V, 50HZ, 1PH, 8.5A 460V, 60HZ, 3PH, 7.5A
Systems Dimensions **			
L x W x H inch (cm)	49 X 33 X 54 (125 X 84 X 137)	55 X 33 X 54 (140 X 84 X 137)	61 X 33 X 54 (155 X 84 X 137)
Weight lb. (kg)	350 (159)	400 (181)	450 (204)

* 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.