

# Industrial Brackish RO Systems

Capacity: 200,000 to 900,000 GPD

**RO-500**

**SERIES**

Pure Aqua's reverse osmosis systems are capable of removing salts, as well as other impurities such as bacteria, sugars, proteins, dyes and constituents having a molecular weight greater than 150-250 Daltons. Our industrial BWRO systems are strategically designed to be energy efficient and environmentally friendly while producing high-quality water.



TW-360K-8680

Pure Aqua supplies a full line of standard and fully customizable reverse osmosis systems, all of which are engineered using advanced 3D computer modeling and process design software for accurate and customized solutions.

## Standard Features

- ◆ Powder coated carbon steel frame
- ◆ 8" TFC spiral wound membranes
- ◆ Stainless steel multi-stage pump with TEFC motor
- ◆ FRP membrane housings
- ◆ 5 micron cartridge prefilter
- ◆ 460V/3ph/60Hz power requirement
- ◆ PLC based control panel
- ◆ Programmable time delay and set points
- ◆ Motor starter
- ◆ NEMA 12 enclosure
- ◆ Low pressure switch
- ◆ High pressure switch
- ◆ Liquid filled pressure gauges
- ◆ Permeate conductivity monitor
- ◆ Permeate & concentrate flow meters

## Available Options

- ◆ Remote monitoring
- ◆ PLC based control panel
- ◆ Feed water conductivity monitor
- ◆ Membrane cleaning skid
- ◆ Automatic hourly flush
- ◆ Feed/Permeate blending
- ◆ Export crating
- ◆ 220V or 380-415V/3ph/50 or 60Hz
- ◆ Product tank level switch
- ◆ pH & ORP controller with sensor
- ◆ Water and hour meters
- ◆ Chemical dosing systems
- ◆ Media prefiltration systems
- ◆ Ozonation and UV sterilization systems
- ◆ Water softeners
- ◆ Post deionization polishers
- ◆ Containerized RO systems

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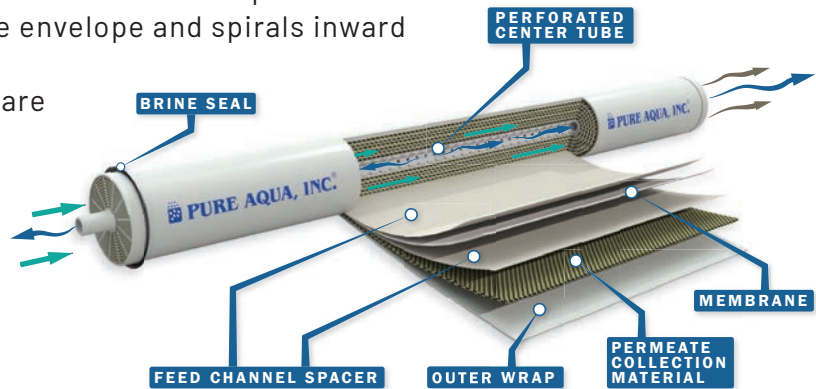
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The spiral membrane is constructed from one or more membrane envelopes wound around a perforated central tube. The permeate passes through the membrane into the envelope and spirals inward to the central tube for collection.

The layers of the membrane envelope are detailed in the diagram to the right.



## Operation Specifications

- ◆ Max. feed water temperature: 42°C
- ◆ Feed water pressure: 20 to 80 psi
- ◆ Operating pressure: 150 to 250 psi
- ◆ Hydrogen Sulfide must be removed
- ◆ Turbidity must be removed
- ◆ Max. iron content: 0.05 ppm
- ◆ Feed water TDS: 0 to 1,000 or 3,000 or 5,000 ppm
- ◆ Hardness over 1 GPG requires antiscalant dosing
- ◆ pH tolerance range: 3-11
- ◆ Max. Silica Tolerance: 60 ppm @ 60% recovery
- ◆ Operate at higher TDS by lowering recovery

Model #	Permeate Flow Rate		Quantity of 8" Membranes	Motor HP Rating at 1,000 ppm		Dimensions L"xW"xH"	Approx. Weight (lbs)
	gpd	m <sup>3</sup> /d		60Hz	50Hz		
TW-200K-4780	200,000	757	28	25	30	310x45x85	4,700
TW-225K-5680	225,000	852	30	30	30	275x45x80	4,850
TW-270K-6680	270,000	1,022	36	30	40	275x65x80	5,050
TW-320K-7680	320,000	1,211	42	40	40	275x65x80	5,200
TW-360K-8680	360,000	1,363	48	40	50	275x75x80	5,750
TW-410K-9680	410,000	1,552	54	40	50	275x75x80	6,250
TW-450K-10680	450,000	1,703	60	50	60	275x75x80	7,500
TW-500K-11680	500,000	1,893	66	60	60	275x75x80	8,500
TW-550K-11780	550,000	2,082	77	60	60	310x85x100	8,750
TW-600K-13780	600,000	2,271	91	75	75	310x85x100	9,250
TW-700K-14780	700,000	2,650	98	100	100	310x85x100	9,650
TW-800K-16780	800,000	3,028	112	80	150	310x85x100	10,200
TW-900K-18780	900,000	3,407	126	100	150	310x85x100	10,650

Note: If the feed water TDS exceeds 1,000 ppm, the system model number changes to BW-XXXX-XXXX, and a suffix is added to the end of the model number: "-3" is added if the TDS is 3,000 ppm or less, and "-5" is added if the TDS is 5,000 ppm or less.

Example: Required system to produce 300,000 GPD with a feed water TDS of 5,000 ppm, the corresponding model number is: "BW-300K-7680-5".

Pure Aqua also supplies: Custom Engineered Solutions, Multimedia Pretreatment, Activated Carbon Pretreatment, Water Conditioning, Chemical Dosing Systems, Ultraviolet (UV) Sterilizers and Ozonation Systems.



Water Treatment and Reverse Osmosis Systems

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