

RO450/RO450M

Reverse Osmosis Drinking Water System



The Rainfresh RO450 is a new generation drinking water system based on the sophisticated technology of reverse osmosis. It is designed to provide your family with high quality drinking water on demand. The high-performance filter system improves the taste and odour of your drinking water and substantially reduces microscopic impurities and chemical elements.

The Rainfresh RO450 features an ultra-thin, semi-permeable membrane, which filters out contaminants from the water, resulting in deliciously clear water you'd expect from Rainfresh — available in the convenience of your own home, right at your fingertips. In addition to drinking water, the Rainfresh RO system provides high quality water for

- Beverages like coffee and tea. – *Improved taste & flavour*
- Juices and lemonades - *Improved taste & flavour*
- Soups, sauces and pasta – *Better flavour*
- Ice cubes – *Clear and transparent*
- General cooking – *Better tastes and flavour*
- Fresh water aquariums – *Healthy fish*
- Even steam irons & steam mops – *No scaling*
- Watering indoor plants & flowers – *See them grow!*

The 4-Stage Purification Process

As water enters the Rainfresh RO system, it passes through four stages of purification before being dispensed for use.

Stage	Filter	Description
Stage 1	Sediment Filter I Model HP1	Removes dirt, sediment, sand & other suspended solids up to 1 micron size (1 micron = 1/1000 millimetre).
Stage 2	Pre-Carbon Filter 2 Model CF2	Removes dirt, sediment, sand & other suspended solids up to 5 micron size. Reduces chlorine, taste & odour.
Stage 3	Reverse Osmosis Membrane Model ROM50	50 US GPD Thin Film Composite Membrane reduces Total Dissolved Solids (TDS) by up to 99%.
Stage 4	Final Taste Filter Model IM200	Granular Activated Carbon Filter (inline) for improvement of water taste after storage

Reduction of a broad range of contaminants

Rainfresh RO System reduces the following

Arsenic (Pentavalent)	Barium	Cadmium	Chromium	Copper
Cryptosporidium Cysts	Chlorine	Fluoride	Giardia cysts	Lead
Mercury	Nitrates	Radium (226/228)	Sediment	Selenium
Sodium	Tastes & odours	Total Dissolved Solids		

Features

Manufactured in Canada using high quality BPA-free materials, Rainfresh RO system has the following features



Easy open housings – Just grab by hand, turn & remove. *No tools required !*

Installation Notes:

Unit Width (Inch)	Unit Height (Inch)	Unit Depth (Inch)	Connections
14"	18"	5"	¼" tube

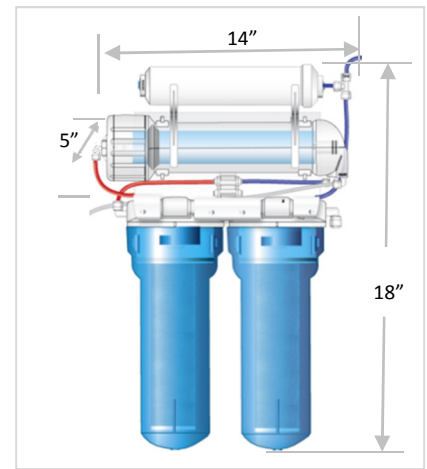
Dimensions exclude storage tank dimensions

The system is usually installed under the kitchen sink and comes with a dedicated faucet just for purified water. The system can also be installed in a remote location (like the basement – not more than 6 feet vertically below or 15 feet horizontally away) with the delivery faucet on the kitchen counter*.

* This scenario might require the additional installation of a permeate pump

Specifications:

- Water Temperature Range : 4°C to 37°C (39 to 100°F)
- Feed Water Pressure : 50 to 100 psi* (344.5 to 689 KPa; 3.45 – 6.89 bar)
- BPA-free materials



Feed Water & Operating Conditions

The unit should be operated with water that meets the following minimum criteria.

Raw Water Supply

Water Supply	=	Bacteriologically Safe ⁽¹⁾
Feed Water Pressure	=	40 (min) to 100 psi (max) ⁽²⁾
Feed Water Temp.	=	4°C - 38°C (40°F - 100°F)
Feed water pH	=	3.0 to 11.0
Feed Water Turbidity	=	1.0 NTU (max)

Chemical Parameters

Max Hardness	<	170mg/L (<10 GPG) ⁽³⁾
Iron (Fe)	<	0.1 PPM (mg/L)
Hydrogen Sulfide	=	0.00 PPM (mg/L)
Manganese (Mn)	<	0.05 PPM (mg/L)
Feed Water TDS	=	1500 PPM (mg/L) max

(1) Do not use with water that is microbiologically unsafe or of unknown quality, without adequate disinfection before the system. For effective disinfection we recommend Rainfresh whole house UV disinfection systems.

Source water exceeding chemical parameters (listed above) requires pre-treatment.

(2) If water pressure can exceed 100psi, a pressure regulator must be installed before the filter. Recommended regulator setting is 75-80 psi. If feed water pressure is lower than 50 psi at any time, a booster pump must be installed.

(3) System will operate with hard water, but membrane life may be shortened.

Replacement Cartridges

Item	Model	Replacement
Pre-filter I	HP1	6 months*
Pre-filter II	CF2	6 months*
Post Filter	IM200	6 months*
RO Membrane	ROM50	2 to 5 years*

* -Cartridge and Membrane life varies with water quality and volume of water filtered.



Electronic Monitor (Model RO450M only)

RO450M features a "Cartridge Life Monitor" that sets off a blinking LED light at the end of 6 months signalling time for cartridge replacement. This unique feature helps maintain the efficiency of the filter system.

WQA Gold Seal Certified



Tested and certified to NSF/ANSI 58 for the reduction of TDS (arsenic (pentavalent); barium; cadmium; chromium (hexavalent); chromium (trivalent); copper; fluoride; lead; radium (226/228); sodium and selenium) & Cyst (e.g. Cryptosporidium, Giardia).

Reduction of Nitrates & Mercury verified by independent laboratory under NSF/ANSI 58
System tested and certified by the Water Quality Association to CSA B483.1.

5 year limited warranty



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