



Installation & Instruction Manual

•4-STAGE •5-STAGE •4-STAGE w/ NH₂CL BLASTER

Please read carefully before proceeding with installation

TOOLS AND MATERIALS NEEDED FOR NORMAL INSTALLATION:

variable speed (VS) drill
Carbide grinding burr
¼" (6mm) drill bit
7/16" (11mm) drill bit
½" (13mm) and 5/8" (16mm) open-
end wrenches (or adjustable)
Phillips screwdriver
Flashlight or droplight
Teflon tape
Protective eyewear (i.e. goggles)
If above tools are not available,
please contact your local distributor
for assistance

REPLACEMENT AND FILTER CHANGE INTERVAL:

Sediment prefilter:	6 mo-1 year
Carbon prefilters:	6 mo-1 year
Carbon post filter:	6 mo- 1 year
R.O. membrane	2-10 years

NOTE: Life of filters and membrane
depends on the quality of water supplied
to RO system

PRE-INSTALLATION INSPECTION:

After opening the shipping container, locate
the following items:

1. R.O. unit
2. Storage tank
3. Faucet with mounting hardware
4. Installation packet containing: drain
saddle, tank ball valve, filter wrench,
& feed water adapter
5. Miscellaneous pieces depending on
unit

WARNING!!!!!! The following conditions for feed water supply must be met or warranty will be void.

1. Unit must be connected to a municipal or well water source that is treated and tested on a regular basis to ensure bacteriologically safe water.
2. Operating temperatures:
Maximum 113 F°
Minimum 33 F°

CAUTION!!! Do not allow unit to freeze
The membrane always contains water and will be destroyed if frozen

WARNING!!! Do not plumb unit to hot water. This will destroy the membrane and void the warranty and manufacturer's responsibility.

3. Operating pressure:
Maximum 85 PSI (5.95 kg/cm²)
Minimum 40 PSI (2.95 kg/cm²)

This reverse osmosis unit is designed to operate at a water pressure in the range of 40 to 80 PSI. At pressure lower than this, the quantity as well as quality will be reduced. At higher pressure, sever damage to the system may result. **If local water pressure exceeds 85 PSI, a pressure regulator must be installed, reducing the water pressure in the system.**

WARNING!!!!!! Warranty voided and manufacturer assumes no responsibility for damage to unit or property if pressure exceeds 85 PSI.

1. Turbidity:< 5 NTU
2. pH: 4 to 11
3. Recommended hardness not to exceed 7 grains per gallon, or 120 PPM.

RECOMMENDATION: If your water hardness exceeds 7 grains per gallon, or 120 PPM you may wish to purchase a water softener for your home. Contact your local distributor for pricing.

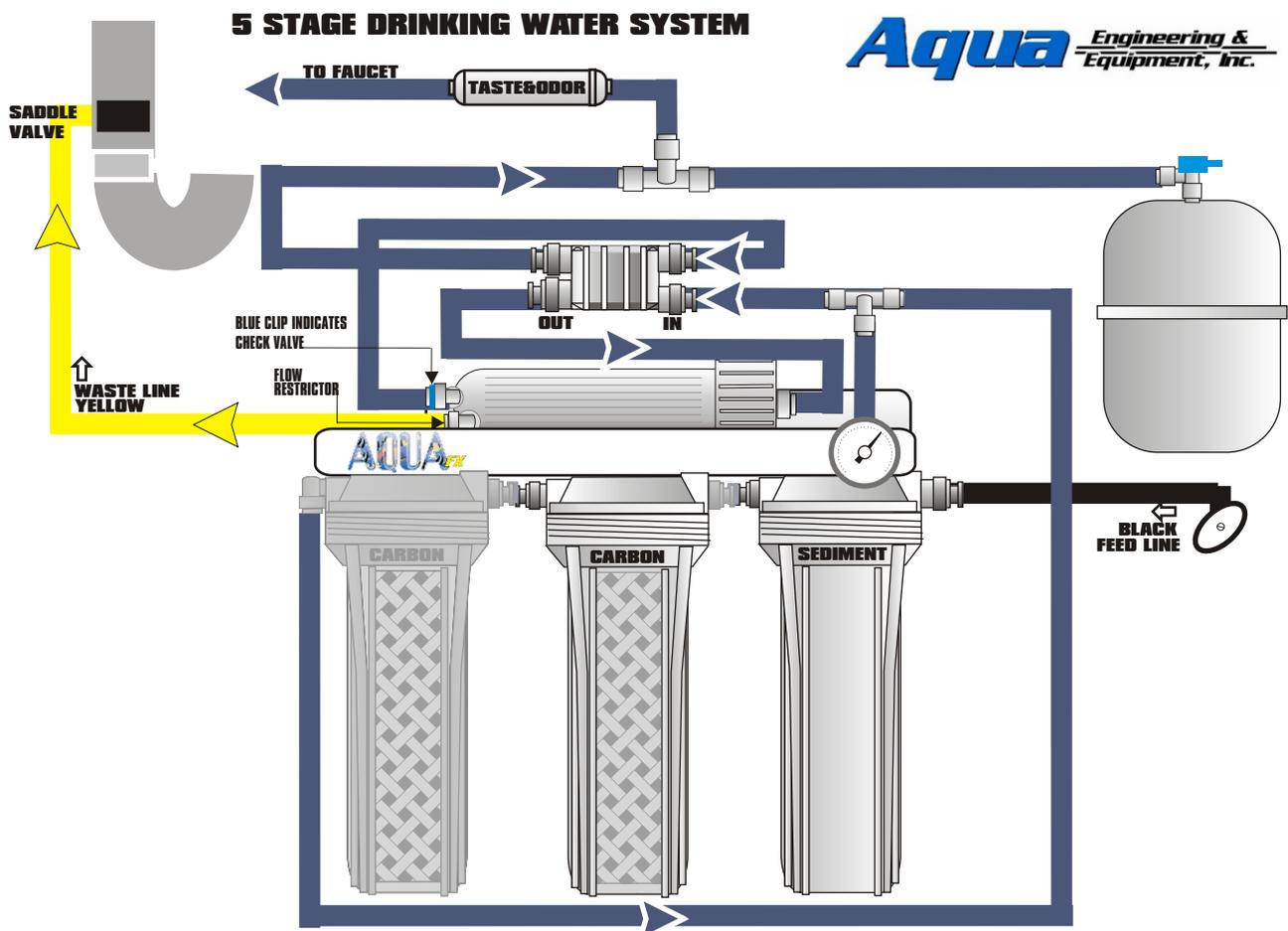
1. Recommended Total Dissolved Solids (TDS) not to exceed 2000.

LIABILITY

WARNING!!The installer is responsible for any leaks resulting from installation of tubing or related fittings. The installer must check over the entire unit completely while under pressure to ensure unit is not leaking and functioning properly. Liability resulting from failure to check for leaks while under pressure is the sole responsibility of the installer.

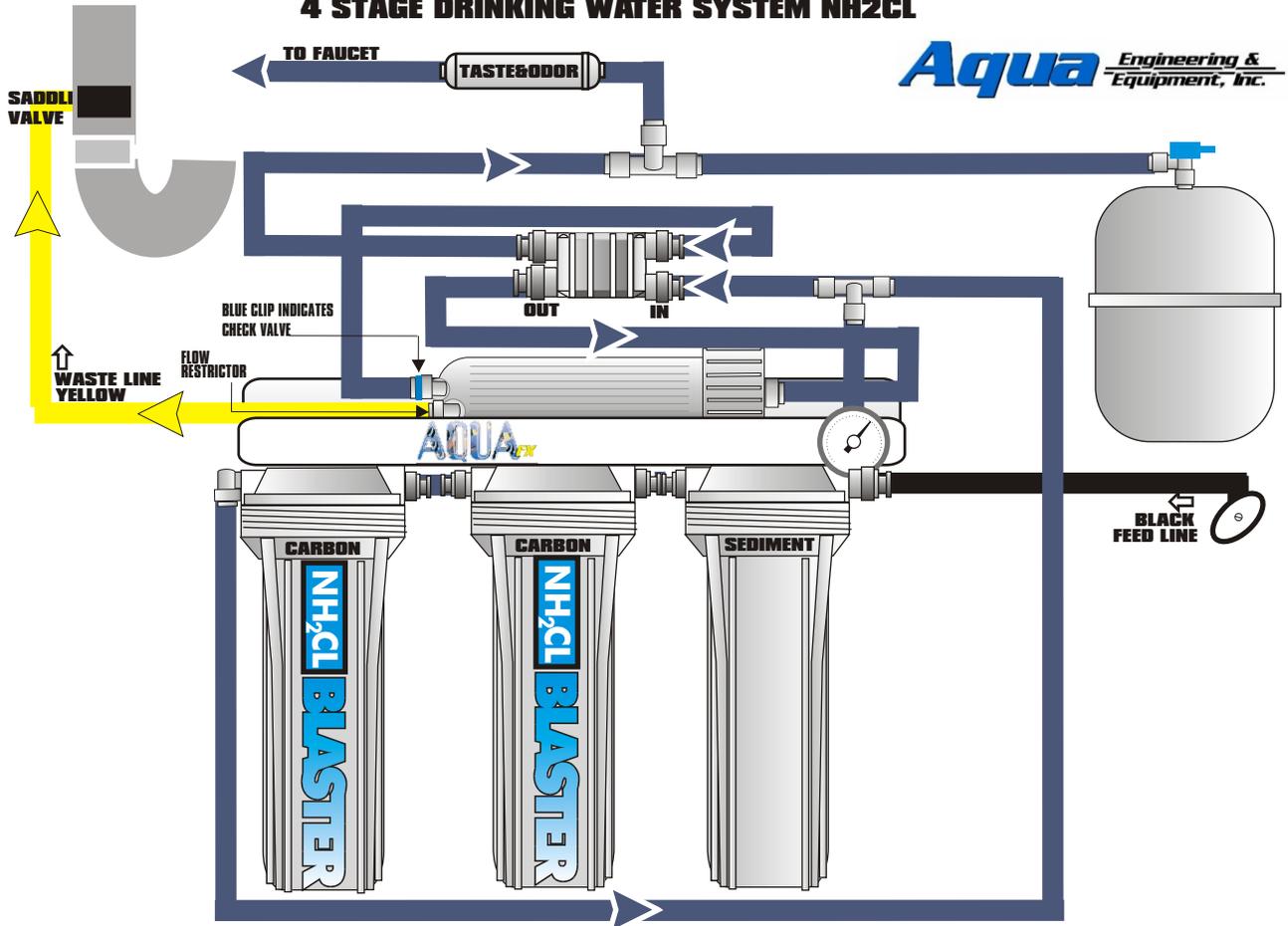
R.O. UNIT PLUMBING SCHEMATIC

For Genesis Series: 4 -stage, 5- stage, & 4 stage with NH₂CL BLASTER upgrade

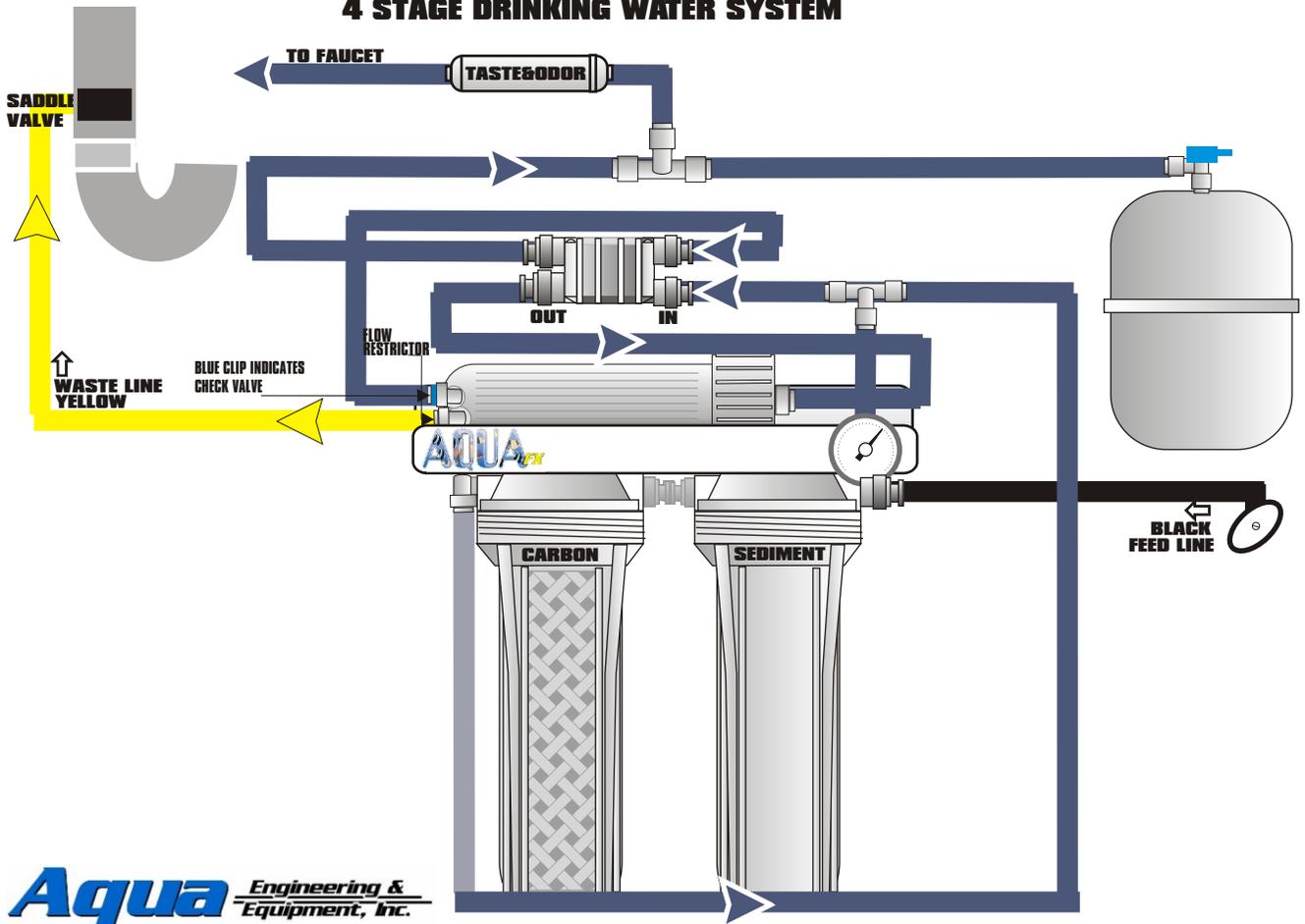


4 STAGE DRINKING WATER SYSTEM NH₂CL

Aqua Engineering & Equipment, Inc.



4 STAGE DRINKING WATER SYSTEM



Aqua Engineering & Equipment, Inc.

1

Preparing For Installation

1. This unit included a standard sink top faucet without an air gap. In localities where plumbing codes require installation of an air-gap, contact your local distributor to obtain a code approved drain line adapter.
2. The R.O. unit may be mounted to the side of the sink cabinet or set on the floor of the sink cabinet. It must be positioned to allow access for service and filter changes. The assembly should be relatively near the faucet to maximize flow rate.
3. The storage tank should be located where it can be removed if necessary. The storage tank may be placed in either the vertical or horizontal position without affecting the system performance. If there is insufficient space under the sink for placement, the tank may be located in an adjacent cupboard up to 50 ft. away.
4. The faucet should be positioned to allow free flow

2

Faucet Installation

CAUTION!! Extreme care must be taken in drilling the hole for the sink-top faucet. The surface material of most sinks is extremely hard and brittle and can be easily chipped or cracked. If you are uncomfortable performing the following procedure it is recommended that your local distributor be consulted for techniques and other assistance. The unit's manufacturer accepts no responsibility for sink top damage resulting from unit installation.

CAUTION!! Before grinding or drilling put on appropriate eye protection to protect eyes from porcelain or metal chips.

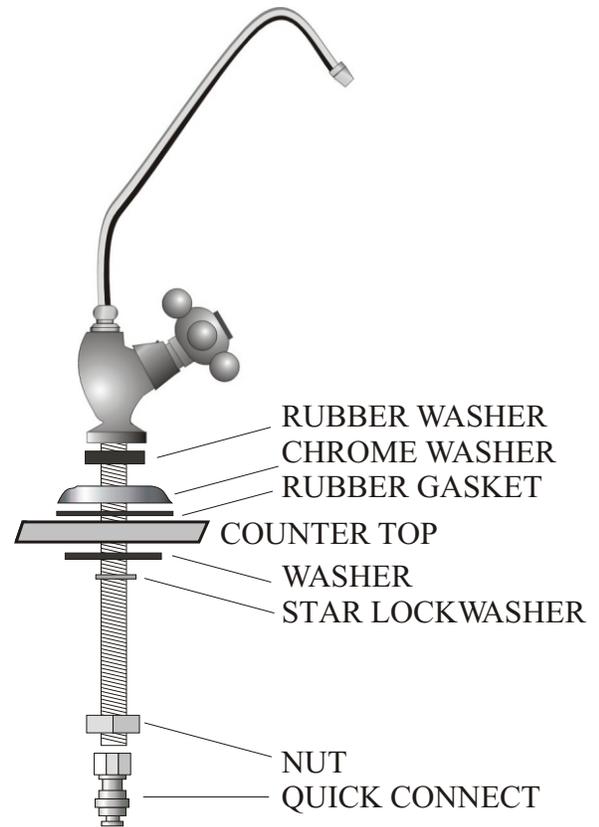
CAUTION!! Before grinding or drilling ensure that the drill is UL Laboratories approved and properly grounded to prevent electrical shock or possible death. **DO NOT USE DRILL WHILE USING OR STANDING IN WATER.**

1. Before drilling or grinding mask off the immediate area surrounding the grinding/drilling location preferably with duct tape or if duct tape is unavailable masking tape may be used. This procedure should help prevent scratching of the sink surface.
2. Remove everything from inside the sink and surrounding area. Place paper towels in the sink to catch the shavings from the grinding and drilling.
3. Using a variable speed (VS) drill with a carbide grinding burr, gently grind away enough porcelain or enamel to more than accommodate the 7/16" (11mm) drill bit. Approx. the size of a dime. Enough surface material must be removed to expose the base metal.

CAUTION!! Porcelain or enamel must be completely removed in the drilling area to prevent immediate dulling of drill bit.

1. Remove everything from under the sink.
2. Place newspaper or paper towels directly under the drilling location in order to catch the drill shavings.
3. Using the 1/4" (6mm) drill bit, drill a centering or pilot hole in the center of the desired faucet location. Note: This centering /pilot hole will make it easier for the 7/16" (11mm) drill bit to cut through the sink. Operate the drill slowly and carefully—Especially when the drill bit is about to penetrate the metal. Otherwise, damage to the sink may occur. Use lubricating oil to keep the drill bit cool while drilling.
4. Using the 7/16" (11mm) drill bit, drill completely through the sink. Operate the drill slowly and carefully—Especially when the drill bit is about to penetrate the metal. Otherwise, damage to sink may occur. Use lubricating oil to keep the drill bit cool while drilling.
5. Discard paper towels and newspaper used in sink and below sink. Be very careful not to drop any shavings in sink or on the floor as they will rust and stain surfaces very quickly.

CAUTION!! Do not over tighten the brass nut. Over tightening can cause damage to the sink or faucet assembly.



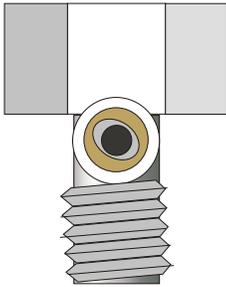
3 Installation of Feedwater Adapter

CAUTION!! For your safety and protection, do not use where water is microbiologically unsafe or of unknown quality. The water supply to your unit **MUST** be from COLD WATER LINE! Hot water will severely damage your RO system.

Turn off cold water supply to the sink using the supply valve located under the sink before installing your particular feed water adapter.

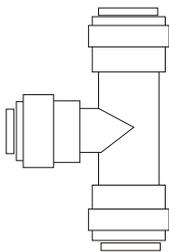
NOTE:

In some cases the supply valve may leak or may not work at all. If this happens turn off water at the main water shut off for the entire house. In extreme cases the house shut off valve does not work. If this happens shut the water off at the street and replace the defective valves immediately.



INLINE SINK ADAPTER

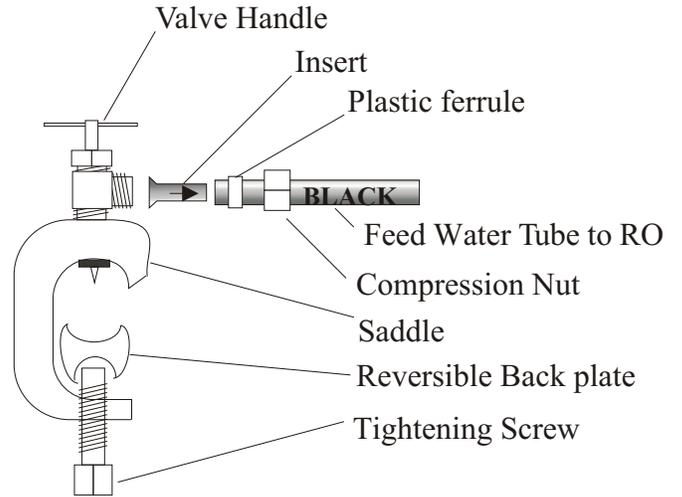
This adapter attaches between your sink faucet & the riser coming from your cold water shut-off



QUICK CONNECT “TEE”

This adapter attaches by cutting the 3/8” riser between your faucet & your cold water shut-off

Self Piercing Saddle Valve



NOTE

Self-piercer assembly can only be installed on smooth riser lines.

1. Clamp the self-piercer onto the riser tube. Fit the adjustable aluminum bracket to the size of your riser tube. Then tighten locking nut until clamp is firmly attached to riser line.

CAUTION!! Do not over tighten!! This will crush the riser tube and destroy it.

2. To pierce the line simply screw the T-handle valve clockwise until it stops.

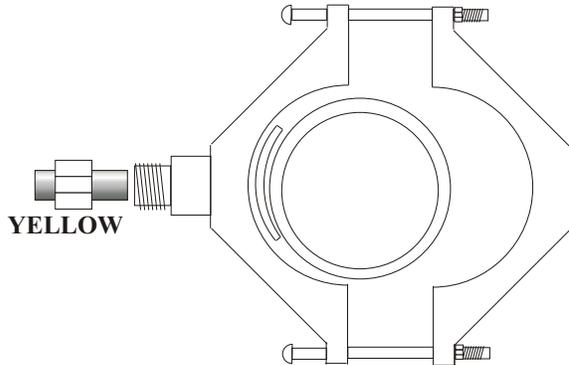
NOTE:

If hole in copper tube (cold water line) is not adequately pierced, this may prevent sufficient cold water supply to the system and reduce the performance of R.O. processing. In this event, open and close the self-piercing valve several times.

4

Installation of Drain Saddle

1. Open the package containing the drain saddle. See diagram F.



2. Peel the protective film off the sponge gasket. Apply gasket to inside of drain saddle, using care to align sponge gasket hole with drain port.
3. Position the drain saddle on the vertical and horizontal drainpipe from your sink. Position as far away from the garbage disposal as possible.

DANGER!! The drain saddle **MUST** be installed on the side of the P-trap that goes to the sink drain!! If installed on the wrong side of the P-trap sewer gas could enter the unit and cause damage.

- 4 Drill 1/4:" (6mm) hole into the drainpipe.

CAUTION!! Be very careful when drilling into drainpipe to not drill all the way through-stop after piercing the first wall of the pipe.

5. Mount the drain saddle. Align the drain saddle port with the 1/4" drilled hole using a small drill bit or other small straight object.
6. **GENTLY TIGHTEN** the two screws evenly on both sides of the clamp until the clamp is snug on the pipe.

5

Positioning the Tank

1. Wrap 4 to 5 wraps of Teflon tape around the tank threads at the top of the tank.
2. hand tighten the plastic shut off ball valve to tank stem.

CAUTION!! Hand tighten the valve only! Do Not Over tighten! If valve is over tightened it will crack and will leak.

3. The storage tank should be located where it can be removed if necessary. The storage tank may be placed in either the vertical or horizontal position without affecting the system performance. If there is insufficient space under the sink for placement, the tank may be located in an adjacent cupboard up to 50 ft. away.

6 R.O. Unit Placement and Mounting

1. Determine if mounting of the RO unit is necessary or desired. The RO unit does not need to be mounted on the wall of the cabinet if there is room for it to sit on floor. However, if mounted to the side of the cabinet it is easier to change the filters and does not take up floor space.

IMPORTANT!! Be careful not to kink any of the tubing on the RO unit. If tubing is kinked the tubing can rupture and leak.

2. Position the RO unit on the wall at the desired mounting location. Using the bracket holes on the back of the bracket, mark on the wall with a pencil where the screws need to be inserted.
3. Set the RO unit to the side.
4. Screw the two Philips head screws (supplies in the packet) into the wall at the marked positions.

NOTE: Let the screw heads protrude from the wall enough to hang the RO unit safely.

5. Mount the RO unit onto the screws.



CAUTION!! Do not use first tank of water from your system. The membrane contains a food grade preservative to protect it while in storage. This preservative is not harmful, however it does have an unpleasant taste. Therefore, do not use the first tank of water, which flushes the entire system removing any preservatives used during storage and preparing it to produce quality water.

7 Tubing Connections

Connect the **BLACK** feed water line from your feed waster adapter to the R.O. Unit. (This will be the first filter on the bottom right)

Connect the **YELLOW** line to the drain saddle

Connect the faucet to the single side of the taste & odor polisher using a piece of **BLUE** tube. (Small white filter on the top of the unit)

Connect the tank using a second piece of blue tube from the tank to the "Tee" on, or before the taste & odor polisher.

IMPORTANT: Be very careful not to kink any of the tubing on the RO unit. If tubing is kinked the tubing can rupture and leak.

To fully pressurize the system disconnect the feed water tubing (red) from the unit and white tubing from the tank. Hook the red feed water tubing directly to the tank. Ensure ball valve is open on tank. Turn on cold water supply. Fill tank for approx. 2 minutes. Turn off tank ball valve and cold water supply valve. Re-hook feed water tubing (red) to unit. Re-hook the white tubing to the tank. Do not re-open the tank valve at this time—damage to the system may occur.

With all connections complete and secure, turn on the cold water supply to the a RO unit.

After 5 minutes turn on the tank ball valve. This means that the valve handle is in line with the blue tubing.

Immediately check entire RO system and tank again for leaks. If you notice any leaks turn off the cold water supply and fix the leak.