

*Packaged Reverse Osmosis Plants for Bottled Water Stores*

*QualiPure™*



The QualiPure line of Commercial Reverse Osmosis units are available in a complete water purification system for water bottling. QualiPure “Water Store” plants provide the total water treatment process including pre-treatment, reverse osmosis, post-treatment, disinfection, product storage, and repressurization.

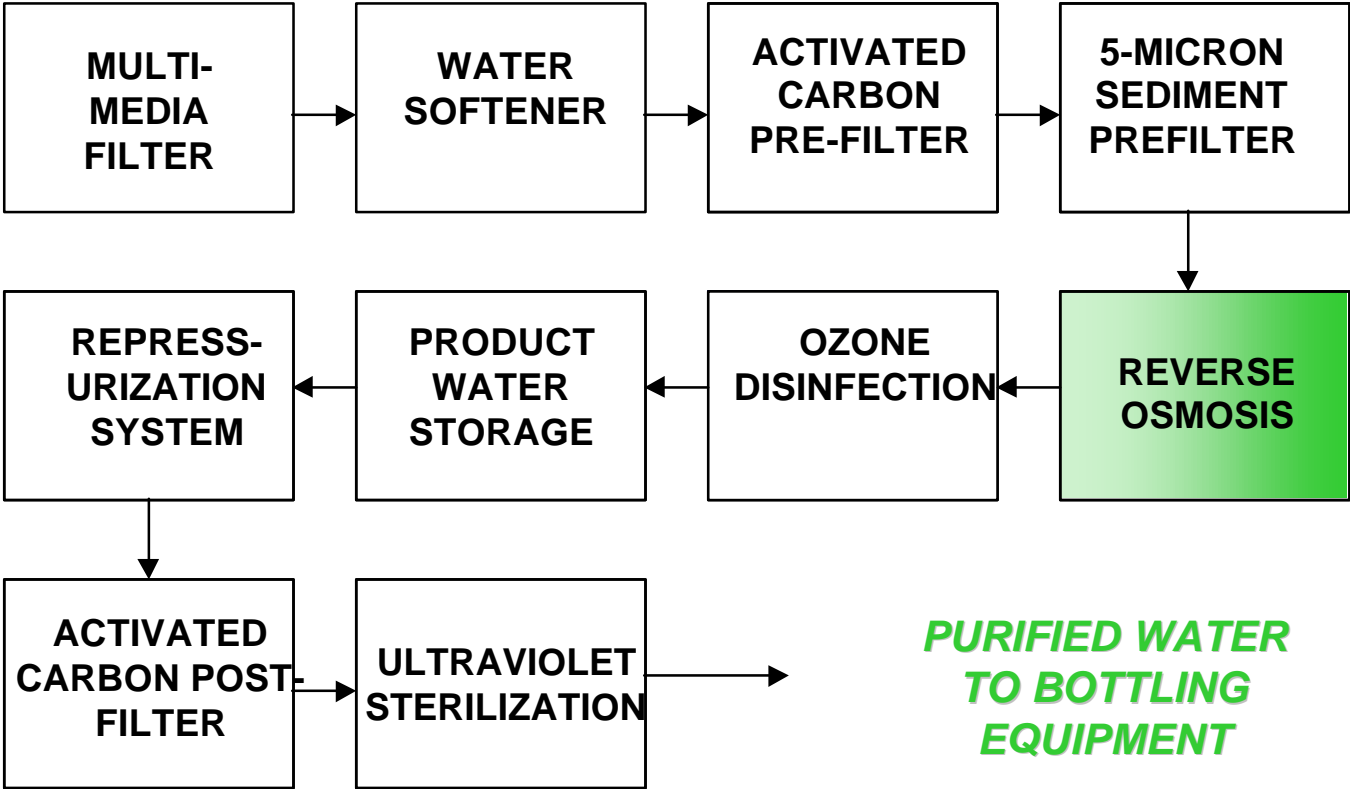


# *Process Description*



## **Total Water Purification Process for Water Bottling**

*from Raw Water to Purified Water ready for bottling.*



## *Packaged Reverse Osmosis Plants for Bottled Water Stores*

# *Specifications*

### TOTAL SYSTEM

- Skid:** Single skid-mounted system, two-coat acrylic paint, with leveling legs, panel-mounted gauges, meters, control valves, and sample valves
- Control Panel:** Single Control Panel for total system with automatic on/off operation and alarms, panel-mounted instruments
- Interconnecting Piping:** Schedule 80 PVC with By-pass Valves, Drains, Sample Valves, and Inlet / Outlet Pressure Gauges

### PRE-TREATMENT

- Multi-Media Filter:** Includes Media, Control Valve with Lockout Switch, Composite Media Tank, and Tank Jacket
- Water Softener:** Twin Alternating System with Resin, Control Valve, Composite Resin Tanks, Brine Tank, Tank Jackets
- Activated Carbon Filter:** Includes Media, Control Valve with Lockout Switch, Composite Media Tank, and Tank Jacket

### PURIFICATION SYSTEM

- Reverse Osmosis:** TFC R.O. Membranes in Stainless Steel Pressure Vessels, Centrifugal High Pressure Pump, 5-micron Sediment Prefilter, Automatic Inlet Shut-off Valve, Automatic Feed Water Flush, Low-pressure alarm, Flowmeters, Concentrate Recycle, Prefilter Inlet / Outlet Pressure Gauges, and TDS Meter
- Ozone Disinfection:** Ozone Generator, Power-Prep Unit, Air Flow Meter and Regulating Valve, and Recirculation Pump

### STORAGE AND REPRESSURIZATION (when sized for 25 GPM dispensing)

- Storage Tanks (optional):** 300 gallon FDA-approved Polyethylene with level controls, bulkhead fittings, flange connections, drain valve, lid and vent
- Repressurization System:** Repressurization Pump with pressure tank, pressure switch, interconnecting piping and pressure gauge

### POST-TREATMENT SYSTEM (when sized for 25 GPM dispensing)

- Carbon Block Post-Filter:** Dual "Big-Blue" housings with carbon block cartridges, Inlet / Outlet Pressure Gauges
- Ultraviolet Sterilizer:** Dual Corrosion-resistant UV Sterilizers, with interconnecting piping and sample valves



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## Specifications



### Optional Features

- Metered Control Valves on Pre-Treatment Filters
- Stainless Cartridge Filter Housings
- Stainless Steel High-pressure R.O. piping
- 50Hz/220V/1-phase or 50Hz/60Hz 3-phase motor
- Stainless Steel Control Valves
- Fiberglass Pressure Vessels
- Additional Instrumentation (pH, Turbidity, Temperature)
- 316SS High-Pressure R.O. Pump
- Permeate Storage Tanks

### System Specifications

| SYSTEM CONFIGURATION |            |      |              |                          |           |           |                                 |                  |                 |                             |                  |                 |
|----------------------|------------|------|--------------|--------------------------|-----------|-----------|---------------------------------|------------------|-----------------|-----------------------------|------------------|-----------------|
| MODEL                | PRODUCTION |      | RECOVERY (%) | NUMBER AND SIZE ELEMENTS | MOTOR     |           | APPROXIMATE SHIPPING DIMENSIONS |                  |                 | APPROXIMATE SKID DIMENSIONS |                  |                 |
|                      | GPD        | m3/D |              |                          | 60Hz (HP) | 50Hz (KW) | (L x W x H) (inches)            | (L x W x H) (cm) | WEIGHT (lbs/Kg) | (L x W x H) (inches)        | (L x W x H) (cm) | WEIGHT (lbs/Kg) |
| QUALIPURE-WS-1600    | 1,600      | 6    | 18           | 1 (4")                   | 1         | 1         | 108 x 72 x 72                   | 274 x 183 x 183  | 1800/818        | 96 x 60 x 60                | 244 x 152 x 152  | 1400/636        |
| QUALIPURE-WS-3200    | 3,200      | 12   | 31           | 2 (4")                   | 1         | 1         | 108 x 72 x 72                   | 274 x 183 x 183  | 1850/840        | 96 x 60 x 60                | 244 x 152 x 152  | 1450/659        |
| QUALIPURE-WS-4800    | 4,800      | 18   | 41           | 3 (4")                   | 1.5       | 3         | 108 x 72 x 72                   | 274 x 183 x 183  | 1900/863        | 96 x 60 x 60                | 244 x 152 x 152  | 1500/682        |
| QUALIPURE-WS-6400    | 6,400      | 24   | 48           | 4 (4")                   | 1.5       | 3         | 108 x 72 x 72                   | 274 x 183 x 183  | 1950/885        | 96 x 60 x 60                | 244 x 152 x 152  | 1550/705        |
| QUALIPURE-WS-8000    | 8,000      | 30   | 54           | 5 (4")                   | 3         | 3         | 108 x 72 x 72                   | 274 x 183 x 183  | 2000/909        | 96 x 60 x 60                | 244 x 152 x 152  | 1600/727        |
| QUALIPURE-WS-9600    | 9,600      | 36   | 55           | 6 (4")                   | 3         | 3         | 108 x 72 x 72                   | 274 x 183 x 183  | 2050/932        | 96 x 60 x 60                | 244 x 152 x 152  | 1650/750        |

### Reverse Osmosis Design Assumptions

- Feed water of 500 mg/L TDS at 25C, SDI < 3, Turbidity < 1
- Negligible permeate back pressure
- 3rd year of operation allowing for Flux Decline and Salt Passage Increase
- Flux, Brine Flow, and Recovery in accordance with membrane manufacturers recommendations

### Connections:

- |                  |                  |
|------------------|------------------|
| Inlet:           | 1.5" ANSI Flange |
| Permeate Outlet: | 1" ANSI Flange   |
| Drain Outlet:    | 3/4" ANSI Flange |

