

## Brackish Water Reverse Osmosis System Price List For TDS < 5000 mg/l

Model Number	Pro-duction (GPD = US Gallons/Day))	Production (LPD = Liters/Day) (M <sup>3</sup> /Day)	Regular System Price (list)
BWRO-150	150	567 LPD	\$2,120.00
BWRO-300	300	1136 LPD	\$2,200.00
BWRO-600	600	2271 LPD	\$2,612.00
BWRO-1000	1000	3785 LPD	\$3,066.67
BWRO-2000	2000	7571 LPD	\$6,120.00
BWRO-3000	3000	11355 LPD	\$8,118.67
BWRO-4500	4500	17074 LPD	\$9,652.00
BWRO-6000	6000	22712 LPD	\$11,492.00
BWRO-7GPM	10,080	38 m3/D	\$19,944.00
BWRO-10GPM	14,400	54 m3/D	\$25,240.00
BWRO-15GPM	21,600	82 m3/D	\$35,866.67
BWRO-20GPM	28,800	109 m3/D	\$40,240.00
BWRO-30GPM	43,200	163 m3/D	\$50,400.00
BWRO-40GPM	57,600	218 m3/D	\$53,066.67
BWRO-50GPM	72,000	273 m3/D	\$60,933.33
BWRO-60GPM	86,400	327 m3/D	\$66,400.00
BWRO-70GPM	100,800	382 m3/D	\$78,666.67
BWRO-80GPM	115,200	436 m3/D	\$81,333.33
BWRO-104GPM	150,000	570 m3/D	\$105,333.33
BWRO-121 GPM	175,000	662 m3/D	\$122,666.67
BWRO-152 GPM	220,000	833 m3/D	\$133,200.00

## GENERAL TECHNICAL SPECIFICATIONS FOR BWRO-40GPM to BWRO-152 GPM

Feed water:	less than 5,000 ppm
Required feed water pressure:	40 psi
Production rate is rated at:	25 °C/ 77 °F <i>(higher temperature will yield higher production rate, and vice versa)</i>
Product water quality:	less than 500 ppm
Recovery Rate:	up to 70%
Working Pressure:	<200 psi <i>(depending on feed water TDS and temperature)</i>

### 1. RO System

ForeverPure Brackish Water RO systems are designed to operate for feed water TDS < 5000 ppm. The built-in Variable Frequency Drive (VFD) can be adjusted to increase or lower the operation pressure according to feed water TDS and temperature.

- **Pre-Filtration System:** fiberglass/PVC housing, 5-micron cartridge type sediment filter further reduces suspended solids in the feed water stream to RO system. It protects the RO high-pressure pump and lead end RO membrane elements from debris.
- **Membrane Housing:** fiberglass, 8" housing, 300 psi rated pressure vessels.
- **Membranes:** New energy saving, low pressure membranes.
- **High pressure RO Pump:** <180 psi, corrosion resistant 316L stainless steel.
- **Motor:** high efficiency, 3 Phase, TEFC. Available for power ratings worldwide.
- **High pressure side piping material:** 316 Stainless Steel or schedule 80 PVC
- **Low pressure side piping material:** Schedule 80 PVC
- **Concentrate control valve:** 316 Stainless Steel
- **Water quality monitor:** product water TDS meter
- **Flow meters:** Panel Mount Flow Meters for feed water and product water.
- **Pressure Gauges:** Feed Water Pressure, working pressure, Concentrate
- **System controls (automatic operation and manual):**
  - **Full Color Touch Screen Operator Interface is standard on all models BWRO-40GPM or larger.** Touch screen provide online trouble shooting instructions, operation and maintenance instructions, real time monitoring of all motors, sensors, valves, and pumps.

Siemens or Allen Bradley Programmable Logic Controller (*PLC*) to provide start/stop, sequential, and alarm control.

**RO System start permissible conditions:**

1. Power On
2. Start button pushed
3. Low pressure switch closed
4. Permeate water tank level below low level (low and high level switches are on open position)

**Five conditions will cause the RO to shut down the machine:**

1. High working pressure,
  2. Low inlet pressure (<20 psi)
  3. Starter overload trip
  4. Product water storage tank level high
  5. Emergency shut-down button pushed.
- Low Feed Pressure Shut Off with indicator light
  - High pressure shut-off switch
  - Product Water and raw water Tank level control
  - System On switch with light
  - Power On switch with light

**Pre-Treatment Systems**

**2. Anti-scalant Dosing System**

One metering injection systems will be supplied for controlling different elements in the feed water of the RO plant. The metering pump will allow controlling of different functions such as the stroke length and percentage rate. The Antiscalant Dosing System prevents the membrane from scaling.

**3. Biocide Dosing System**

One metering injection systems will be supplied for controlling different elements in the feed water of the RO plant. The metering pump will allow controlling of different functions such as the stroke length and percentage rate. The Biocide Dosing System prevents biofouling of multi-media and RO membranes.

**Membrane Cleaning and Flushing Systems**

**4. Permeate Water Flush**

The Permeate Water Flush function purges the salt water out of the system by pumping permeate water into the membrane housing before each shut down. This maintains product water quality and extend the membrane life time.

## Miscellaneous

### 5. High Product Water TDS Diversion With Alarm

If the product water TDS rises above a preset value, then the system will trigger an alarm and divert the unqualified product water into the drain. This function ensures product water quality.

## GENERAL TECHNICAL SPECIFICATIONS FOR BWRO-2000 to SWRO-30GPM

Feed water:	less than 5,000 ppm
Required feed water pressure:	40 psi
Production rate is rated at:	25 °C/ 77 °F <i>(higher temperature will yield higher production rate, and vice versa)</i>
Product water quality:	less than 500 ppm
Recovery Rate:	up to 70%
Working Pressure:	<200 psi <i>(depending on feed water TDS and temperature)</i>

### 1. RO System

ForeverPure Brackish Water RO systems are designed to operate for feed water TDS < 5000 ppm. The built-in Variable Frequency Drive (VFD) can be adjusted to increase or lower the operation pressure according to feed water TDS and temperature.

- **Pre-Filtration System:** fiberglass/PVC housing, 5-micron cartridge type sediment filter further reduces suspended solids in the feed water stream to RO system. It protects the RO high-pressure pump and lead end RO membrane elements from debris.
- **Membrane Housing:** fiberglass/PVC, 4" housing, 300 psi rated pressure vessels.
- **Membranes:** New energy saving, low pressure membranes.
- **High pressure RO Pump:** <180 psi, corrosion resistant 316L stainless steel.
- **Motor:** high efficiency, 3 Phase, TEFC. Available for power ratings worldwide.
- **High pressure side piping material:** 316 Stainless Steel or schedule 80 PVC
- **Low pressure side piping material:** Schedule 80 PVC
- **Concentrate control valve:** 316 Stainless Steel
- **Water quality monitor:** product water TDS meter
- **Flow meters:** Panel Mount Flow Meters for feed water and product water.
- **Pressure Gauges:** Feed Water Pressure, working pressure, Concentrate
- **System controls** (automatic operation and manual):  
Siemens or Allen Bradley Programmable Logic Controller (*PLC*) to provide start/stop, sequential, and alarm control.

RO System start permissible conditions:

5. Power On

6. Start button pushed
7. Low pressure switch closed
8. Permeate water tank level below low level (low and high level switches are on open position)

**Five conditions will cause the RO to shut down the machine:**

6. High working pressure,
  7. Low inlet pressure (<20 psi)
  8. Starter overload trip
  9. Product water storage tank level high
  10. Emergency shut-down button pushed.
- Low Feed Pressure Shut Off with indicator light
  - High pressure shut-off switch
  - Product Water and raw water Tank level control
  - System On switch with light
  - Power On switch with light

## Pre-Treatment Systems

### 6. Anti-scalant Dosing System

One metering injection systems will be supplied for controlling different elements in the feed water of the RO plant. The metering pump will allow controlling of different functions such as the stroke length and percentage rate. The Antiscalant Dosing System prevents the membrane from scaling.

## Membrane Cleaning and Flushing Systems

### 7. Permeate Water Flush

The Permeate Water Flush function purges the salt water out of the system by pumping permeate water into the membrane housing before each shut down. This maintains product water quality and extend the membrane life time.

## Miscellaneous

### 8. High Product Water TDS Diversion With Alarm

If the product water TDS rises above a preset value, then the system will trigger an alarm and divert the unqualified product water into the drain. This function ensures product water quality.

## GENERAL TECHNICAL SPECIFICATIONS FOR BWRO-150 to BWRO-1000

Feed water:	less than 5,000 ppm
Required feed water pressure:	40 psi
Production rate is rated at:	25 °C/ 77 °F <i>(higher temperature will yield higher production rate, and vice versa)</i>
Product water quality:	less than 500 ppm
Recovery Rate:	up to 50%
Working Pressure:	< 200 psi <i>(depending on feed water TDS and temperature)</i>

### 1. RO System

ForeverPure Brackish Water RO systems are designed to operate for feed water TDS < 5000 ppm. The built-in Variable Frequency Drive (VFD) can be adjusted to increase or lower the operation pressure according to feed water TDS and temperature.

- **Pre-Filtration System:** PVC housing, 5-micron cartridge type sediment filter further reduces suspended solids in the feed water stream to RO system. It protects the RO high-pressure pump and lead end RO membrane elements from debris.
- **Membrane Housing:** PVC/fiberglass, 2.5" housing, 300 psi rated pressure vessels.
- **Membranes:** New energy saving, low pressure membranes.
- **High pressure RO Pump:** <180 psi, corrosion resistant 316L stainless steel.
- **Motor:** high efficiency, single phase or 3 Phase, TEFC. Available for power ratings worldwide.
- **High pressure side piping material:** schedule 80 PVC or reinforced hose
- **Low pressure side piping material:** Schedule 80 PVC
- **Concentrate control valve:** 316 Stainless Steel
- **Water quality monitor:** product water TDS meter
- **Flow meters:** Panel Mount Flow Meters for feed water and product water.
- **Pressure Gauges:** Feed Water Pressure, working pressure, Concentrate
- **System controls** (automatic operation and manual):  
Siemens or Allen Bradley Programmable Logic Controller (*PLC*) to provide start/stop, sequential, and alarm control.

RO System start permissible conditions:

9. Power On

10. Start button pushed
11. Low pressure switch closed
12. Permeate water tank level below low level (low and high level switches are on open position)

**Five conditions will cause the RO to shut down the machine:**

11. High working pressure,
  12. Low inlet pressure (<20 psi)
  13. Starter overload trip
  14. Product water storage tank level high
  15. Emergency shut-down button pushed.
- Low Feed Pressure Shut Off with indicator light
  - High pressure shut-off switch
  - Product Water and raw water Tank level control
  - System On switch with light
  - Power On switch with light