

## DT-Series Reverse Osmosis Systems

**DT-Series Reverse Osmosis Systems** have been engineered for capacities ranging from 10000 – 20000 gallons per day and feed water up to 2000 TDS.

**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 compact space saving expandable design, excellent pre-filtration, quality components and allow for many options and upgrades to suit most applications.



**DT-20000**  
Reverse Osmosis System

### 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.



Engineered Water  
Treatment Solutions

# FLEXEON™

## DT-Series Reverse Osmosis Systems

### Features:

- S150 Computer Controller
  - ◆ LCD Display
  - ◆ Pre-Treatment Lockout
  - ◆ Tank Level Input
  - ◆ Low Pressure Monitoring and Alarm
  - ◆ Controller Permeate TDS Monitoring
  - ◆ Feed Flush
- White Powder Coated Aluminum Frame
- FSI® 10 Micron Filter Bag
- FSI® Bag Filter Housing
- 5 Micron Sediment Pre-filter
- Double O-Ring Filter Housing
- Goulds® Multi-Stage Booster Pump
- 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 Gauges
- 0-100 psi Prefilter Pressure Gauges
- Single Wood Crate



**DT-20000**  
Reverse Osmosis System



### Options & Upgrades:

- AXEON® HF4 Extra Low Energy Membranes
- AXEON® HF5 Ultra Low Pressure Membranes
- AXEON® NF3 Nanofiltration Membranes
- AXEON® NF4 Nanofiltration Membranes
- Stainless Steel Pressure Vessels
- Fiberglass Pressure Vessels
- 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)
<b>Frame</b>			
White Powder Coated Aluminum Frame	✓	✓	✓
<b>Controls</b>			
S150 Computer Controller	✓	✓	✓
LCD Controller Display	✓	✓	✓
Pre-Treatment Lockout	✓	✓	✓
Tank Level Input	✓	✓	✓
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 Prefilter In Pressure Gauge	✓	✓	✓
0-100 psi Prefilter Out Pressure Gauge	✓	✓	✓
0-300 psi Pump Pressure Gauge	✓	✓	✓
0-300 psi Final Concentrate Pressure Gauge	✓	✓	✓
Controller Permeate TDS Monitoring	✓	✓	✓
Controller Feed TDS Monitoring			✓
<b>Standard Options</b>			
Auto Flush	✓	✓	✓
FSI® 10 Micron Filter Bag	✓	✓	✓
5 Micron Sediment Pre-filter	✓	✓	✓
Double O-Ring Filter Housing	✓	✓	✓
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			✓
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
<b>Design</b>			
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	55%	55%	55%
Recovery with Optional 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)	6.94 (26.27)	10.42 (39.44)	13.89 (52.57)
Minimum Feed Flow gpm (lpm)	15.00 (56.78)	22.00 (83.27)	29.00 (109.77)
Maximum Feed Flow gpm (lpm)	18.00 (68.13)	25.00 (94.63)	33.00 (124.91)
Minimum Concentrate Flow gpm (lpm)	6.00 (22.71)	6.00 (22.71)	6.00 (22.71)
<b>Connections</b>			
Feed inch	2 FNPT	2 FNPT	2 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	6	8	10
Membrane Size	4040	4040	4040
<b>Vessels</b>			
Vessel Array	2:2:2	2:2:2:2	2:2:2:2:2
Vessel Quantity	6	8	10
<b>Pumps</b>			
Pump Type	Multi-Stage	Multi-Stage	Multi-Stage
Motor HP (kw)	3 (2.20)	3 (2.20)	5 (3.67)
RPM @ 60 (50 Hz)	3450 (2900)	3450 (2900)	3450 (2900)
<b>Electrical</b>			
Standard Voltage	220V 60HZ 1PH	220V 60HZ 1PH	220V 60HZ 3PH
Voltage Options	220V 50HZ 1PH 220V 60HZ 3PH 220V 50HZ 3PH 380V 50HZ 1PH 460V 60HZ 3PH	220V 50HZ 1PH 220V 60HZ 3PH 220V 50HZ 3PH 380V 50HZ 1PH 460V 60HZ 3PH	220V 50HZ 3PH 380V 50HZ 1PH 460V 60HZ 3PH
Voltage Amp Draw (220V 60Hz / 220 50 Hz / 380V 50 Hz/ 460V 60 Hz)	16.0 / 17.0 / 5.3 / 4.6	16.0 / 17.0 / 5.3 / 4.6	14.7 / 15.9 / 8.5 / 7.5
<b>Systems Dimensions **</b>			
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 are based on equipment test parameters.

\*\*Does not include operating space requirements.

## Operating Limits:

Maximum Feed Temperature °F (°C)	105 (40.56)	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), 70 psi (4.83 bar) (NF3 & NF4 Membranes), or 80 psi (5.52 bar) (HF5 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.



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