



Alkaline and Ionized Water Purification System

Installation and Service Manual



Manufactured and assembly in the USA



CHANGE YOUR LIFE

WITH ALKALINE & IONIZED WATER



A combination of Reverse Osmosis Purifier and Alkaline Water Ionizer

Tap water and most bottled water have positive ORP (Oxidation Reduction Potential), which means that there is no antioxidant capacity and therefore it cannot help the body in neutralizing acidity. Medical studies show that alkaline ionic water has the most powerful antioxidant properties, better than vitamins A, C, E, Beta Carotene and selenium, which improves your body's defense against disease. In order to hydrate your body optimally, you need to drink water that is purified, alkaline, ionized, and mineral rich.

YOU WILL IMPROVE IN:

Energy, Mood, Digestion, Hydration, Immune System & Weight Loss

System Features:

Alkaline capacity - pH 9.5 ~ pH 10+, Ionizing capacity - ORP -150 ~ -250, Negative Ions - 7,000 ~ 20,000 EA/cc

- The best alternative to expensive electric Water Ionizers.
- Removes up to 99% of all contaminants (such as Heavy Metals, Fluoride, chlorine, chloramine, prescription drugs), and mineralizes back with essential minerals.
- Produces up to 30 gallons per day of purified, alkaline, and ionized water
- Keeps high pH level for months.
- Produces micro-clustered water for maximum hydration and cellular detoxification.
- Removes harmful active oxygen (free radicals) which causes cancer, diabetes, hypertension, aging, decreased energy.
- Removes acidic waste from the body caused by stress, modern diet, air pollution, and bottled water.
- A higher pH in the body reduces the need for fat and cholesterol to protect the body from damaging acids.
- Water and nutrients are absorbed more effectively into the body.
- Cooking with alkaline water improves taste and quality of foods.

All components certified by NSF, alkaline filtration system manufactured and assembled in USA

For orders or more information please contact us at;

How Does Alkaline Water Work To Extend Life? by Sang Whang MD

Alkaline water and stomach acid

We all know that we get old and sick because of excess acid accumulation in our body, and that alkaline neutralizes acid; therefore, drinking alkaline water makes sense. But do we know how alkaline water works in our body? Some doctors say that our stomach acid will kill the alkalinity and, therefore, drinking alkaline water is useless. How do we answer that? Have you thought about that?

This is what happens in the stomach.

The stomach maintains its pH around 4.0. When we drink high pH alkaline water, the water pH comes down; but stomach pH goes up as a result. How high it goes up is a function of the amount and the pH of the alkaline water we drink. When the stomach pH rises above 4.5, the stomach will produce more hydrochloric acid and put it in the stomach to bring the stomach pH down to below 4.0.

How the stomach produces hydrochloric acid is not well known to medical doctors, except pathologists. The chemical formula of hydrochloric acid production is:



Water, carbon dioxide and sodium chloride (table salt) produce hydrochloric acid and sodium bicarbonate. The hydrochloric acid goes into the stomach, and the sodium bicarbonate goes into the bloodstream.

[Note: An interesting fact is that the formula above looks simple, but no scientist in a laboratory can produce hydrochloric acid and sodium bicarbonate from water and carbon dioxide and salt. Only living cells can do that. In the lab, the reverse is easy: adding hydrochloric acid to sodium bicarbonate will instantly produce water, carbon dioxide and salt.

Sodium bicarbonate is an alkaline buffer in our blood. In our blood, there are alkaline buffer and acid buffer constantly monitoring the blood pH to maintain a constant blood pH of 7.365. When the blood becomes too alkaline, the acid buffer works to bring the pH down; and when the blood becomes too acid, the alkaline buffer works to raise the pH.

Alkaline buffers are bicarbonate (HCO_3^-) mated with alkaline minerals. Examples of them are sodium bicarbonate (NaHCO_3), potassium bicarbonate (KHCO_3), calcium bicarbonate ($\text{Ca}(\text{HCO}_3)_2$) and magnesium bicarbonate ($\text{Mg}(\text{HCO}_3)_2$). Acid buffer is mainly carbonic acid (H_2CO_3), a water and carbon dioxide combination. Carbohydrate completely burnt becomes carbon dioxide (CO_2) and water (H_2O); therefore there is no shortage of acid buffer.

Discovery by Dr. Linda Frassetto

In 1996 Dr. Lynda Frassetto at the University of California, San Francisco, discovered that as we age, starting around age 45, we lose the alkaline buffer – bicarbonates - in our blood. By the age of 90, we lose 18% of bicarbonates in our blood.

Journal of Gerontology: BIOLOGICAL SCIENCES, 1996, Vol. 51A. No. 1, B91-B99

By Dr. Lynda Frassetto of University of California, San Francisco

Dotted line added by Sang Whang

Insufficient amount of bicarbonates in our blood reduces our capabilities to manage (neutralize and dump) the acid our body produces. This is the cause of aging. The age of 45 is the average age when human beings start to show symptoms of diabetes, hypertension, osteoporosis and many other adult degenerative diseases. And since we cannot manage the acid, we accumulate acidic wastes in our body. These wastes show up as cholesterol, fatty acid, uric acid, urate, sulfate, phosphate, kidney stones, etc.

Drink Alkaline Ionized Water!

Consume
Freely
Raw is Best!

Alkaline
pH

Most foods
get more acidic
when cooked

Neutral
pH

7.365 is Optimum pH for HUMAN BLOOD!

It takes 20 parts
of ALKALINITY
to neutralize
1 part ACIDITY
in the body

Acidic
pH

Consume
Sparingly
or never

10.0

9.0

8.0

7.0

6.0

5.0

4.0

3.0

2.3

High Alkaline Ionized Water

Raw Spinach
Raw Broccoli
Artichokes
Brussel Sprouts
Olive Oil
Herbal & Green Tea
Most Lettuce
Borage Oil
Raw Zucchini
Sweet Potato
Raw Peas
Apples
Almonds
Avocados
Tomatoes
Fresh Corn
Mushrooms
Turnip
Olives

Red Cabbage
Raw Celery
Cauliflower
Carrots
Potato Skins
Alfalfa Grass
Sprouted Grains
Raw Eggplant
Alfalfa Sprouts
Raw Green Beans
Beets & Greens
Blueberries
Pears
Soybeans
Bell Peppers
Radish
Rhubarb
Pineapple
Cherries
Millet
Wild Rice

Cucumbers
Collards
Seaweed
Onions
Asparagus
Lemons & Limes
Mangoes
Papayas
Figs & Dates
Tangerines
Melons
Kiwi
Grapes
Strawberries
Apricots
Cantaloupe
Honeydew
Peaches
Oranges
Grapefruit
Bananas

Most Tap Water

Municipalities adjust tap water to be +/- 7.0
Optimum pH for HUMAN BLOOD is 7.365

Milk, Yogurt
Fruit Juices
Cooked Spinach
Most Grains
Soy Milk
Coconut
Eggs
Fish
Tea
Cooked Beans
Chicken & Turkey
Beer
Sugar
Canned Fruit
White Rice

Kidney Beans
Lima Beans
Plums
Processed Juices
Rye Bread
Spelt
Brown Rice
Barley
Cocoa
Potatoes w/o Skins
Pinto Beans
Navy Beans
Garbanzos
Lentils
Black Beans

Butter, fresh, unsalted
Cream, fresh, raw
Milk, raw cow's
Margarine
Oils, except Olive

Rice & Almond Milk
Sprouted Wheat Bread
Oats
Liver
Oysters
Cold Water Fish
Salmon
Tuna
Goat's Milk
Butter, salted
Rice Cakes
Cooked Corn
Wheat Bran
Rhubarb
Molasses

Reverse Osmosis Water

Coffee
White Bread
Peanuts
Pistachios
Beef
Lamb
Pork
Wine
Shellfish
Pastries
Cheese
Goat Cheese
Soda

Distilled & Purified Water

Blackberries
Cranberries
Prunes
Sweetened Fruit Juice
Wheat
Black Tea
Pasta
Pickles
Stress
Worry
Lack of Sleep
Overwork
Tobacco Smoke

Most Bottled Water & Sports Drinks

Most Nuts
Tomato Sauce
Buttermilk
Cream Cheese
Popcorn
Chocolate
Vinegar
Sweet 'N Low
Equal
Aspartame
NutraSweet
Processed Food
Microwaved Foods

Colas! (Off the Chart)

Please read carefully this installation manual and follow the instruction before proceeding to the installation.

Pay particular attention to all the cautions, warnings and notes. Failure to do so could result in personal injury, equipment damage or other property.

Be sure to follow any special plumbing codes in your area.

Check List

1. Reverse Osmosis system
2. Water storage tank
3. Faucet
4. Installation kit: Tank ball valve, Drain saddle valve, Feed water valve



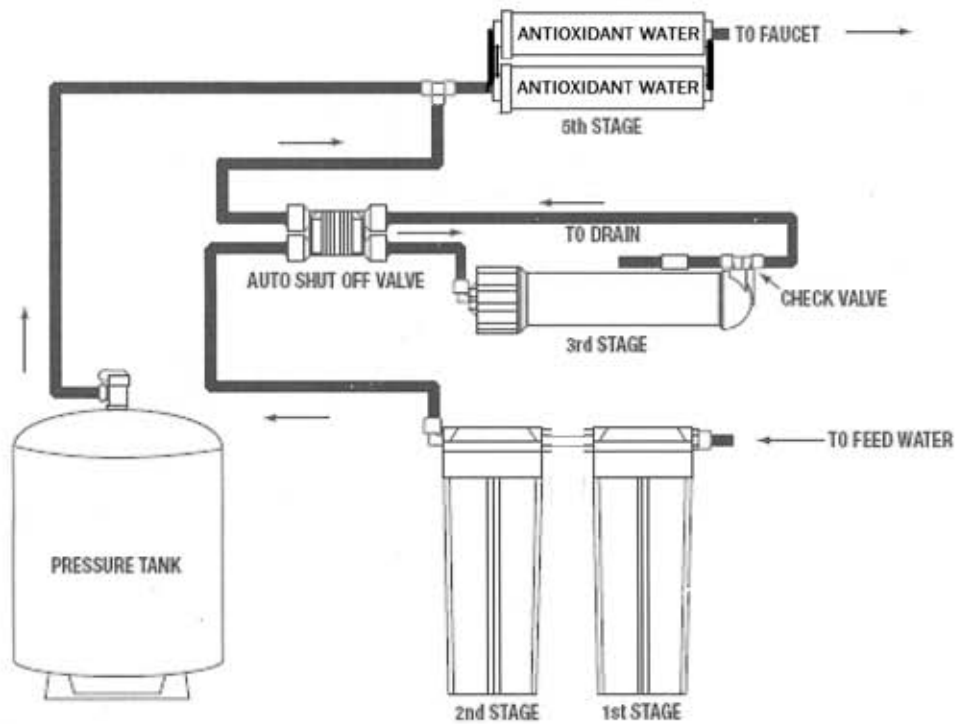
Recommended Tools List

- Variable speed drill
- 1/8" and 1/4" drill bits, 7/16" drill bit
- 1/2" and 9/16" open-end wrench or adjustable wrench
- Utility knife
- Teflon tape

Warning

1. Do not use this RO system to purify non-drinkable sources of water that are unsafe or with water of unknown quality
2. Never use hot water or allow unit to freeze
3. Incorrect installation will void the warranty

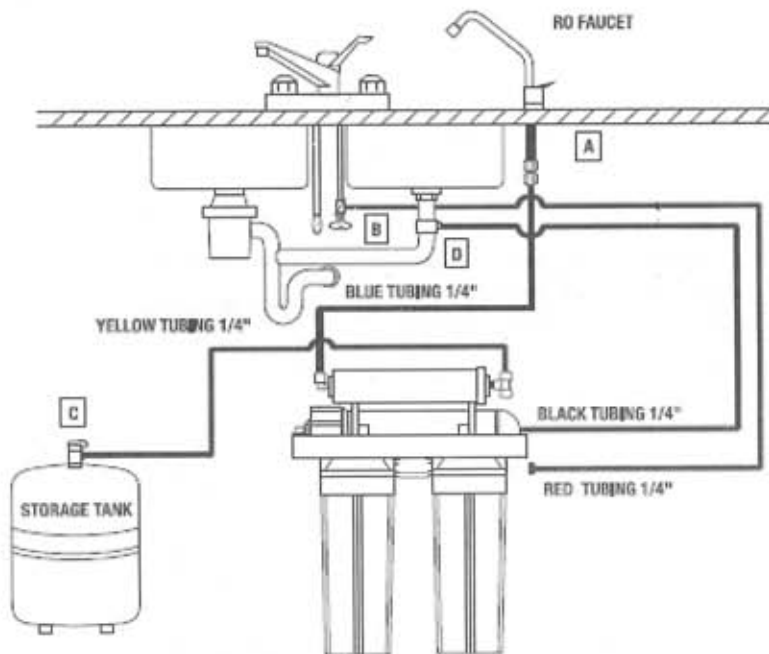
5 stage RO system filtration process



Specification

Stage	Description	Service Life
1 st stage	Pre-carbon filter, 10"	24 months
2 nd stage	Pre-carbon filter, 10"	24 months
3 rd stage	Reverse Osmosis membrane	36-60 months
4 th stage	Ionizer cartridge	12-18 months
5 th stage	Alakline cartridge	12-18 months

Installation Guide Line

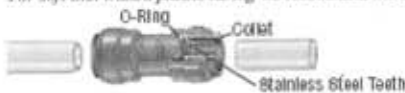


- | | |
|--------------------------|--------------------------|
| A. Blue tubing: | RO water to faucet |
| B. Red tubing: | Feed water to RO system |
| C. Yellow tubing: | RO water to storage tank |
| D. Black tubing: | Discharge water to drain |

How to make a connection

1. CUT THE TUBE SQUARE

Cut the tube square. It is essential that the outside diameter be free from score marks and that burrs and sharp edges be removed before inserting into fitting. For soft thin walled plastic tubing we recommend the use of a tube insert.



2. INSERT TUBE

Fitting grips before it seals. Ensure tube is pushed into the tube stop.



3. PUSH UP TO TUBE STOP

Push the tube into the fitting, to the tube stop. The collet (gripper) has stainless steel teeth which hold the tube firmly in position while the o-ring provides a permanent leak proof seal.



4. PULL TO CHECK SECURE

Pull on the tube to check that it is secure. It is a good practice to test the system prior to leaving site and/or before use.



Disconnecting - PUSH COLLET AND REMOVE TUBE

To disconnect, ensure the system is depressurized before removing the tube. Push in collet squarely against face of fitting. With the collet held in this position, the tube can be removed. The fitting can then be re-used.

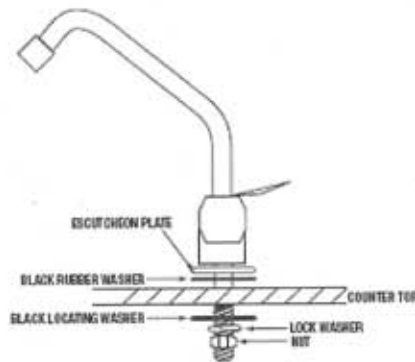


Installation

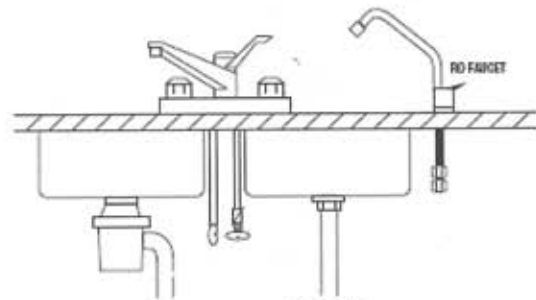
1. Install the faucet

- a. Determine the best location for your RO faucet on your sink surface.
- b. Place a piece of masking tape or duct tape on the determined location where the hole is to be drilled.
- c. Use a variable speed drill at the slow speed with a 1/8" drill bit approved for the sink material. Drill a centering hole in the center of the desired faucet location. Use the lubricating oil to keep the drill bit cool while drilling.
- d. Enlarge the hole using a 1/4" drill bit. Use factory approved method or approved plumbing practice to drill hole in sink.
- e. Enlarge the hole to 7/16" diameter. Keep bit well oiled and drill slowly.
- f. Pass the escutcheon base plate and large rubber washer in the order over the threaded mounting tube at the base of the faucet.
- g. From under the sink, install the large metal or plastic locating the washer and the star washer over the threaded stem. Screw on the nut and tighten.
- h. Over the blue tubing, install brass compression nut and plastic sleeve (do not use the brass one), then install plastic insert
- i. The spout is 360 degree swivel.

Please see <Fig. 1> and <Fig. 2>



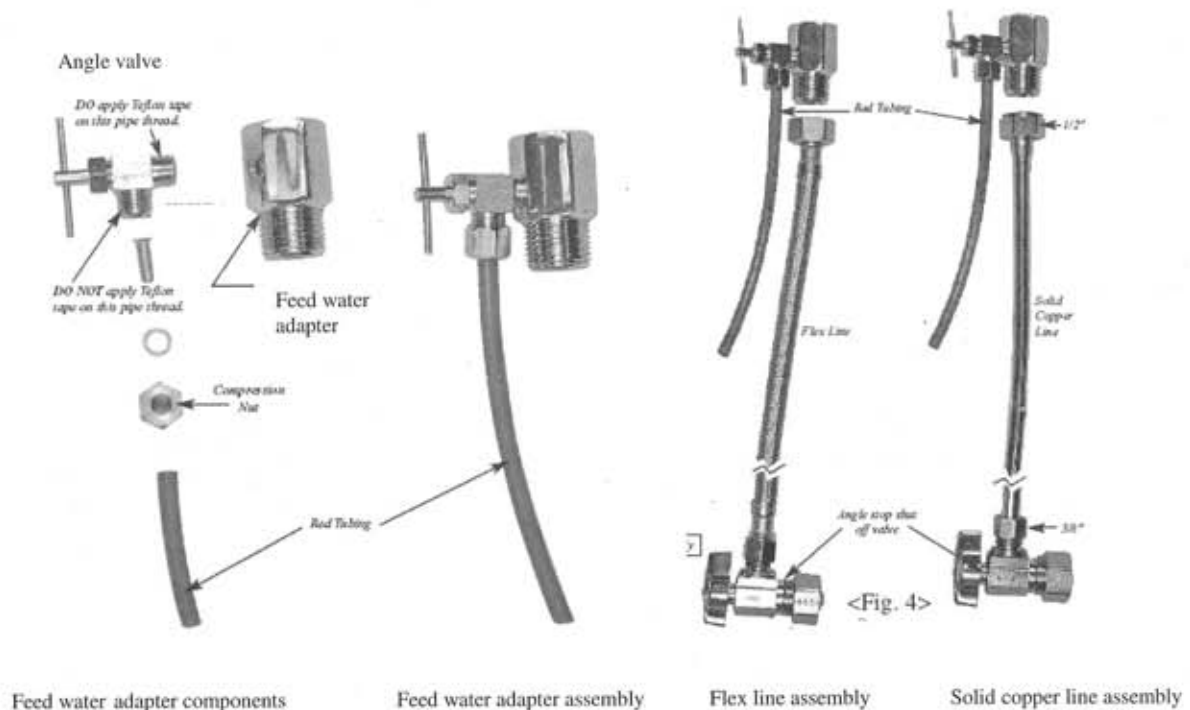
<Fig. 1>



<Fig. 2>

2. Tapping into COLD water line

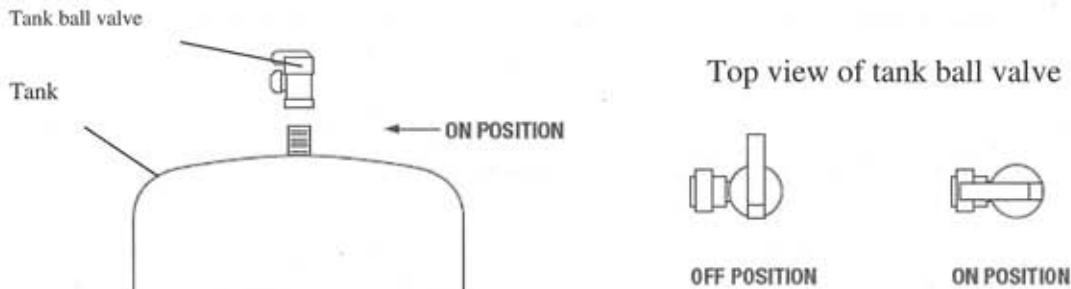
- a. Locate the cold water angle shut off valve underneath the sink and turn it off. Open the cold water faucet to release the pressure. On single handle faucet, the hot water may need to be turned off to prevent any hot water cross over. If water continues to come out of faucet with angle valve turned off, the house main will be to be turned off. Care must be taken for appliances that may be damaged by an interrupted water supply.
- b. Locate feed water adapter. The angle valve should be installed into slip joint adapter before assembly is connected to the feed water line.
- c. Teflon tape must be used on angle valve to prevent leaks.
- d. Disconnect the cold water riser tube and install the slip joint adapter.
- e. Please follow by <Fig. 4> for flex line and solid copper riser installation
Flex line: Loosen nut and separate cold water riser tube from faucet shank. Gently bend riser tube so that slip joint fits onto faucet shank. Replace the existing cone washer with new washer provided in installation kit onto cold water riser tube. Reinstall riser tube onto slip joint adapter and tighten
Solid copper riser tube: Procedure as flex tubing except you must cut a piece of the riser tube about 3/4" or 1" so the slip joint adapter can fit between faucet and riser tube (Teflon tape must be used on slip joint adapter to prevent leaks).
- f. Connect red tubing to angle needle valve.



THE WATER SUPPLY TO YOUR UNIT MUST BE FROM THE COLD WATER LINE. HOT WATER WILL SEVERELY DAMAGE THE RO UNIT

3. Mounting the tank ball valve

- a. Unplug the plastic cap on the top of the tank.
- b. Wrap the thread 3 times with Teflon tape only.
- c. Connect the ball valve to the thread. Make sure it is tight but not over tight.
See <Fig. 5>
- d. Connect the yellow tubing to the tank ball valve. Turn the tank ball valve off.

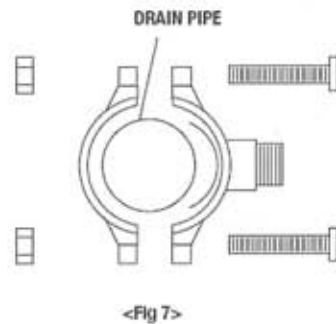
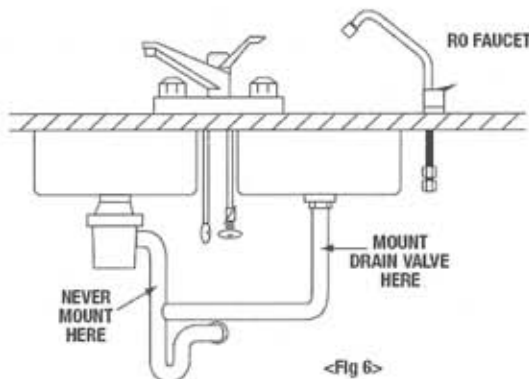


<Fig 5>

4. Mounting the drain clamp

The drain clamp will fit most standard drain pipe 1-1/4". It should be installed above the trap and on the vertical tailpiece. See <Fig. 6>

- a. Position the drain saddle in desired location, mark spot through thread outlet, remove saddle.
- b. Drill 1/4" (6.3mm) hole into the drain pipe above the water line of trap.
- c. Align the hole drilled in the drain pipe with the drain saddle using a drill bit or other narrow straight object and tighten clamp.
- d. Make sure to align drain saddle to drilled hole. Attached drain saddle to drain pipe and tighten the two screws evenly. See <Fig. 7>.
- e. Connect black tubing to drain clamp.



TANK SHOULD HAVE A PRE-CHARGE AT 5-7 PSI

5. System starts up

- a. Turn on the cold water supply and the under sink feed water valve but close the tank ball valve.
- b. Open RO faucet for continuous flow.
- c. Check system for leaks, tighten as necessary.
- d. After 10-30 minutes, the water will start to drip out of the RO faucet. Let it drip for about 10 minutes and then flip the handle to the closed position. Turn on the tank ball valve now. It will take 2-3 hours to fill the storage tank.
- e. You will hear the water stop after the tank is full.
- f. Check leaks daily for first week and periodically thereafter.
- g. You may notice that the water may be milky colored during the first week. It is the air bubble in the water. It is normal and safe.

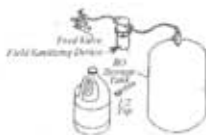
Note

1. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.
2. This reverse osmosis system contains a replaceable component critical to the efficiency of the system. Replacement of the reverse osmosis component should be with one of identical specifications, as defined by the manufacturer, to assure the same efficiency and contaminant reduction performance.
3. Do not use this RO system appliance to purify non-drinkable sources of water that are unsafe or with water of unknown quality.
4. Never use hot water or allow unit to freeze.
5. Incorrect installation will void the warranty.

Cleaning Procedures

The following system and tank cleaning procedures are recommended every 12-18 months.

1. Shut off the source water supply to the RO system.
2. Open the RO faucet and depressurize the RO system and storage tank
3. Remove pre-filter, post filter and RO membrane. Discard or prepare for clean. If the RO membrane element is to be reused, disinfectant solution should be introduced into the permeate tube outlet sufficient remove biofilm in this vulnerable area, before reinserting the membrane into the housing.
4. Wash the internal housing areas with warm soapy water using a clean brush (do not scratch the surface of the housings). Be sure to clean o-ring grooves thoroughly. Remove the exiting o-ring. Discard o-ring or prepare for cleaning.
5. Rinse off all the housing pieces with clean water to remove soap.
6. Replace o-rings, and lubricate per manufacture's instruction.
7. Pour recommended amount of disinfection solution into each of the clean housings and replace housing on the RO system.
8. Disconnect RO storage tank from the system.
9. RO storage tank cleaning procedure:
 - a. The tank should be empty. Check the air pre-charge pressure with an accurate gauge (low pressure type 0-12 lbs). The average tank pressure should be 8-10 psi (when the tank is empty).
 - b. Fill the tank sanitizer feeder with the recommended disinfectant dosage, and connect the feeder to the water supply and RO storage tank
 - c. Turn on water supply and force water and disinfectant solution into the RO storage tank. The storage tank should feel heavy when filled.
 - d. The disinfectant solution should remain in the tank a minimum of 10 minutes. Turn off the water supply valve and the RO storage tank valve. Disconnect the sanitizer feeder and connect the RO storage tank to the RO unit (the tank ball valve should remain closed).
10. Open the feed water valve and open the RO faucet until water flow freely from the spout. Close the RO faucet. Hold the disinfectant solution in the RO system, including the tubing and faucet, for a minimum of 10 minute. Open the tank ball valve.
11. Shut off the feed water valve and open the RO faucet. Let water run out until the flow stops at the RO faucet.
12. Open the feed water valve. Let water flow freely from the faucet for about 3 minutes. Shut off the water at the source water supply with RO faucet open.
13. When the flow of water has stopped at the RO faucet, remove the filter housing sumps and membrane housing from the RO system. Replace the filters and membrane according to the service life.
14. Replace the housing on the RO system. Open the source water valve and allow the water to flow from the faucet.



Because some of the disinfectant solution may still be in the system, the system should be flushed prior to using the water human consumption. A maintenance record should be kept for the RO system, including information about the replacement parts, when service was performed and by whom. It is recommended that you completely drain the RO tank every month

Preventive maintenance

These recommendations are intended for maximize efficiency of RO water production by your system.

1. Filter maintenance

- a. It is OK to store the filters on the shelf for several years.
- b. To store the sealed, unopened filter, we recommend that it be kept in an air-tight container. This prolongs the shelf life of the carbon filter (particularly filter was ordered more than one year before its intended use) and avoid having the filter absorb any possible odor from the air.

2. Membrane maintenance

- a. The dry packed membrane usually has a two-year shelf life. To prolong the shelf life, we recommend keeping unopened dry membrane in a refrigerator.
- b. Once the membrane is in use, we recommend running the RO system every day for at least 10-15 minutes (about 1 gallon or 1 liters of drinking water). This helps to maintain the membrane performance.
- c. If the RO system is not used for over a week, drain the storage tank first. Then fill the tank and drain it twice. Your RO system is now ready to use again.

3. Filter and membrane change procedures

- a. Shut off the water supply.
- b. Turn off the tank ball valve by turning it 90 degrees.
- c. Open the RO faucet to the continuous flow position and drain the tank completely.
- d. Slid in the housing wrench. Use one hand to hold the system and the other hand to turn the wrench clockwise to open the housing.

Note: if it is too tight to open the housing you may try unplugging the fitting between red tubing and the system in order to reduce the air and water pressure inside the housing.

- e. After opening the housing, remove the used filter and put the new filter into the housing. Make sure the O-ring is back in place and turn the housing counter-clockwise to close.
- f. Repeat previous step to change the second filter.
- g. Turn on the water supply and make sure there are no leaks.
- h. Let the water drip from the faucet for about 10 minutes. If the water flow is less than 1 cup (8 oz. or 240 ml) per minutes, it may be a single to change the membrane.
- i. Membrane change procedures
Unscrew the membrane housing cap
Slide out the used membrane and discard/
Insert the new membrane into the housing. The end with the two o-rings should go in first. To prevent leaks be sure it is fully seated in the bottom of the housing.
Screw the cap back onto the membrane housing, making sure o-ring is still in place.

It may take 10-20 minutes for the new membrane to run at normal flow.

If the water flow is OK, then turn on the tank ball valve. After 1 minute, turn off the RO faucet and complete the filter change procedures.

Trouble shooting

Note: Turn off the system before servicing

Problem	Cause	Solutions
Milky colored water	Air in the system	Air in the system is a normal occurrence with initial startup of the RO system. This milky look will disappear during normal use within 1 to 2 weeks
Noise from faucet	<ol style="list-style-type: none"> 1. Air gap faucet 2. Location of drain saddle 3. Restriction in drain line 	<ol style="list-style-type: none"> 1. Will disappear after system shuts down 2. Relocate the drain to above water trap 3. Blockage sometimes caused by debris from garbage disposal or dishwasher
Small amount of water from storage tank	<ol style="list-style-type: none"> 1. System just starting up 2. Air pressure in storage tank is low 	<ol style="list-style-type: none"> 1. Normally it takes 2-3 hours to fill tank. Low water pressure or low temperatures can reduce production rate 2. Add pressure to storage tank. The pressure should be 8-10 psi when the tank is empty
Slow production	<ol style="list-style-type: none"> 1. Low water pressure 2. Crimps in tubing 3. Clogged pre-filters 4. Fouled membrane 	<ol style="list-style-type: none"> 1. Add a booster pump 2. Make sure tubing is straight 3. Replace pre-filters 4. Replace membrane
Water taste or smell offensive	<ol style="list-style-type: none"> 1. Post carbon is depleted 2. Fouled membrane 3. Sanitizer not flushed out 	<ol style="list-style-type: none"> 1. Replace post carbon 2. Replace membrane 3. Drain storage tank and refill it overnight
No drain water	Clogged flow restrictor	Replace flow restrictor
Leaks	<ol style="list-style-type: none"> 1. Fittings are not tightened 2. Twisted o-ring 3. Misalignment of hole in drain saddle 	<ol style="list-style-type: none"> 1. Tighten fittings as necessary 2. Replace a o-ring 3. Realign drain saddle

Limited Warranty

1. Warranty Covers

Alkaline and Ionized Water Purification System is warranted to the original owner to be free of defects in material and workmanship from the date of manufacture for two years as follows:

- 1) The manufacture will replace the defective parts (excluding the replaceable filters) within one year at no charge.
- 2) The replaceable filters are warranted for defects in material and workmanship only. Service life of replaceable filter varies with local water and is thus not warranted.

2. Conditions of Warranty

- 1) System must be maintained and service with manufacturer approved replacement parts. The performance and function of the RO system is directly related to the quality of the water being treated and the particular application in which it is used. Therefore, the manufacturer liability is limited to the cost of repair or replacement of any defective part and does not include incidental or consequential damages of any kind. This warranty gives you special legal rights and you may also have other rights which vary from state to state.
- 2) Systems must be installed and operated in accordance with manufacturer recommended procedures and guidelines.

3. Reverse Osmosis Systems Will Not Do

- 1) Warranty is void if product failure or damage result from freezing, neglect, misapplication, fouling with sediment or scale or failure to operate the system in accordance with the instructions contained in the owner's manual.
- 2) The following operating conditions must also be followed for this warranty to be valid.

Operating pressure: 50-90 psi (3.5-6.3 kg/cm²)

Operating temperature: 40-100 ° F (4.4 -37.8 °C)

Hardness: <120 ppm (7gpg)

TDS: <1000 ppm

pH Range: 3-11

Iron: <0.3 ppm

4. Limitations and exclusions

The manufacturer will not be responsible for any implied warranties including those of merchant ability and fitness for a particular purpose. The manufacturer will not be responsible for any incidental or consequential damages including travel expense, telephone charges, loss of revenue, loss of time, inconvenience, loss of use of the equipment and damage caused by the equipment and its failure to function properly. This warranty sets forth all of manufacturer's responsibilities regarding this equipment.