

## Contaminant Reduction List

Go to our web sight or contact the factory for average percent reductions of contaminants listed here. Always test after install to verify system is operating properly.

Average Rejection 99%

### Inorganic

Aluminum	Beryllium	Cyanide	Mercury	Silver
Antimony	Cadmium	Flouride	Nickel	Sodium
Arsenic	Chloride	Iron	Nitrate	Sulfate
Asbestos	Chromium	Lead	Nitrite	Zinc
Barium	Copper	Manganese	Selenium	

### Organic

Acrylamide	Diethylhexyladipate	Trans-1,2- Dichloroethylene	Monochlorobenzene	1,2,4 Trichlorobenzene
Benzene	Diethylhexylphthalate	1,2-Dichloropropane	Odor	1,1,1 Trichloroethane
Carbon Tetrachloride	p-Dichlorobenzene	Epichlorohydrin	PAH's	1,1,2 Trichloroethane
Color	o-Dichlorobenzene	Ethylbenzene	Styrene	Trichloroethylene
Corrosivity	1,2 Dichloroethane	Ethylene dibromide EDB	2,3,7,8 -TC DD (Dioxin)	Trihalomethanes
Dibromochloropropane	1,1 Dichloroethylene	Hexachlorobenzene	Tetrachloroethylene (PCE)	Vinyl Chloride
Dichloromethane	Cis-1,2- Dichloroethylene	Hexachlorocyclopentadiene	Toluene	Xylenes

### Pesticides

Aldicarb	Aldicarb Sulfoxide	Chlordane	Heptachlor epoxide	Methoxychlor
Aldicarb Sulfone	Carbofuran	Endrin	Lindane	Toxaphene

### Herbicides

Alachlor	Dinoseb	Glyphosate	Simazine	PCB's
Atrazine	Diquat	Oxamyl (vydate)	2,4 -D Pentachlorophenol	
Dalapon	Endothall	Picloram	2,4,5 -TP (Silvex)	

### Radionuclides

Alpha emitters	Beta- particle emitters	Radium 226	Radium 228	Uranium
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### Gases

Radon	Methane	VOC	MTBE
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### Bacteria

All forms of bacteria are killed.

### Microbiological

Total Coliform	Giardia lambia	Legionella	Turbidity
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### RO1100 Specs

Unit Weight: 275 lbs.  
 Shipping Weight: 325 lbs.  
 Foot Print: 30"W by 60"L  
 Tank Size: 30"W by 60"L by 60"H  
 Tank Volume: 375 gallons  
 System Size: 39"W by 65"L by 69"H  
 Production Rate: 1 to 1.4 gpm/2000gpd  
 Operational maintenance and replacement requirements are essential for the product to perform to specification.

See your local authorized independent dealer.

Made in the U.S.A.

Felder Industries Presents

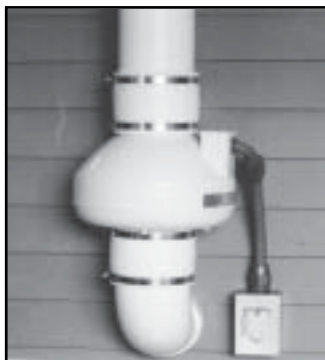
# Model RO1100



Whole House Reverse Osmosis System  
 Pure Water At Every Tap



Example of vent pipe installation.



The exhaust fan creates vacuum to draw radon and other toxic gases from the water storage chamber.

## We Combine RO and Ozone to Produce Incredibly Pure Water

### RO: What is it?

The process of Reverse Osmosis removes undesirable materials from water by using high water pressure to force water molecules through a semi-permeable membrane. The process is called "Reverse" Osmosis because a concentrated water solution (raw) is forced under pressure to yield a diluted water solution (treated) for consumption. RO has been proven to be the most economical technology for the desalination of water containing salts, it removes up to 99% of salts from the water, while at the same time removing contaminants such as chemicals, ionized salts, heavy metals, pesticides, colloids, organic molecules down to a molecular weight of 100 (See the contaminant reduction list on back cover for specific details). Reverse Osmosis is the finest level of filtration available. In addition to the RO process, the RO1100 utilizes Ozone to continuously sanitize and neutralize the purified holding-tank water.

### Ozone: What is it?

The ozone generator, in combination with an air pump, continuously aerates the water in your tank with tiny ozone (O<sub>3</sub>) saturated bubbles, which oxidize and kill many of the impurities in your water. The ozone (O<sub>3</sub>) saturated bubbles also provide the pumping action that constantly circulates and filters the holding tank water at a rate of 10 gallons per minute processing over 14,000 gallons a day. The result is refreshing, delicious, high quality pure water throughout your home for all your water needs, including drinking, showering, laundering, dish washing, cooking, etc. The system typically costs only \$20 to \$30 dollars per month to operate.

Ozone (O<sub>3</sub>) is one of nature's basic elements, composed of oxygen (O<sub>2</sub>) with an extra oxygen atom attached. When oxygen (O<sub>2</sub>) in the air is exposed to high intensity ultraviolet (UV) rays, ozone is created. Ozone gets rid of any impurities in the water by attaching its extra oxygen molecule to many pollutants in the water and oxidizing them.

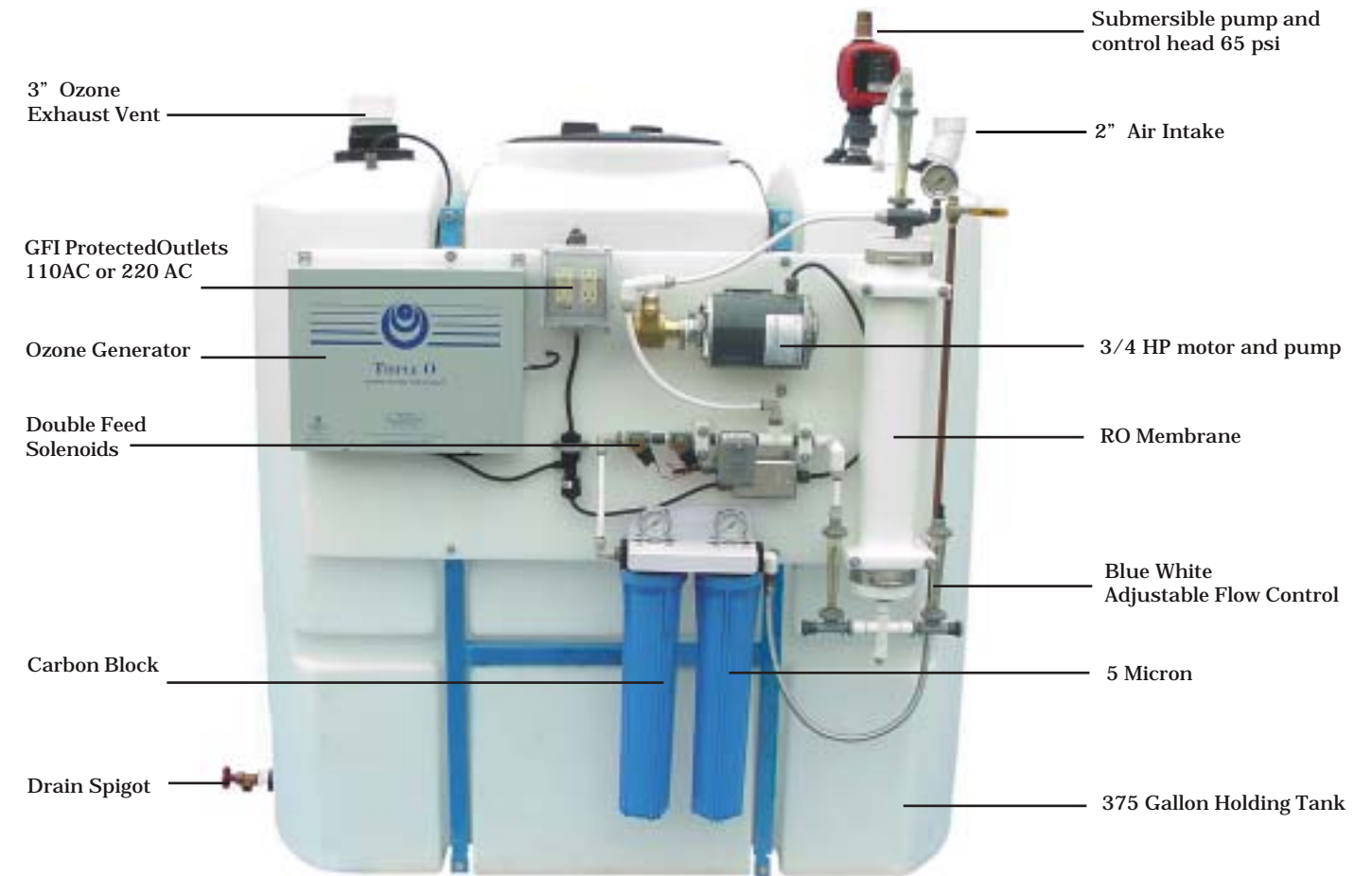
After the impurities have been cleared away by the extra oxygen molecule on (O<sub>3</sub>), all that remains is oxygen (O<sub>2</sub>). Additionally, high oxygen content in water helps to remove toxic gases such as Volatile Organic Compounds (VOC's), Radon, MBTE's, and other harmful gases.

### A Winning Combination

The RO1100 is a complete system to purify, sanitize and aerate water for residential or commercial use. The storage tank holds 375 gallons in reserve and can produce up to 2,000 gallons of pure water per day. The average family of four only uses 300 gallons per day. A built-in submersible pump re-pressurizes the product water to 64psi for great pressure, and flow rates up to 20 gallons per minute. In addition to the use of RO and Ozone to process the water, an external fan draws air from outside to create a vacuum inside the water chamber and over 120 cubic feet of air a minute is pulled across the top of the tank, removing unwanted gases.

Because of the lifting action of the Ozone bubbler moving 10 gallons of water per minute, other contaminants that an RO cannot remove are brought to the top of the water chamber and the exterior fan removes the unwanted contaminants. A magnet working in conjunction with the Ozone and air movement allows the neutralization of the pure water with typical pH levels of 7.0. This process makes the water non-aggressive and protects the plumbing system from corrosion damage. This is a very simple and economical way to produce very pure water. With a foot print of 30" by 60", it is very compact and fits through a standard 30" doorway. With the RO1100 we have made Whole House Reverse Osmosis both easy and affordable.

## Model RO1100



#### Standard Features:

- Thin film composite membrane
- PVC membrane housing
- Powder coated steel frame
- Inlet and outlet pre-filter gauges
- Liquid-filled system pressure gauge
- Adjustable waste / recycle valves
- High - pressure nylon tubing
- High - pressure John Guest fittings
- Low-pressure switch
- 2 feedwater inlet solenoid valves
- ¼ hp 50/60 hz motor
- Rotary vane pump
- 20" 5 micron sediment pre-filter
- 20" carbon block pre-filter
- Salt rejection 95-99%

#### Feed Water Parameters:

- Temperature 85°F maximum
- Pressure 40-80 psi maximum
- TDS 2000 ppm maximum - If higher, consult factory
- Iron tolerance 0.1 ppm maximum
- Hydrogen sulfide must be removed
- Turbidity should be removed
- Hardness over 10gpg should be softened
- Silica tolerance cannot be higher than 125ppm in the concentrate stream. Antiscalant should be considered for any levels over 75 ppm.

#### Operating Parameters:

- Operating pressure 200 psi maximum
- Water recovery is adjustable and suggested to be set at 15% and can not exceed 50%
- pH range 3-11
- Flow rates are determined by the membrane manufacturer's testing criteria of 1500 ppm NaCl solution, 77°F water temperature, 225 psi at 10-15% recovery. Actual flow rates may vary depending on the pre-treatment used, water conditions, system size, membrane array and applied pressure.