INSTALLATION MANUAL

Natural Ionic Calcium Alkaline Water System

(AQ9-50GPD, AQ9-200GPD, AQ9-300GPD)

MADE IN THE U.S.A.

www.aquanineplus.com

Natural Ionic Calcium Water System (NICA)

This water treatment system works with a process called reverse osmosis Filtration Type: Reverse Osmosis Filtration Method: Sediment Filter, Pre Carbon Filter, Post Carbon Filter, Membrane, Aqua 9+ Ceramic Filter, Water Storage Tank, TCR Filter

Aqua 9+ Natural Ionic Calcium Alkaline Reverse Osmosis System is one of the most convenient and economical methods of reducing dissolved solids in potable drinking water. This means drastic reductions in impurities such as salts, sugars, particles, dyes, germs, bacteria and virus. You get the best quality of natural Ionic calcium alkaline water, at your finger tips 365 days a year, and at only a fraction of the cost.

The Forefront 7 Stage Water Purifying Method

Stage 1: Pre Filter
5 micron polypropylene sediment free filter extracts materials and impurities such as sands, dirt, rust from the water pipes, insects, asbestos fiber, and particles down to 5 micron.

Stage 2: Pre Carbon
The high quality carbon filter absorbs all types of polluted materials and rust. It will also remove the unpleasant orders of chlorine that was used as a disinfectant and heavy chlorine by-products such as chloramines, THM, and TCE.

Stage 3: Post Carbon
The two carbon blocks filter out organic matter from water without releasing carbon fines, and help protect the membrane. It also removes the remaining order, chlorine and other impurities for the second time.

Stage 4: Membrane
U.S. made high rejection Thin Film Composite (TFC) RO membrane will reject a wide spectrum of impurities including Total Dissolved Solids (TDS), various kinds of harmful chemical substances such as bacteria, virus, cancerous heavy metal phenol, pesticide, synthetic detergent, industrial waste, asbestos, radioactive contaminated materials down to 0.0001 micron. The product water is sent to a storage tank, while the reject water is flushed down the drain and leaves only the pure water elements.

Stage 5: Booster Pump(optional)

Non- electrical Power pump is installed to increase inlet water pressure and to reducing waste water.

Stage 6: AQUA 9+ Bio-Ceramic Filter
Changes Acid RO water to alkali water and produces all natural calcium, magnesium, sodium and potassium ion water

Stage 7: Water tank
Sterilized water tank will maintain the clean pure water safely. It Prevents the reproduction of germs and virus.

Stage 8: TCR Filter

In-line GAC filter is used to remove dissolved gases, bad taste and odor from the water kept in the storage tank. This is the final treatment before drinking the natural ionic calcium alkaline water.

Stage 9: Ultra Violet Light(optional)

UV light kills 99.99% of bacteria and viruses in the water before the final drinking water deliver to the faucet.

Example of typical feed water installation

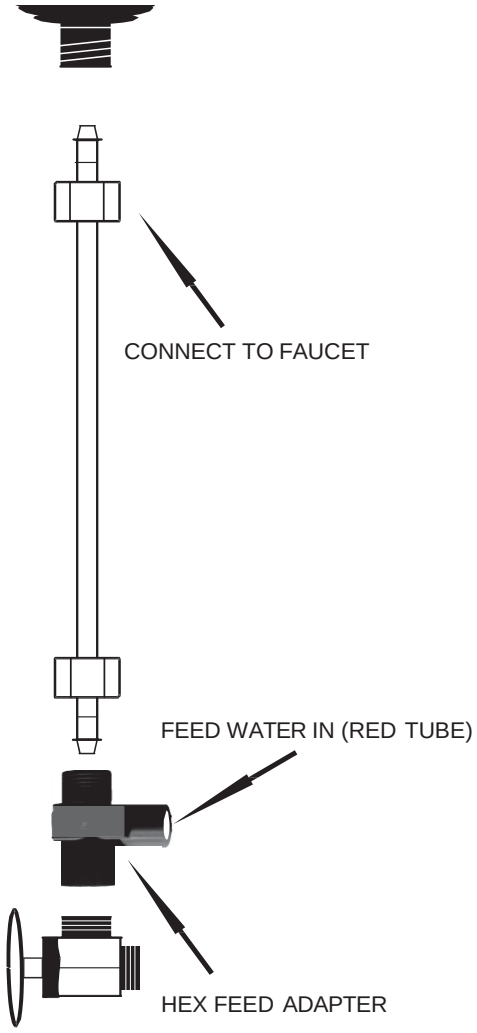
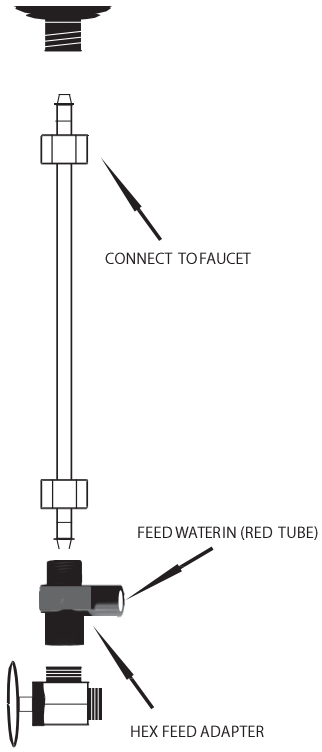


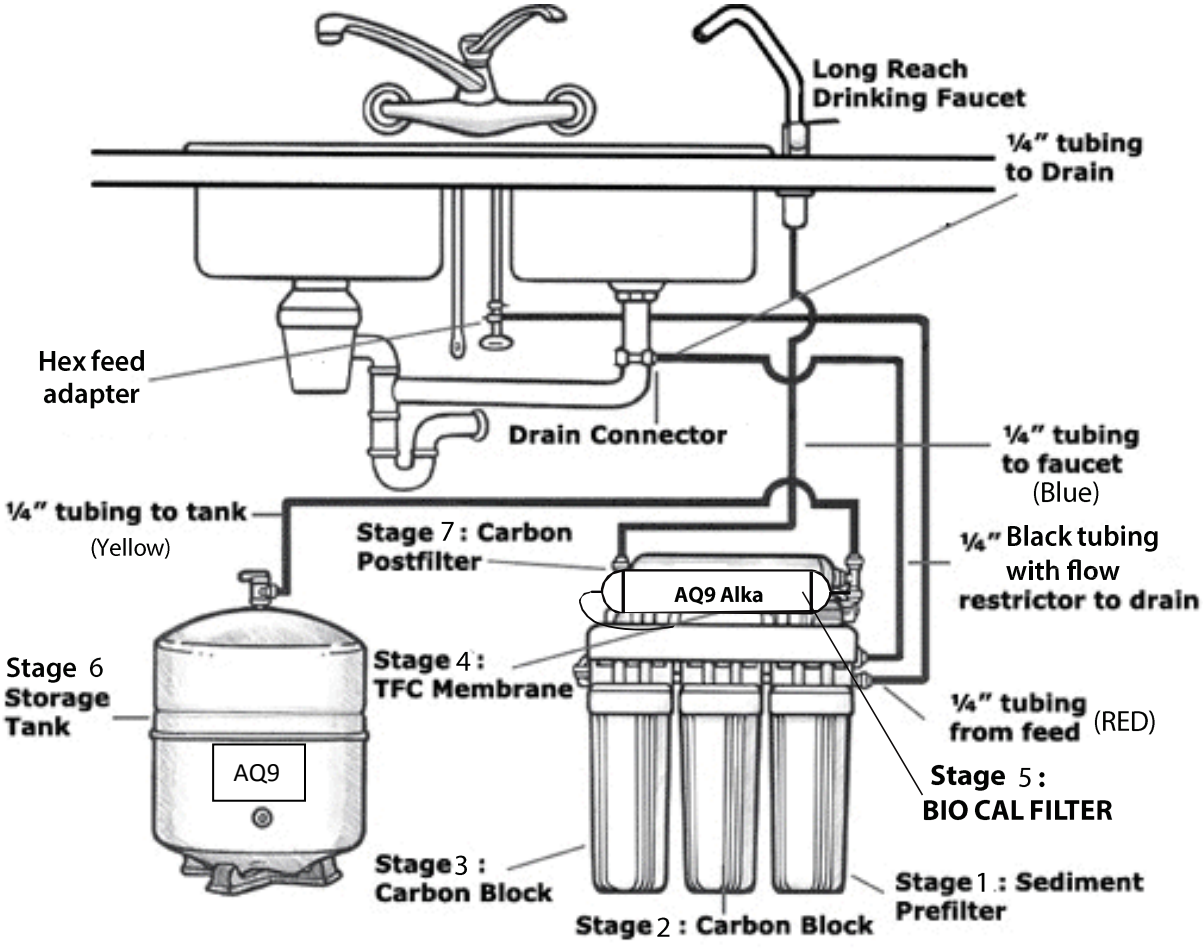
Figure 1



Example of typical feed water installation

Figure below shows the system interconnection.

1. RED LINE: Connect from system to feed adapter.
2. BLUE LINE: Connect from system onto threaded faucet shank with compression nut supplied with faucet.
3. YELLOW LINE: Connect from system to storage tank.
4. BLACK LINE: Connect from system to drain clamp fitting.



BOOSTER PUMP INSTALL(OPTIONAL)

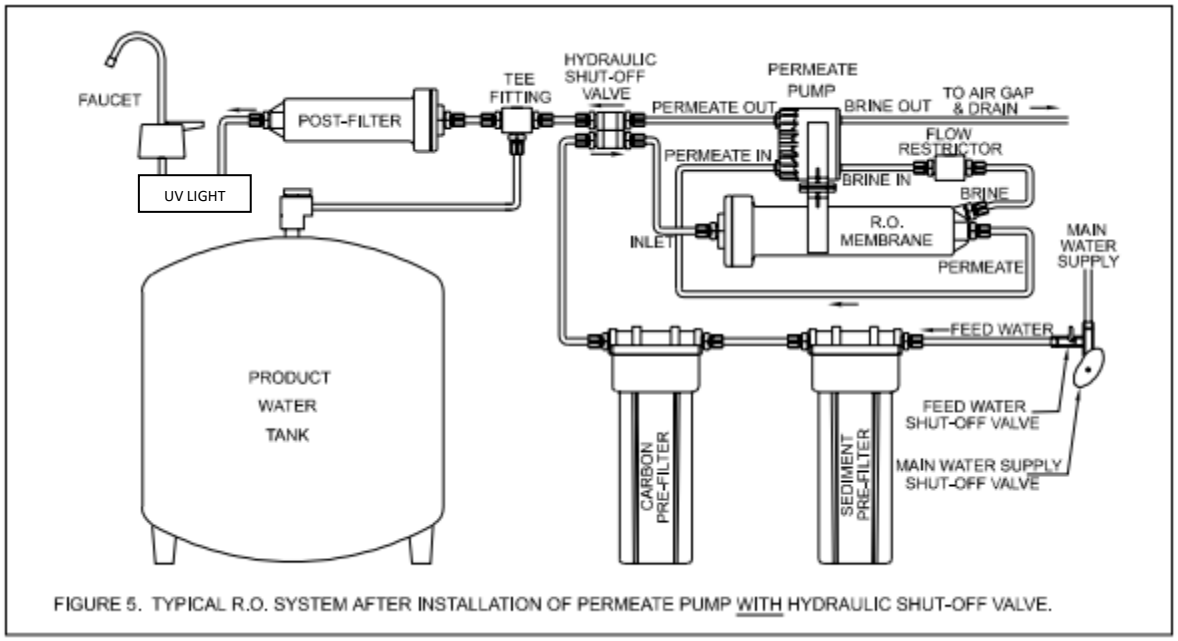


FIGURE 5. TYPICAL R.O. SYSTEM AFTER INSTALLATION OF PERMEATE PUMP WITH HYDRAULIC SHUT-OFF VALVE.

ULTRAL VIOLET LIGHT(OPTIONAL)

The UV Light can be installed between the post filter and the faucet.

DRAIN CLAMP INSTALLATION

1. The drain clamp should be installed above the trap and on the vertical or horizontal tailpiece (see figure 2).
2. The hole position on the pipe should be marked and drilled with a 1/4” bit through only one side of the pipe (see figure 3).
3. Align the drain clamp over the drilled hole and attached to the drain pipe and tighten the two screws evenly (see figure 4).

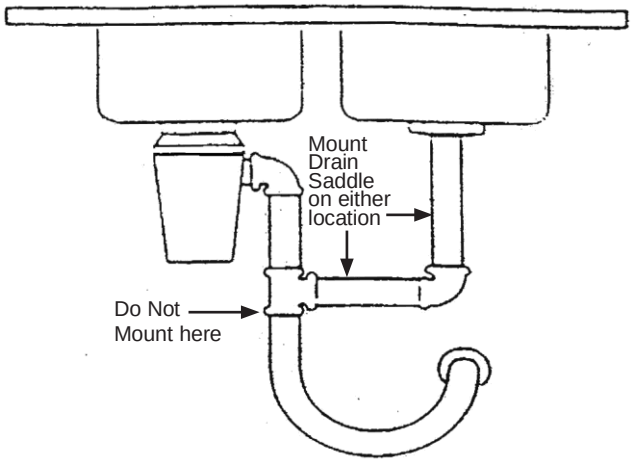


Figure 2. Drain Clamp Location

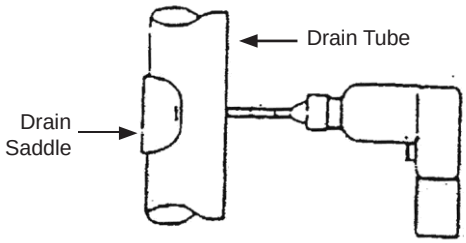


Figure 3. Drain Clamp Drill

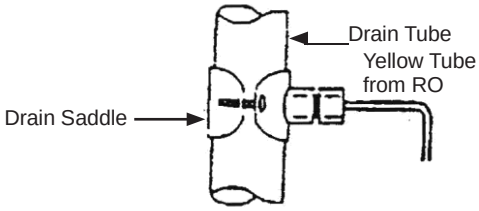


Figure 4. Drain Clamp Connection

DRILLING FAUCET HOLE IN SINK

Stainless Steel Sinks & Porcelain Sinks:

1. Drilling through a stainless steel sinks can be achieved by marking a center punch & drilling a 3/8” guide hole.
2. Use a 7/16 or 1/2” carbide drill to enlarge the hole.
3. For porcelain sinks, mark the location of the hole. Use some masking tape to protect the area where the hole is to be drilled on the sink surface. Use a 7/16 or 1/2” drill. Make sure when starting a drill, to begin slowly through the porcelain portion of the sink so that chipping is cut down to minimum.

MOUNTING THE FAUCET

1. Disassemble the bottom portion of the faucet
2. Place into hole of sink and reassemble faucet from underneath sink (see figure 5)
3. Tighten nut on faucet bottom while keeping faucet straight as desired on sink.
4. Connect 1/4” tubing to bottom of the faucet shank using the insert, ferrule, and compression nut.

STANDARD FAUCET

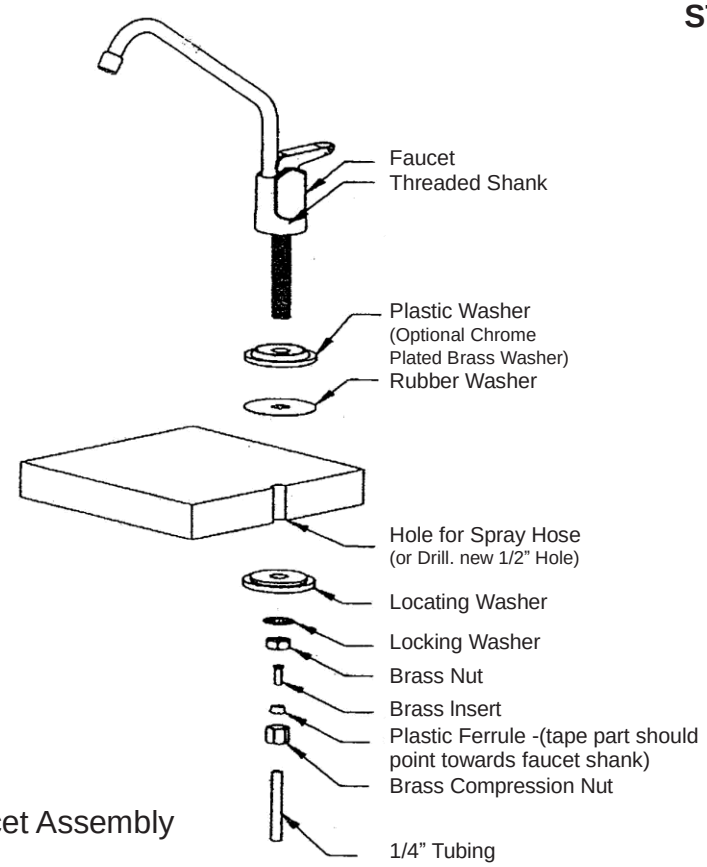


Figure 5. Faucet Assembly

BEFORE YOU START

Ensure there is a pressure regulator installed and is in proper working order before proceeding. Inlet water pressure should be subject to between 40 to75 PSI. You should contact a licensed plumber if you are not able to check this on your own .
Excessive pressure could cause damage to the system and water could leak out.
Failure to follow proper installation instructions voids all warranties and liabilities.

The system should be installed where it is protected from freezing. Do not install the system where it would cause damage if failure or leakage occurred.

1. Prior to installation the feed water assembly, please assure that the following water conditions are met.

Feed water conditions	Min.	Max.
Inlet pressure	40 PSI	75 PSI
Temp	40 deg F	100 deg F
pH Level	2	11
TDS Level		2000 ppm

2. All local plumbing codes should be followed

3. Locate cold water supply , drain placement and faucet placement.

4. Locate water system and storage tank placement. (Should allow yourself room for easy access to future filter changes)

5. Contact a plumber if you are not familiar with standard plumbing codes , procedures or are not able to handle the installation.

6. Verify there is a working pressure regulator in place with a maximum of 75 PSI. If pressure exceeds PSI mentioned above make sure to contact a licensed plumber for assistance.

FEED WATER INSTALLATION

1. The feed water assembly consist of a 1/2” Metal adapter. Locate this part in the installation kit. (Note: Teflon tape should be used to prevent leaks)

2. Locate cold water angle shut off valve underneath the sink, usually on right side and turn it off. Open cold water faucet to release the pressure. On single handle faucets, the hot water may need to be turned off to prevent any hot water from crossing over. If water continues to come out of the faucet with angle valve turned off, the house main water will have to be turned off.

3. Disconnect the cold-water rinse tube and install the hex feed connector.(flex line) Loosen nut and separate cold riser tube from faucet shank. Gently bend riser tube so that the hex feed adapter fits on to faucet shank. Replace the existing at washer (if needed) with new washer provided in installation kit onto cold riser tube. Re-install riser tube onto hex feed adapter and tighten. (Solid copper riser tube) same procedure as ex tubing except you must cut out a piece of the riser tube about 3/4” to 1” so the hex feed adapter can fit between faucet and riser tube. Example drawings are provided.

SYSTEM START UP

1. Slowly open the feed adapter valve to allow raw water to enter the system.

2. Move ball valve lever on storage tank to open position.

3. Tighten all nuts and connections which may have loosened in transit. Check all connections for leaks. Recheck several times during the first 48 hours of installation for any leaks, tighten or re-tape as required.

4. Allow the system to run between 3 to 8 hours to fill the storage tank.

5. Turn on the faucet on top of the sink and let the water run for a few minutes clearing all new tubes and filters. It is recommended that you fill the tank overnight and drain it to completely flush the system during initial start up. To do this raise the faucet handle to the up position where it will remain open. When the water stops running close the faucet by lowering the handle to the normal position.

6. The system will start automatically filling the tank again.

7. The system is ready to provide you with fresh clean water.

RECOMMENDED MAINTENANCE

1. The pre-filters should be maintained regularly. The snow white pre-filter should be changed when the outside discolors to cardboard brown color and before the inner core discolors. The life of the pre filters depends on the condition of your feed water supply and should be checked at a three month interval until a filter life is established. The average life of a pre-filter is about 3 to 6 months.

2. The carbon filter helps remove chlorine and protects the life of the reverse osmosis membrane and should be changed at the same time with the pre-filter.

3. The post filters should be changed when you experience an unusual taste and / or order to the water and it has a normal life between 5 to 6 months.

4. The reverse osmosis membrane can be tested annually by bringing a sample of your filtered water to a nearby water store and request a conductivity test.(TDS meter sold separately)

5. Drain your storage tank each month to have fresh water in the storage tank. Drain the storage tank by lifting the faucet handle into the parallel position with the spigot until water stops owing from the tank. Then return the handle to the normal position. The system will require some time to begin producing new clean water This will take about 3-8 hours before new water can be drawn from the tank.

Nominal Tap Water Rejection Characteristics of Thin Film Composite (TFC) Reverse Osmosis Membrane

ION	% Rejection
Calcium	93-98
Sodium	92-98
Magnesium	93-98
Potassium	92-96
Manganese	96-98
Iron	96-98
Aluminum	96-98
Copper	96-98
Nickel	96-98
Cadmium	93-97
Silver	93-96
Zinc	96-98
Mercury	94-97
Hardness Ca & Mg	93-97
Radioactivity	93-97
Uranium	96
Chloride	92-95
Ammonium	80-90
Bromide	90-95
Phosphate	95-98
Cyanide	85-95
Sulfate	96-98
Thiosulfate	96-98
Silicate	92-95
Silica	80-90
Nitrate	90-95
Nitrite	90-95
Boron	50-70
Borate	30-50
Fluoride	92-95
Polyphosphate	96-98
Orthophosphate	96-98
Chromate	85-95
Bacteria	99+
Lead	95-98
Arsenic# 5 (Surface)	98
Arsenic # 3 (Well)	70-80

The above percent rejection is for reference only. Actual rejection will depend heavily on the exact chemistry, temperature, pressure and TDS content of the feed water.

One Year Limited Warranty

Aqua 9+ Beverage Co. Warrants it's Aqua 9+ Natural Ionic Alkaline Water System to be free from defects in materials and workmanship under normal use for a period of one year from the date of purchase. Aqua 9+ Beverage Co. will repair or replace any part of the system with the exception of filters and membrane. The RO membrane carries a 1 year warranty.

CONDITIONS OF WARRANTY

The above warranty shall not apply to any part of the Aqua 9+ Beverage Co. Alkaline water System that is damaged because of neglect , misuse, alteration, accident, misapplication, physical damage, fouling, and /or scalding of membrane by minerals, bacterial attack, sediment or damage caused by re, freezing, hot water, or an act of God. Aqua 9+ Beverage Co. assumes no warranty liability in connection with this Natural Ionic Alkaline system other than as specified herein.

WARRANTY SERVICE

Warranty service will be provided by Aqua 9+ Beverage Co. under the following conditions:

1) Contact your local dealer who will obtain return authorization instructions from Aqua 9+ Beverage Co.

2) Ship unit or part (freight prepaid) to Aqua 9+ Beverage Co. for warranty evaluation or service. Unit must be returned in original carton or packaged to prevent possible damage. Systems or parts covered under the warranty shall be repaired or replaced and returned without charge.

CONDITIONS FOR OPERATION

Source Water Supply - TFC	
Community / Private	Non - Chlorinated
System Pressure	30 - 100 psi
Temperature	4 - 38 C (40 - 100 F)
pH range	3.0 - 11.0
Max supply TDS level	2000 mg/L
Turbidity	< 1.0 net turbidity (NTU)

Chemical Perimeters - TFC	
Hardness	<350 mg/L (<20 gpg)
Iron (Fe)	<0.1 mg/L
Manganese (MN)	<0.05 mg/L
Hydrogen Sulfide (H S)	0.00 mg/L
Chlorine (CL)	0.00 mg/L