



Canadian Manufacturer

# EXCALIBUR - WHOLE HOME REVERSE OSMOSIS SYSTEM



Quality through innovation



## Whole Home Reverse Osmosis System

Water is an essential part of everyday life. Ensure the water in your home is free from dangerous impurities that can be found in your water supply, with a Whole Home Reverse Osmosis System.

Your water may look clean, but all well, lake, and municipal water supplies contain dangerous chemicals and heavy metals that pose a risk to your health. From PFAS (also known as "forever" chemicals) to bacteria, tannins, pesticides, pharmaceuticals and more, your water contains numerous impurities that can lead to adverse health effects.

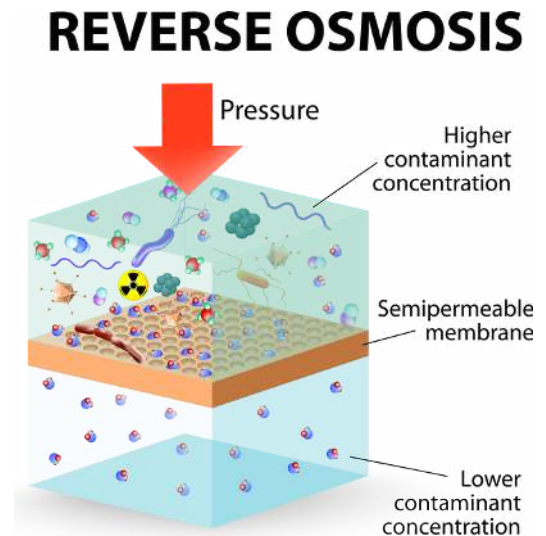
Excalibur Water Systems manufactures the best water treatment and purification systems to create a Whole Home Reverse Osmosis System, which provides the highest quality water to your entire home. Enjoy the benefits that come with drinking, bathing, and cooking with reverse osmosis water, with a system that has been customized to your family's needs.



**Option to upgrade to a  
fully-programmable  
Series 150 Controller**

## The Osmosis Process

To understand reverse osmosis, you must first understand the naturally occurring process of osmosis. Osmosis is the diffusion of water through a semi-permeable membrane where a low concentration solution naturally moves to a high concentration solution until the osmotic pressures are balanced. To reverse this process, energy is applied to force water through the semi-permeable membrane. The membrane allows the passage of water molecules while rejecting 99% of salts, heavy metals, and chemicals.



## Total Dissolved Solids

Total Dissolved Solids (TDS) is a measurement of the total amount of dissolved inorganic compounds in water. TDS is made up of chemicals and heavy metals as well as minerals such as calcium, magnesium, sodium, chlorides, and carbonates.

## Where Do Contaminants Come From?

Unnatural levels of TDS can accumulate in well, lake, and municipal water because of human activity. Since water dissolves more substances than other liquids, it is particularly vulnerable to contamination. Some water sources are contaminated naturally from organic sources like rocks, soil, and decaying vegetation, while other contaminants are manmade. Residential, industrial, and agricultural activities all release toxic substances into the environment, which enter lakes, streams, and oceans. These substances range from PFAS ("forever" chemicals) and radioactive waste, to pesticides and pharmaceuticals. All these contaminants can have a negative impact on the environment, like the creation of blue-green algae blooms, which can only be removed through the process of reverse osmosis or nanofiltration. Ingesting these contaminants can lead to both acute and chronic health effects including cancer.

## The Reverse Osmosis Process

The Whole Home Reverse Osmosis System utilizes reliable, high-performance reverse osmosis membrane technology to provide the best water to your entire home. The system removes a large majority of contaminants from your water by pushing the water through a semi-permeable reverse osmosis membrane. When feed water enters the reverse osmosis system, water molecules can pass through the small pores of the membrane, while chemicals, heavy metals, salts and other contaminants are rejected and sent to drain. The water that passes through the reverse osmosis membrane is clean and pure, with 99% of contaminants having been removed in the reverse osmosis process. The Whole Home Reverse Osmosis System removes:

- Lead
- Fluoride
- Sodium
- Barium
- Viruses
- Pesticides
- Mercury
- Chlorine
- Uranium
- Hydrocarbons
- Chromium
- Cyanide
- Cadmium
- Sulfates
- Phosphate
- Bacteria
- Pharmaceuticals
- Blue-Green Algae
- + and many more

Up to  
**99%**  
Removal  
Rate



## Whole Home Reverse Osmosis System Steps:

Pre and post filters are incorporated along with the reverse osmosis system itself to protect the reverse osmosis membrane(s) and provide the highest quality water throughout your household. Each system is customized to meet your family's specific water needs to provide the best water for your home or business.

### *Pre-treatment*



#### **Filtration Custom Engineered To Your Specific Application**

Based on a water analysis, additional filtration may be used as a pretreatment to protect the TFC (Thin Film Composite) high purity membrane(s), giving it a longer life.



#### **Water Softener**

Removes water hardness giving the reverse osmosis membrane(s) longer life.

### *Post-treatment*



#### **Neutralizing Filter**

A pH balanced neutralizing filter is used after the reverse osmosis system.

## Optional: Fully-Programmable Series 150 Controller



#### **Features**

- 2 line by 20 character LCD backlit multi-function keypad provides operating hours and water temperature
- Visual and audible alarm
- Programmable flush modes, time delays, and set points
- Low pressure automatic reset
- Hinged NEMA 4X enclosure
- TDS/Conductivity monitor and sensor

#### **Control and/or Monitor**

- Inlet valve and flush valve
- Pressure fault
- Storage tank levels (1 or 2)
- Provides TDS/Conductivity of both feed water and purified water
- Second sensor monitors feed water quality and contaminant rejection
- Tank full override

## Benefits To Your Home

A Whole Home Reverse Osmosis System not only offers you a variety of health benefits from the consumption of pure water, it also provides benefits to your home itself, such as:

- With soft, pure water, the life of your water-using appliances will be extended and plumbing issues due to mineral buildup in your pipes will be prevented
- Hard water problems like mineral buildup on fixtures and appliances, cloudy glassware, and dull/stiff clothing are no longer a problem
- 75% of wastewater is recycled, providing significant cost savings
- Save up to 24% on energy costs

## What Do These Systems Remove?

The Whole Home Reverse Osmosis System removes 99% of contaminants such as chemicals, heavy metals and organics from your water supply. Most contaminants in your water won't cause acute health effects but they will lead to adverse chronic effects like cancer, liver and kidney problems, and reproductive issues.

<b>Filtration &amp; Ion Exchange</b>	Chlorine Chloramines THM's Volatile Organic Compounds Magnesium ( <i>hard water mineral</i> ) Calcium ( <i>hard water mineral</i> )	Iron Sulphur Tannins Arsenic Manganese Turbidity
<b>Reverse Osmosis System</b>	Lead PFAS "Forever" Chemicals Insecticides/pesticides Microplastics Sulphate Herbicides Nitrates Antibiotics/pharmaceuticals Blue-Green Algae	Ammonia PCB'S Benzene Zinc Silver Nickel Copper Uranium + many more
<b>Neutralizing Filter</b>	Neutralizes pH for the best quality water	

## Benefits To Your Body

Up to 80% of the human adult body is water. It's something we all use and consume every day, whether that be when we drink a glass of water, take a shower, or wash vegetables before dinner. Contaminants present in your water supply can enter your body through ingestion, or absorption when showering/bathing. With water being such an integral part of our everyday lives, it's crucial that the water in your home is clean and pure. Having a Whole Home Reverse Osmosis System in your home has a number of benefits such as:

- Helps to prevent against a number of ailments like cancer, and liver/kidney problems
- Reverse osmosis water tastes delicious
- Perfect water for drinking cooking, coffee, ice cubes etc.

## Choose Excalibur

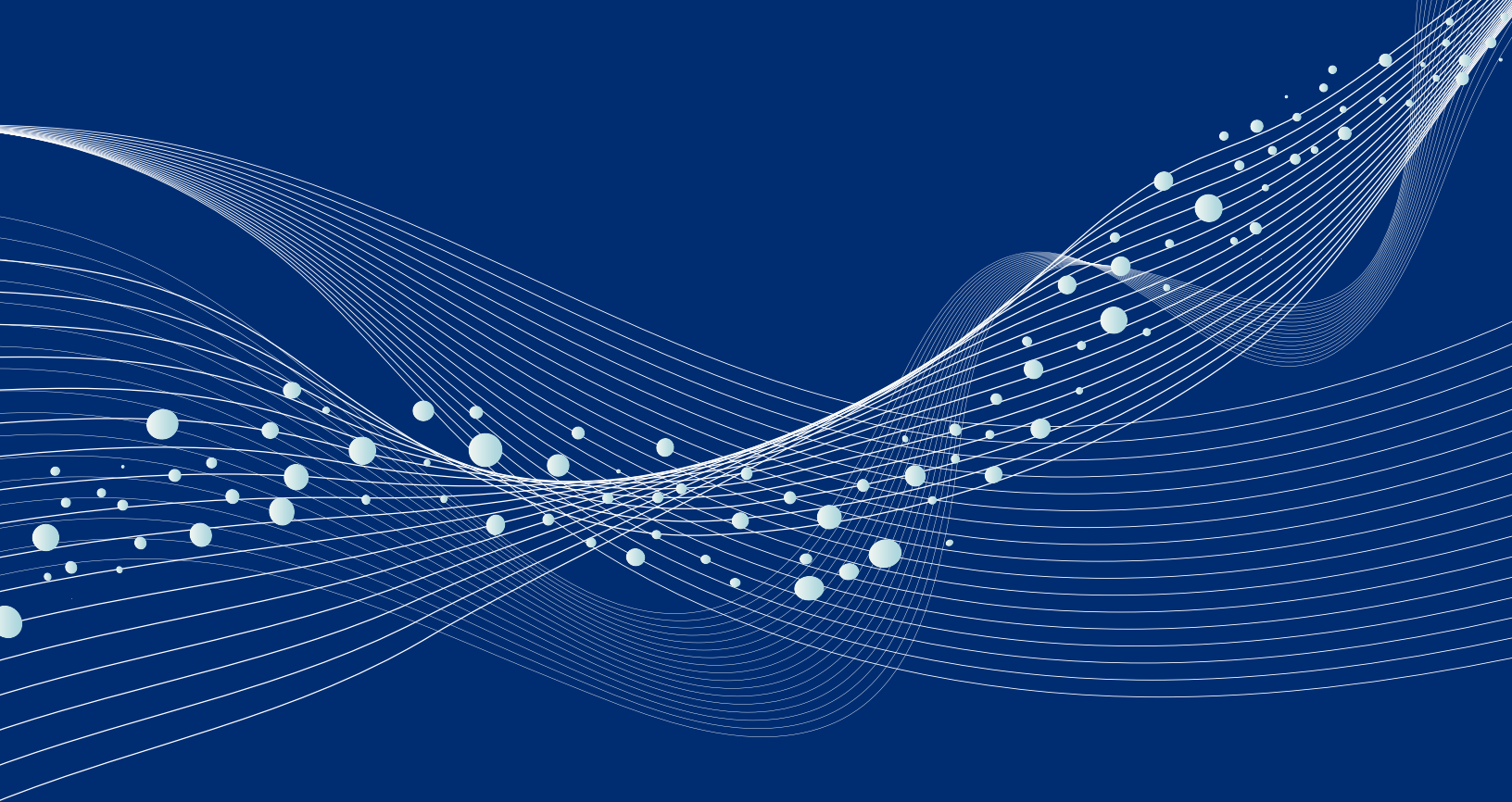
Reverse osmosis water is produced with the finest level of water filtration, providing the highest quality water to your entire home. Enjoy the benefits that come with having reverse osmosis water in your home, customized to your family's needs and backed by the best warranties in the water treatment industry.

**Contact Excalibur today for your customized Whole Home Reverse Osmosis System.**



This Reverse Osmosis membrane is Tested and Certified by NSF International against NSF/ANSI Standard 58 for material requirements only.





**EXCALIBUR WATER SYSTEMS INC.**

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**Authorized Dealer:**

