Reverse Osmosis is the process by which ordinary tap water is forced through a semi-permeable membrane, leaving certain unwanted substances behind. These substances are rinsed away, producing clear, fresh tasting water. It is a process similar to that used to produce bottled water and is the most effective technology known for the improvement of drinking water today.

Stage 1 – Sediment filter
The first stage of your RO system is a five micron sediment filter that traps sediment and other particulate matter like dirt, silt and rust which affect the taste and appearance of your water.

Stage 2 – Carbon filter
The second stage contains a 5 micron carbon block filter. This helps ensure that chlorine and other materials that cause bad taste and odor are greatly reduced.

Stage 3 and Stage 4 – KDF/GAC filter
The third stage contains a KDF/GAC filter. KDC (Kinetic Degradation Fluxion) is a high purity copper-zinc formulation which removes chlorine, lead, mercury, iron, and hydrogen sulfide from the water. Removing these impurities prolongs the life of the Reverse Osmosis membrane. The GAC filter (Granular Activated Carbon) has an extremely large amount of adsorption surface area. The design of GAC promotes high flow to the RO membrane while removing chlorine taste and odor as well as reduction of VOC's.

Stage 5 – Membrane
Stage five is the heart of the reverse osmosis sytem, the 50GPD (Gallons Per Day) RO membrane. This semi permeable membrane will effectively remove TDS (Total Dissolved Solids), including sodium and a wide range of contaminants such as Chromium, Arsenic, Copper, Lead as well as Cysts, such as Giardia and Cryptosporidium. Because the process of extracting this high quality drinking water takes time, your RO water treatment system is equipped with a storage tank.

Stage 6 – Carbon post filter
The final stage is a high quality carbon filter. Drinking water enters this filter after the water storage tank and it is used as a final polishing filter.

This system has been tested according to NSF/ANSI 58 for reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system as specified in NSF/ANSI 58. This system has been tested for the treatment of water containing pentavalent arsenic (also known as As (V), As (+5), or arsenate) at concentrations of 0.30 mg/L or less. This system reduces pentavalent arsenic, but may not remove other forms of arsenic. This system is to be used on water supplies containing a detectable free chlorine residual at the system inlet or on water supplies that have been demonstrated to contain only pentavalent arsenic. Treatment with chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic.

	Avg. In. (mg/L)	Avg. Eff. (mg/L)	% Reduction	pH	Pressure	Max Eff. mg/L	Inf. challenge concentration mg/L	Max Allowable concentration mg/L
Arsenic (Pentavalent)	.310	0.001	99.6%	7.24	50psi	0.002	0.30±10%	0.010 mg/L
Barium Reduction	9.2	0.08	99.0%	7.64	50psi	0.12	10.0±10%	2.0
Cadmium Reduction	0.031	0.0004	98.0%	7.49	50psi	0.0008	0.03±10%	0005
Chromium (Hexavalent)	0.30	0.002	99.0%	7.24	50psi	0.004	0.03±10%	0.1
Chromium (Trivalent)	0.30	0.001	99.0%	7.64	50psi	0.002	0.03±10%	0.1
Copper Reduction	3.2	0.02	99.0%	7.40	50psi	0.04	3.0±10%	1.3
Cysts	92,000#/ml	3 #/ml	99.99%	7.44	50psi	18	minimum 50,000/mL	N/A
Fluoride Reduction	8.7	0.19	97.0%	7.24	50psi	0.3	8.0±10%	1.5
Lead Reduction	0.15	0.002	98.8%	7.39	50psi	0.005	0.15±10%	0.0107
Radium 226/228	25pCi/L	5pCi/L	80.0%	7.24	50psi	5pCi/L	25pCiL±10%	5pCiL
Selenium	94.85	<0.2	97.0%	7.24	50psi	<0.2	0.10±10%	0.05
TDS	741	22	97.0%	7.28	50psi	26.0	750±40mg/L	187
Turbidity	11.3	0.1	99.0%	7.43	50psi	0-1	11±1mg/L	0.5NTU

Recovery - 15.77% Daily Production Rate - 18.43 GPD Efficiency - 8.82%

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