



49119 Van Dyke (At 22 Mile Road)
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Pure and Fresh 12-Stage Water Purifications System®

Explanation of the Water Flow

Ion Exchange:

The Ion Exchange removes metals, radiation, etc. and eliminates corrosive scale on the RO membrane to prolong membrane life.

Granular Activated Carbon Filter:

The GAC Filter removes chemicals such as chlorine.

Sediment Filter:

This 1-micron sediment filter removes all sediments from the water.

200PSI Booster Pump:

This special stainless steel pump pressurizes the water to about 200PSI so the pure water can pass through the RO membrane.

Reverse Osmosis Membrane Filtration:

The membrane of the RO unit removes salts and other impurities from the city tap water, then the purified water is sent to an FDA approved polyethylene holding tank. The impurities and wastewater concentrate are then disposed down the drain. Our system recycles some of the wastewater through the RO unit again to save on water consumption and get the most purified water possible from the least amount of tap water.

Ozone Pump:

This pump pulls the water from the holding tank and re-circulates it back to the holding tank.

Ozone Generator:

Ozone is the fastest and most thorough disinfection available for water, while leaving no harmful residual in the water. Ozone is 3,200 times faster than chlorine, yet reverts back to oxygen in a few hours or so. At this point, the ozone is injected into the water as it passes through a venturi.

Ozone Mixing Tank:

This allows for a thorough mixing of the ozone into the water. The smaller the bubbles, the more useful the ozone is in disinfecting the water. This ozone treated water is then forwarded back to the holding tank where it also treats the water in the tank. The injection of ozone is to be done using the Manual Ozone Timer.

Re-Pressure Pump:

This stainless steel pump pulls the ozone treated water from the holding tank to pressurize the water for the next stages.

Post GAC Filtration:

The post carbon filtration polishes the water to catch anything missed and removes any tastes or odors the water may have picked up from the tank or tubing.

Post Sediment Filtration:

This 1 micron sediment filter will pick up any residual that the water may have picked up from the equipment.

Ultraviolet Disinfection/Pressure Tank:

The ultraviolet acts as a secondary disinfection and protects the pressure (bladder) tank from ozone. The tank keeps the pressure in the feed lines to the dispensing unit. This helps conserve electrical energy by allowing many bottles to fill before the re-pressure pump activates. Without this stage, the re-pressure pump would have to run constantly to fill water bottles.

Note: Most home installation reverse osmosis units waste between three to five gallons for every gallon of purified water made. Our system has been designed to be more environmentally friendly. Therefore, we only waste about half a gallon for every gallon of purified water made. We have installed check valves and back flow protection valves so the city tap water cannot contaminate the purified water.