



ST – Series Reverse Osmosis Systems

The **FLEXEON ST – Series Reverse Osmosis System** is a state-of-the-art, versatile system for treating tap water supplies with a production flow rate of 500 gallons per day utilizing minimal energy consumption with low maintenance and operational costs. The design of this system is perfectly suited for a wide range of applications including use in coffee and tea production, cleaning and sanitizing, misting and more.

The **FLEXEON ST – Series Reverse Osmosis System** is uniquely designed to rotate 360° on top of a 40 gallon steel reverse osmosis storage tank that is designed to store and deliver water under pressure between pump cycles. The system features AXEON HF5 – Series Ultra Low Energy Membranes, AXEON by Pentek® Filter Housings, AXEON gauges, flow meters, cartridges and needle valves with flow meter.



AXEON ST – 500
Reverse Osmosis System

Features

- Concentrate Flow Meter with Integrated Stainless Steel Needle Valve
- System Bypass Valve
- System Blend Valve
- Feed Low Pressure Switch
- Permeate High Pressure Switch
- Permeate Pressure Gauge
- Pump and Concentrate Pressure Gauges
- AXEON HF5 – Series Extra Low Energy Membranes
- AXEON 4.5" x 20" 5 – Micron Sediment Pre-Filter
- Built-in Internal Permeate Flush
- Stainless Steel Rotary Vane Pump
- Feed and Permeate TDS Meters
- Permeate Sample Valve
- Feed Sample Valve
- AXEON by ASCO® Composite Feed Solenoid Valve
- Permeate Flow Meter
- Pre-Filter In/Out Gauges
- White Powder Coated Aluminum Frame
- 40 – Gallon Steel Pressure Tank
- AXEON Stainless Steel – Series Housings
- AXEON 2.5" x 20" 10 – Micron Carbon Block Pre-Filter
- AXEON 2.5" x 20" 10 – Micron Carbon Block Post-Filter

Know Higher Standards™





ST – Series Reverse Osmosis Systems

Product Specifications

| Model | ST – 500 |
|--|------------------------------------|
| Design | |
| Configuration | Single Pass |
| Feedwater Source [†] | TDS <1000 ppm |
| Standard Recovery Rate % | 25 – 30 |
| Rejection and Flow Rates^{††} | |
| Nominal Salt Rejection % | 98.5 |
| Permeate Flow (gpm / lpm) | 0.35 / 1.30 |
| Minimum Feed Flow (gpm / lpm) | 1.35 / 5.10 |
| Maximum Feed Flow (gpm / lpm) | 6.00 / 22.70 |
| Minimum Concentrate Flow (gpm / lpm) | 1.00 / 3.70 |
| Connections | |
| Feed Connection (in) | 1/2 QC |
| Permeate Connection (in) | 1/2 QC |
| Concentrate Connection (in) | 3/8 QC |
| Membranes | |
| Membrane(s) Per Vessel | 1 |
| Membrane Quantity | 2 |
| Membrane Size | 2521 |
| Vessels | |
| Vessel Array | 1:1 |
| Vessel Quantity | 2 |
| Standard Pump | |
| Pump Type | Stainless Steel Rotary Vane 411 |
| Motor HP | 1/3 |
| RPM @ 60Hz | 1725 |
| System Electrical | |
| Standard Voltage + Amp Draw | 120VAC / 1PH / 60Hz / 6.6A** |
| High Voltage Service + Amp Draw | 220VAC / 1PH / 60Hz / 3.2A** |
| Systems Dimensions | |
| Approximate Dimensions* L x W x H (in / cm) | 21 x 21 x 68 / 53.3 x 53.3 x 172.7 |
| Approximate Weight (lbs / kg) | 170 / 77 Dry Weight |

Test Parameters: 550 TDS Filtered (5 – Micron), Dechlorinated, Municipal Feedwater, 65 psi / 4.50 bar Feed Pressure, 80 psi / 5.52 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.

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) | Up to 1000 |
| 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.

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WATER TECHNOLOGIES

MKTF-389-D

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