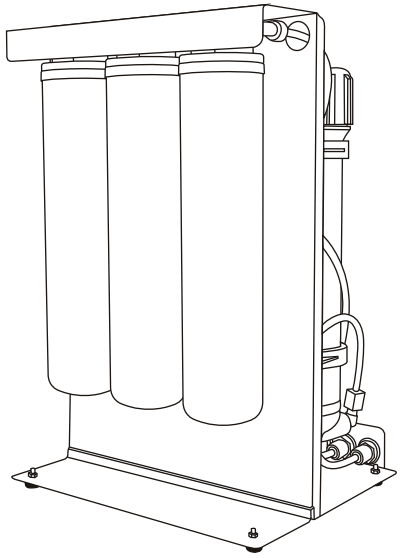
SANTEVIA®

Mineralized Alkaline Water

ALKALINE REVERSE OSMOSIS SYSTEM

USER'S MANUAL



Thank you for selecting Santevia Water Systems.

To ensure the best use of your system, please read the user's manual carefully before installation and follow the instructions.

SANTEVIA.COM

Introduction

Santevia Quick-Change RO System

The Santevia Reverse Osmosis System uses the most advanced water treatment technology available. Reverse osmosis is recognized as one of the best available technologies for producing high quality drinking water.

Our newly designed RO system is user friendly with design simplicity in mind. It requires no tools for filter changes. The twist and quick-change cartridge design makes pre-filter changes fast, clean and easy. The stainless steel tank is durable and will not rust or dent. This compact design allows maximum use of your under counter space.

Warranty

1 year limited warranty. For complete warranty details, visit Santevia.com or contact us by email at help@santevia.com or call 604-943-9220, toll free 1-866-943-9220.

Specifications

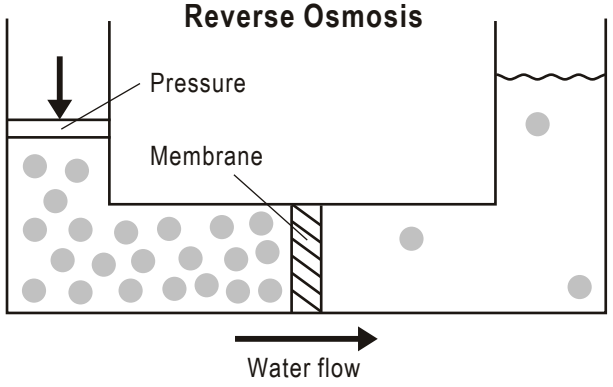
- Production: 50 GPD / 189 LPD
- Water storage tank: 3.2gallons / 12.2 liters
- Operation pressure: 10 - 100 psi
- Dimensions: (cm)27 (L) x 39.8(H) x 22.5 (W)
- Weight: 9.0 kg

Maintenance checking list

Filters / Date	1st stage 5 M Sediment Filter	2nd stage GAC Carbon Filter	3rd stage GAC Carbon Filter	4th stage TFC RO Membrane	5th stage Post Carbon Filter	6th stage Mineral Filter	7th stage Alkaline Filter

What is reverse osmosis?

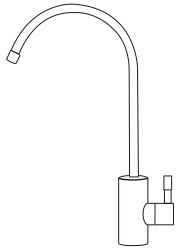
Reverse osmosis was originally designed to make sea water drinkable for the navy. It is ideal for anyone on a low sodium diet. An R.O. membrane has a pore size much smaller than bacteria virus, or the cryptosporidium parasites. When functioning properly it will remove most microorganisms from tap water*. Reverse osmosis is the reversal of the natural flow of osmosis. In a water purification system, the goal is not to dilute the salt solution, but to separate the pure water from the salt and other contaminants. When the natural osmotic flow is reversed, water from the salt solution is forced to pass through the membrane in the opposite direction by application of pressure; thus the term REVERSE OSMOSIS. Through this process, we are able to produce pure water by screening out the salts and other contaminants.



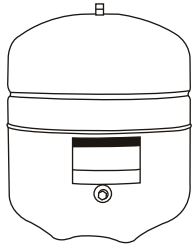
* Important note: if the input water is not potable, an ultraviolet lamp must be added to ensure biologically safe water. Contact Santevia if you requre this optional add-on feature.

The parts of the RO system

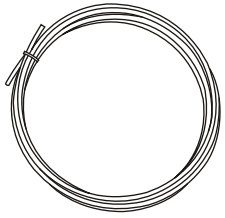
Components



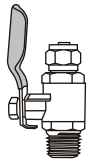
European ceramic faucet



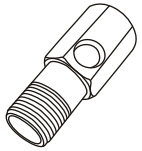
Water storage tank



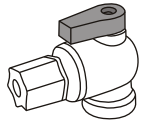
Tubing



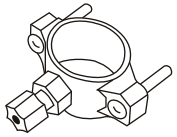
Supply-valve



Water supply connector



Tank ball shut-off valve



Drain saddle

FAQ

Q: How will the Santevia RO water affect mixed beverages?

Because reverse osmosis removes invisible contaminants that mask flavor, it allows the natural taste of your beverages to come through. You will be able to use less coffee and still get the full flavor. Concentrated beverages like orange juice will taste tangier. You will probably be drinking a lot more water as well, since many people drink soda, Kool-Aid, concentrated juices, and beer as an alternative to bad-tasting tap water.

Q: How much water does the RO system produce?

Under ideal conditions, the TW30-1812-50 TFC membrane is rated at 50 gallons of production per day which should provide adequate water for the average household's drinking and cooking requirements. If the system does not provide enough water for your family's needs, an optional membrane can be purchased.

Q: How is the Santevia RO system different from standard RO systems?

Reverse osmosis technology is so effective in removing contaminants that all beneficial minerals recommended by the World Health Organization are also removed in the process. In addition, regular RO systems also lower the pH of the finished water, leaving it more acidic. The Santevia system corrects these issues by incorporating two post membrane cartridges to raise the pH and add beneficial trace minerals.

Q: What is the maintenance schedule for the RO system?

The three pre-filter cartridges should be changed every 6 months. The 5 micron sediment cartridge filter is the first one; the second and third ones are carbon. Failure to change the cartridge every 6 months may cause chlorine to destroy the membrane.

FAQ

Q: What is the guarantee on the RO system?

The Santevia RO system (excluding filters) is guaranteed for 1 year for material and workmanship. All defective parts will be replaced free within the first year under normal use. The membrane has one year pro-rated guarantee.

Q: What factors affect the quantity and the quality of the water production?

There are four major variables to consider:

1.Pressure-The greater the water pressure, the better water quantity and quality it produced. Water pressure of 60 PSI is ideal.

2.Temperature-760F is the ideal water temperature for R.O. 400F water will cause the production of R.O. water to fall to half of that at 760F. The maximum water temperature recommended is 850F.

3.Total Dissolved Solids (TDS)-The higher the amount of dissolved contaminants in the water, the lower the quantity of water produced. A high level of TOTAL DISSOLVED SOLIDS can be overcome with additional water pressure.

4.Membrane-Different membranes have different characteristics. Some produce more water than others; some have better contaminant rejection capabilities; some have greater resistance to chemical abrasion for longer life. The Santevia RO system includes TW30-1812-50 The Thin Film Composite (TFC) membranes combine the best of these characteristics and are considered the finest membrane in the world.

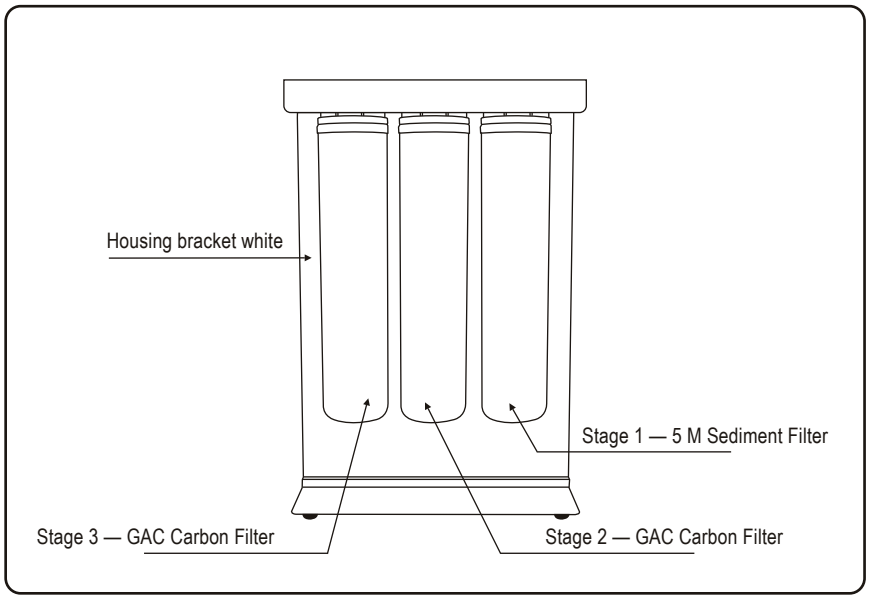
Q: Can the RO system be connected to an extra faucet?

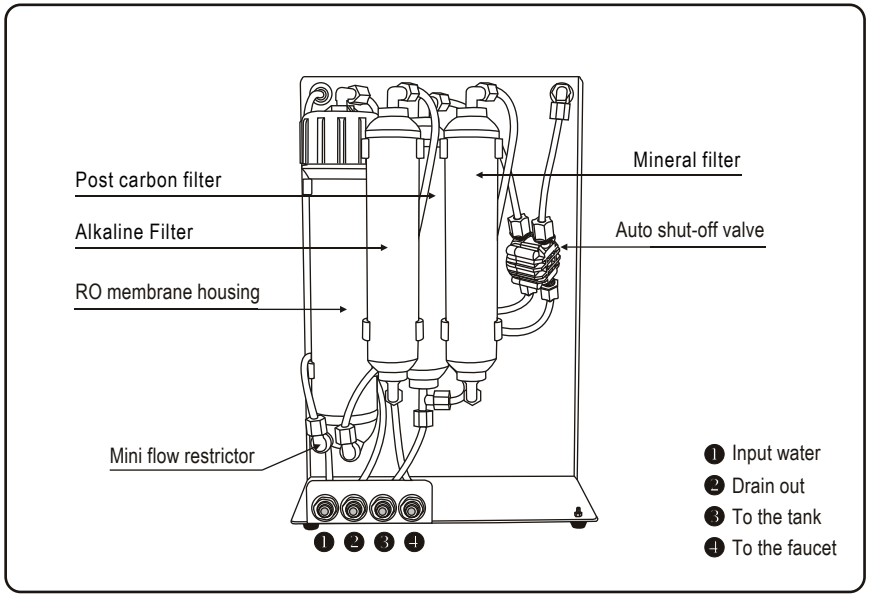
It only takes a 1/4" tee and tubing to run the water to a refrigerator or an extra faucet.

Q: What does the RO drinking water taste like?

The taste of the RO water depends on the amount of contaminants in the tap water originally. Most RO water tastes flat or sterile. Because the Santevia system re-introduces beneficial minerals and raises the pH, the finished water should be natural and sweet.

The parts of the RO system





Tubing connection diagram

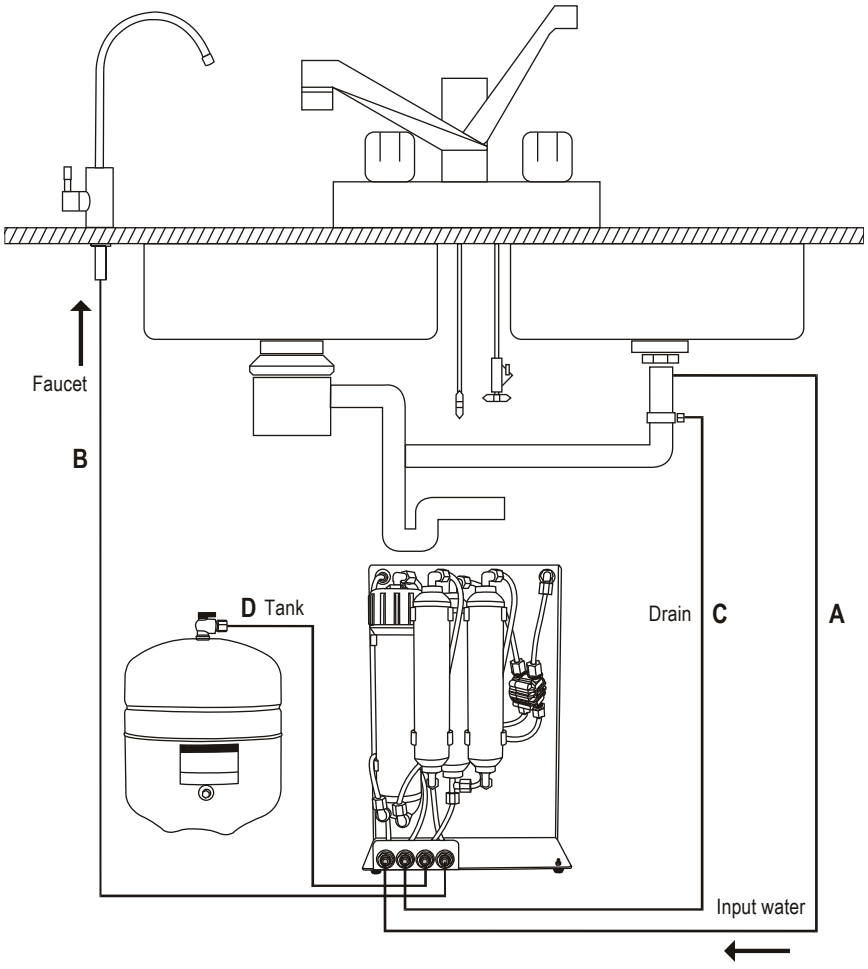
CONNECTING THE COLOR TUBING

A. Connect the WHITE tubing to the water supply connector.

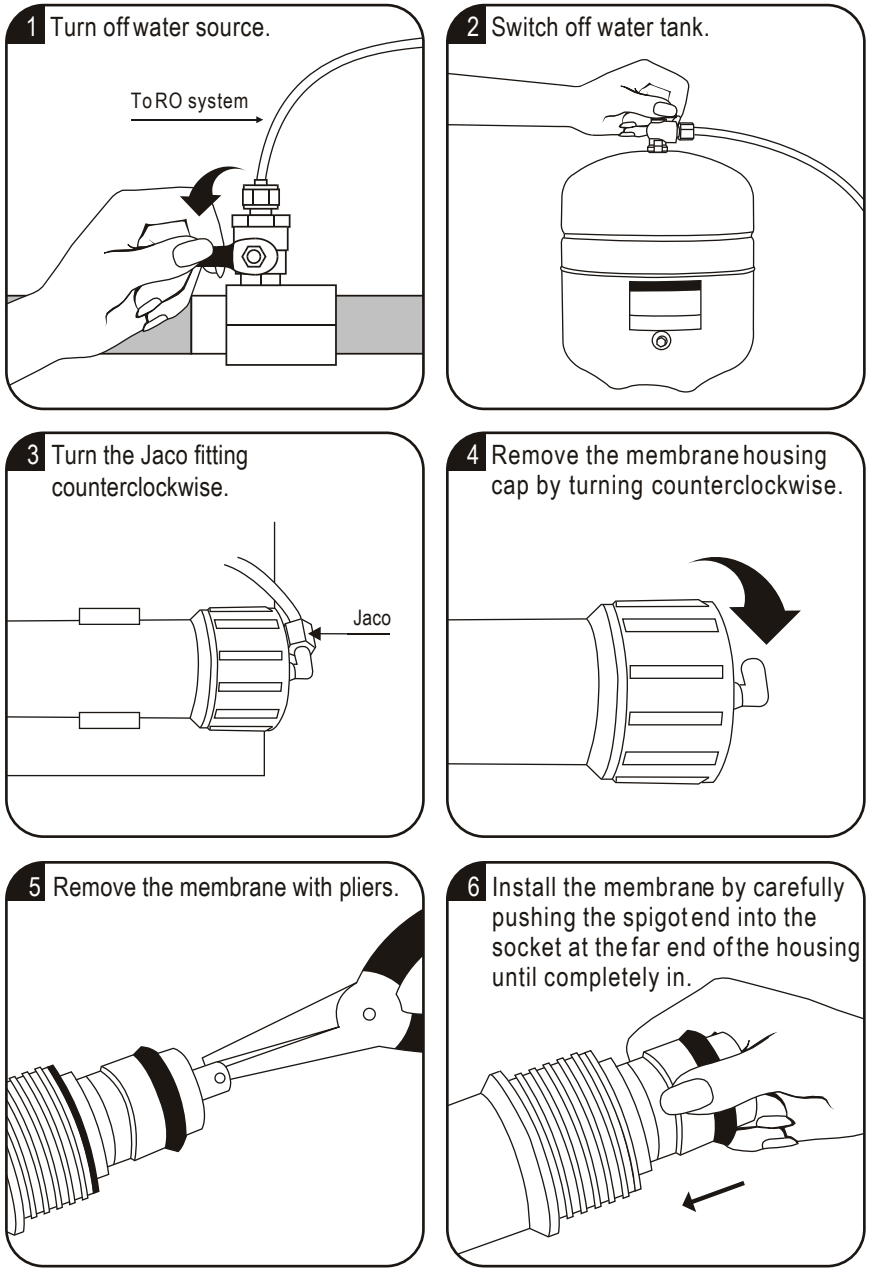
B. Connect the BLUE tubing to the sink top faucet.

C. Connect the BLACK tubing to the drain saddle.

D. Connect the RED tubing to the storage tank.

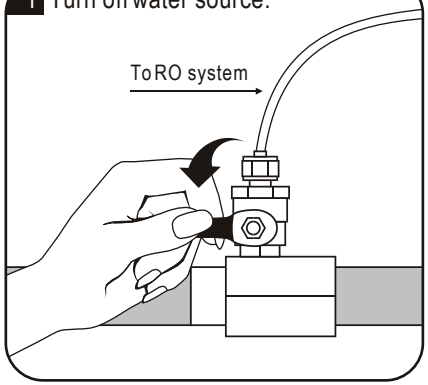


Change membrane

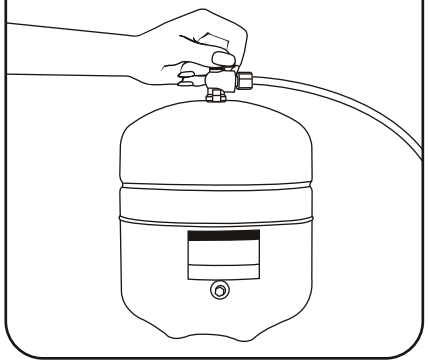


Change filters

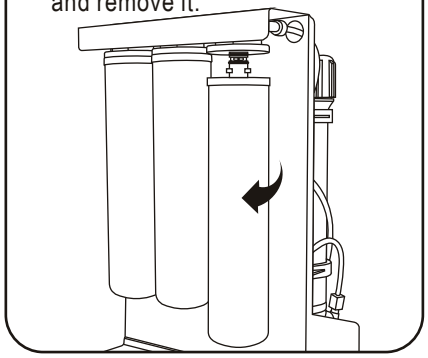
1 Turn off water source.



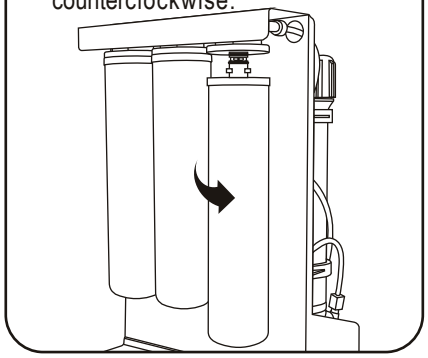
2 Switch off water tank.



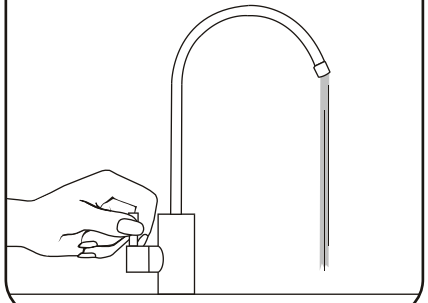
3 Turn the used pre-filter clockwise and remove it.



4 Screw in and install the new filter counterclockwise.

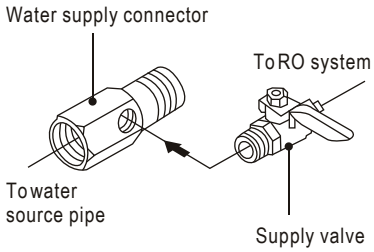


5 Drain out 1 Gallon of water to purify replacement filters.

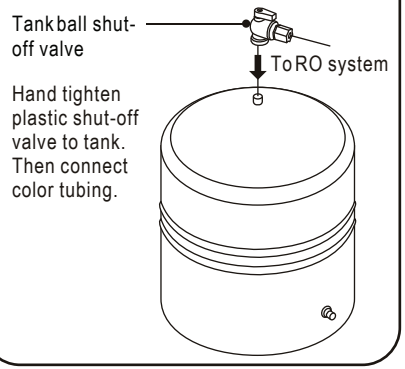


Installation diagram

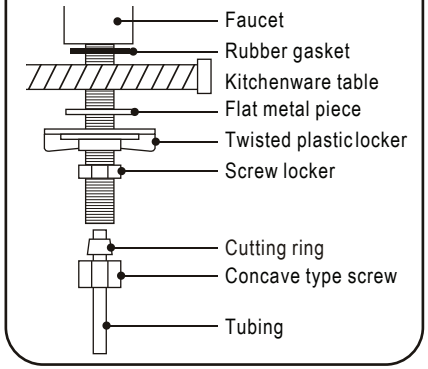
Input water :



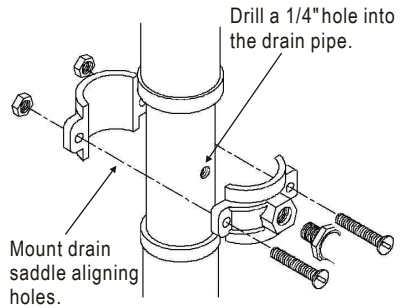
Install water tank :



Install faucet :

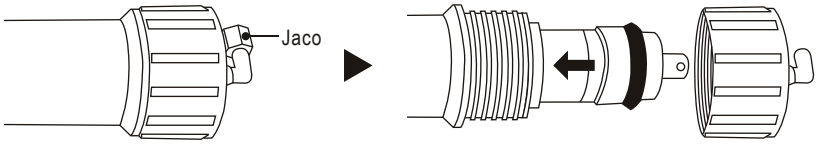


Install drain saddle :



Assemble membrane :

- Loosen the Jaco fitting counterclockwise.
- Remove the membrane housing cap.
- Install the membrane by carefully pushing the spigot end into the socket at the far end of the housing until completely in. Avoid touching the RO membrane with bare hands.



See also “Change membrane instructions on page 11.

Operating instructions

A. With everything connected, turn on the water to check for leaks.

B. Make sure the storage tank shut-off valve is "OFF". Open the sink top faucet.

C. Within a few minutes (up to 15) the water will start to run from the faucet slowly.

D. Let the water run for at least 30 minutes. This flushes the carbon filters on first time use.

E. After initial flushing, open the shut-off valve on the tank and close the sink top faucet.

F. Tank will now fill with water (usually 2 to 3 hours). After the tank has filled, open the sink top faucet and drain all water until the storage tank is empty and there is only a small flow from the sink top faucet.

*** DO NOT USE FIRST TANK OF WATER.***

G. Close the sink top faucet. The system is now ready for use.

H. Change filters regularly every 6 to 12 months and have the membrane checked annually.

Caution

1. Do not use hot water (over 45^{0}C)!
2. Do not freeze the machine!
3. Switch off electricity and water source if away for more than 5 days, and drain out put water.

Cartridge filters

Cartridge Filters	Filter Description	Service Life
Stage 1 **5 M Sediment Filter** rs510	With only five micron rating. It is effective in removing dirt, rust and sand particles.	6 Months
Stage 2 **GAC Carbon Filter** rs512	It takes out 99% of the chlorine and organic chemicals. It provides enhanced reduction of taste, odor, and color.	6 Months
Stage3 **GAC Carbon Filter** rs514	It takes out 99% of the chlorine and organic chemicals. It provides enhanced reduction of taste, odor, and color.	6 Months
Stage 4 **TFC RO Membrane** rs505	Made in USA. High rejection TFC type membrane with the capacity of producing 50 gallons per day. This membrane removes the following hard water contaminants that may be present in your water: lead, cooper, barium, chromium, mercury, sodium, cadmium, fluoride, nitrite, nitrate, and selenium.	2 Years
Stage 5 **Post Carbon Filter** rs516	NSF approved. This post carbon filter is designed to improve taste. It removes any residual impurities and odors from the tank and provides a finer conditioning of pure water.	1 Year
Stage 6 **Mineral Filter** rs518	This filter improves the qualities of clean water by adding necessary health minerals, such as Calcium, Magnesium, Sodium, Potassium, as well as others readily found in many natural mineral waters for proper human development. Mineral filters are mainly installed with RO systems to complement their absolute filtration qualities.	3-4 Months**
Stage 7 **Alkaline Filter** rs520	The Alkaline filter changes the acidic RO water into a perfect Natural Alkali Calcium Ionized Water. The Alkaline filter simply gives back minerals such as ionized calcium, magnesium, sodium, potassium ion, which were taken away while purifying the water.	3-4 Months*

* 3-4 months recommended for optimal water enhancement

Service life will vary according to the quality of the source water. If water quality diminishes, filters may need earlier replacement.