

# OWNER'S INSTRUCTION MANUAL



## Reverse Osmosis Water Purification System

Systems that tested and certified by NSF

\*ERO-436-FT

\*ERO-450-FT

\*ERO-475-FT

\*ERO-536-FT

\*ERO-550-FT

\*ERO-575-FT

\*ERO-435-SH

\*ERO-450-SH

\*ERO-480-SH

\*ERO-535-SH

\*ERO-550-SH

\*ERO-580-SH

\*ERO-550P-SH



System tested and certified by NSF International against NSF/ANSI standard 58 for the reduction of the claims specified on the performance data sheet.

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## Read this before you start system installation:

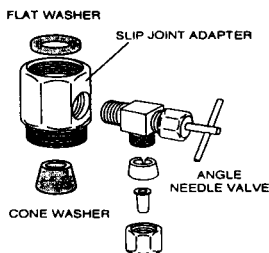
- Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts. Please note the influent of water characterizes such as chlorine, bacteria, pH, temperature, iron, turbidity, hardness, pressures, etc that may affect RO membrane polymers or other components performance in this water system.
- 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.
- Min. / Max. working pressure: 40~80 Psi  
Min. / Max. operation Temp.: 40~80 °F
- Manufacture warning: This system needs 24 hours flush time before use .

## INSTALLATION

Your Reverse Osmosis System has been thoroughly tested and inspected for leaks, product water quality, product water output and all the functions at our factory. Therefore, the system might have some water in it.

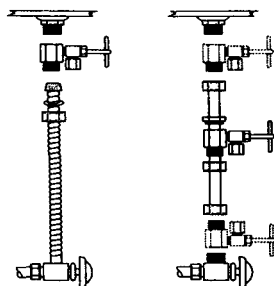
### TAPPING INTO COLD WATER LINE

1. Turn off the cold water supply to the sink faucet.
2. locate feed water adapter in the installation kit. The angle needle valve should be installed into slip joint adapter before assembly is connected to the feed water line. Use Teflon tape to prevent leaks.
3. Disconnect the cold water riser tube and install the slip joint adapter.



**A) FLEX LINE OR NYLON:** loosen nut and separate cold water riser tube from faucet shank. Gently bend riser tube so that slip joint fit 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.

**B) SOLID COPPER RISER TUBE:** Same procedure as flex tubing except you must cut a piece of the riser tube about 3/4" to 1" so the slip joint adapter can fit between faucet and riser tube. Use Teflon tape to prevent leaks.



TYPICAL FEED WATER CONNECTIONS

### DRILLING THE HOLE FOR FAUCET

The faucet should be positioned with aesthetics, function and convenience in mind. An ample flat is required for the faucet base so that it can be drawn down tight.

If space is not available on the upper sink area, the faucet could be positioned on the counter top at the edge of the sink. Be sure to watch for obstructions below, i.e., drawers, cabinet walls, support braces, etc. If the counter top is ceramic tile, the method for drilling the hole would be the same as for porcelain sink.

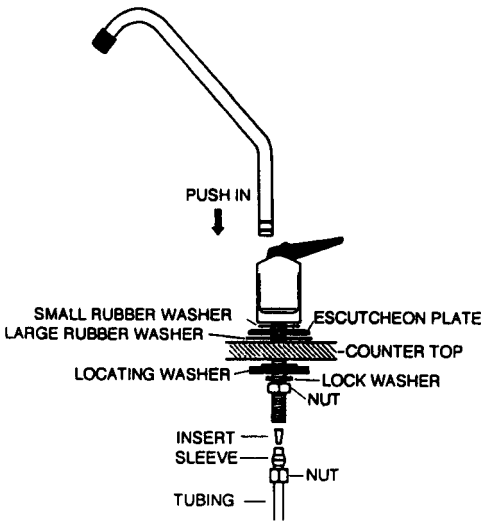
The sink drilling process, although not complicated, requires as a certain amount of caution and forethought. Porcelain sink can be chipped if care is not exercised when drilling the hole for faucet assembly.

### PORCELAIN ENAMEL SINK

A 1/2" hole is required. To drill the hole, begin with a small drill bit as guide hole, then use a 1/2" carbide tipped drill. When start to drill, keep a firm and steady downward pressure. Slowly begin through the porcelain portion of the sink so that chipping is cut down to a minimum. When the hole is achieved, clean the area of metal chips. (metal chips on porcelain will stain very fast)

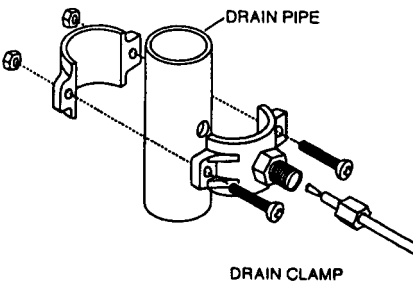
## STAINLESS STEEL SINK

Same as porcelain sink. When the hole is achieved, file away any severe roughness and clean the area.



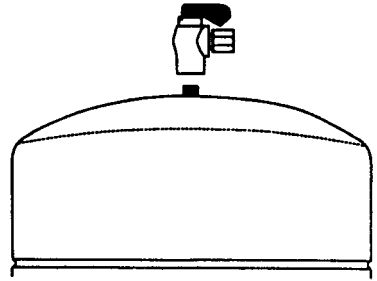
## MOUNTING THE DRAIN CLAMP

The drain clamp will fit most standard drain size of 1 1/4". Install the drain clamp above the P-trap and drill a 1/4" hole where the drain tube is to be connected. Tighten bolts and nuts evenly. Brackets should be parallel.



## MOUNTING THE BALL VALVE

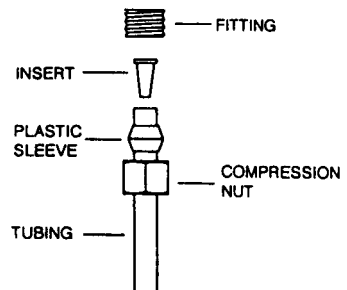
Make sure the ball valve is tight but not overtight. Use Teflon tape to prevent leaks.



## MOUNTING THE RO SYSTEM

(see installation diagram) make sure there is sufficient space under the counter for installation. Where space is not available for the storage tank, it may be placed in the next adjoining cabinet. Mounting holes are on the back of the RO system so it can be mounted on either side of the cabinet wall. The RO system should be mounted at least 3" from the cabinet floor and secure by using the provided screws.

## SYSTEM HOOK UP



ORANGE TUBE: connect from system to feed water adapter.

BLUE TUBE: connect from system on to threaded faucet shank.

## OPERATING THE RO SYSTEM

**YELLOW TUBE:** connect from system to the ball valve on the storage tank.

**BLACK TUBE:** connect from system to the drain clamp.

### REFRIGERATOR ICE MAKER OR WATER COOLER HOOK UP

The RO system can also supply water to a refrigerator's ice maker and water dispenser or water cooler up to 15 feet away.

1. Cut blue tubing and use "T" fitting connect to the blue tubing.

2. Run ¼" tubing from the "T" fitting to the refrigerator or water cooler.

**NOTE:** When the system is connect to a refrigerator or water cooler, it will requires longer than 2-3 hours of the system to become fully charged for use.

### SYSTEM START UP

1. Make sure all connections are secure.
2. Slowly open needle valve on feed water adapter counterclockwise allowing water to enter the system.
3. ( models with pump only) plug in the transformer to the wall outlet.
4. Turn ball valve on the storage tank to "OPEN" position.
5. Allow system to run while cleaning up tools. It will takes several minutes before the system begins to produce water and serveral hours to fill the storage tank.
6. Check all connections, including those inside the system for leaks and tighten fitting as necessary.

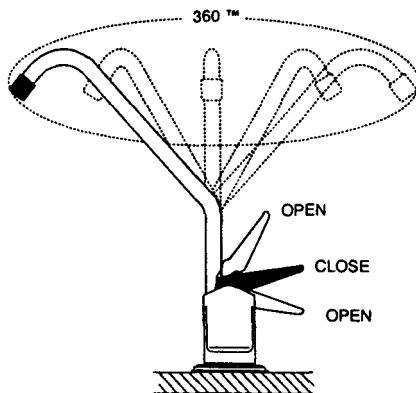
### NOTE:

- A) Due to the variations in plumbing configurations where the system will be ultimately being installed, we assume no liability for the determination of proper requirement necessary to meet your equirement.
- B) Please check with state and local laws and regulations.
- C) Air bubbles maybe present for the first few days after installations.
- D) Drain the first full tank of fresh water produced by the RO system.

- The RO system will perform better and last longer with heavier usage. We encourage you to use RO water to cook, make coffee, tea, mixed drink, etc.

- The system is designed for easy use and works automatically. It works when water in storage tank is low and shuts off when storage tank is full.

- To keep water in the storage tank fresh all the time, drain water once a month by opening the faucet until flow from spigot stops.



- Faucet spigot can be swiveled 360. It can be swiveled away if it is in your way.

- Faucet handle has two positions:

1. Life up, and it will stays open.
2. Push down, it will stays open until you release it.

**NOTE:** In case of emergency such as waterleaks, filter housing break, etc. Turn off the feed water valve and fix the problem.

The RO system is designed for easy maintenance. It is important that the filters be changed on a routine schedule. Failure to do as required will reduce the life of membrane and could void your warranty.

## DISINFECTION

At least once each year, your system should be sanitized. To do this, please follow these guidelines:

1. Turn off the feed water to the system.
2. Drain the storage tank.
3. Remove the used pre filter and replace with a new one.
4. Add 1 teaspoon of household liquid bleach into the filter housing and reassemble.
5. Turn on the feed water.
6. The liquid bleach will sanitize the entire system.
7. Drain the first two tanks full of water and replace all the filter cartridges.

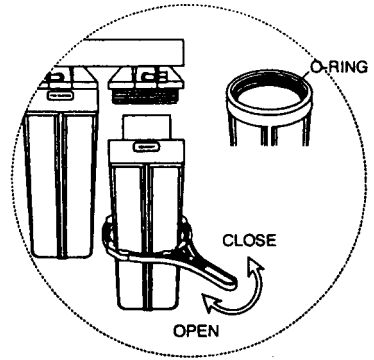
## APPROXIMATE FILTERS AND MEMBRANE LIFE

- STAGE ONE: sediment 6-12 months
- STAGE TWO: pre carbon 6-12 months
- STAGE THREE: carbon 12 months
- STAGE FOUR: membrane 2-3 years
- STAGE FIVE: post carbon 12 months
- BOOSTER PUMP (models with pump only)
- Replace diaphragm every 2-3 years

Membrane life can vary significantly depending on the condition of water supplied to the system. It is strongly recommended to have your RO system tested periodically or verify that it maintains the performance levels claimed by the manufacturer.

## CHANGING FILTER STAGE ONE, STAGE TWO, AND STAGE THREE:

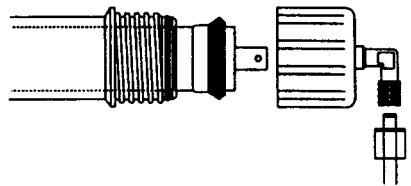
1. (Model with pump only) Unplug the transformer.
2. Shut off the feed water supply to the system.
3. Empty the storage tank by opening the RO faucet.



4. Using wrench to remove filter housing by turning it clockwise.
5. Remove and discard the used filter cartridge. Clean inside the filter housing if dirty and put in new cartridges.
6. Make sure that the O-Ring is in good condition and in its place.
7. Tighten filter housing securely to avoid any leaks.
8. Open the feed water supply to the system.
9. (Model with pump only) Plug in the transformer.
10. Drain the first full tank of product water after each replacement of filters.

## STAGE FOUR:

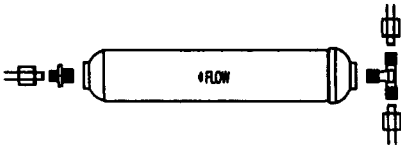
Same procedure as changing filters above and remove plastic compression nut from membrane housing cap. Remove membrane cap. Pull out the old membrane by using a pair of pliers. Clean inside if dirty. Insert a new membrane **ALL THE WAY IN**. Make sure O-Ring is in its place. Put back the cap and tighten the compression nut.



MEMBRANE REPLACEMENT

## STAGE FIVE:

Same as changing membrane on stage four. Remove fitting from both ends of the old filter cartridge. Wrap a few turns of Teflon tape on both fittings and put them into the new filter cartridge. Please note the <- FLOW sign.



## TROUBLE SHOOTING

### LEAKS

1. Filter housing: the O-Ring in the housing may not be in its groove, dirty or be stretched.
2. Fitting connections: check to see that the fitting is tighten it and if it cracked. If fitting is loose, tighten it and if it cracked, replace it.
3. Tubing: check to see if tubing is broken, cut, etc. replace if necessary.

### FAUCET

After a lengthy period of use, the internal of the faucet will wear out and it will begins to drip when in the closed position. A faucet repair kit is available.

### BOOSTER PUMP (MODELS WITH PUMP ONLY)

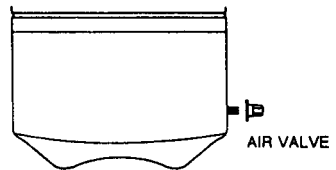
If the product water decreases and membrane is in good condition, the diaphragm in booster pump need replacement

### NO WATER OR SLOW FLOW

1. It will takes approximately 3-5 hours from startup to fully the storage tank and longer if connected to a refrigerator dispenser and/or ice maker.
2. Check the feed water supply valve to see that it is in the "OPEN" position.
3. The storage tank holds approximately 3 gallons of water. In heavy use this supply can be depleted, but the system will automatically fill the tank again. In the event that depletion becomes a recurring event,

and additional or larger storage tank maybe installed.

4. Check all tubing to verify proper connection. Make sure that there are no restrictions or kinks in the tubing connections.
5. Make sure that the storage tank valve is in the "OPEN" position.
6. Check the pre filter for clogging. A dirty filter cartridge will restrict flow to the system . Remember to change it regularly.
7. Low feed water pressure can cause low storage tank pressure and /or slow flow from the faucet. If low feed water pressure becomes a problem, a pressure booster pump may be installed.
8. If the storage tank is heavy with water but there is no water flow from the faucet, it has lost its surcharge and needs to be serviced or replaced. The air charge in the tank should be about 5 PSI when tank is empty.



9. Cold feed water will reduce the production capacity of membrane substantially in proportion to actual water temperature.

## WARNING

BEFORE INSTALL THIS RO SYSTEM, WE STRONGLY RECOMMEND YOU ( THE INSTALLER) TO CHECK YOUR INLET WATER PRESSURE. IF PRESSURE IS OVER 80 PSI, THEN A PRESSURE REGULATOR IS NEEDED. PLEASE CONSULT YOUR LOCAL DISTRIBUTOR TO PREVENT ANY DAMAGE CAUSE BY HIGH INLET WATER PRESSURE. THE MANUFACTURER MAY UNABLE TO CLAIM INSURANCE TO OVER THE LOST OF HOUSE PROPERTY.

### Performance Data Sheet

	ERO-535-SH	ERO-550-SH	ERO-580-SH	ERO-575-FT	ERO-550-FT	ERO-536-FT	ERO-550P-FT
* Recovery Rating(%)	22.90	17.54	20.94	17.91	16.66	18.89	20.06
Daily Production(GPD)	20.86	19.57	28.48	23.22	18.06	16.86	34.71
* Efficiency Rating	12.04	8.84	13.12	12.00	8.20	11.99	21.36
Over all % Rejection	97.90	97.00	95.70	84.70	83.30	82.80	90.60

\* Recovery rating means the percentage of the influent water to the membrane portion of the system that is available to the user as reverse osmosis treated water when the system is operated without a storage tank or when the storage tank is bypassed.

\* Efficiency rating means the percentage of the influent water to the system that is available to the user as reverse osmosis treated water under operating conditions that approximate typical daily usage.

#### NOTE:

- A) MFG. Reserves the right to change specifications without notice.
- B) That the reverse osmosis system contains a replaceable treatment component, critical for the effective reduction of total dissolved solids and that product water shall be tested periodically to verify that the system is performing properly.
- C) Do not use the system where water is microbiologically un safe or with water unknown quality.
- D) Do not allow system to freeze.
- E) Model numbers of replaceable treatment components are available at Puregen Technology Inc.
- F) **Manufacture Warranty:** Gplease refer to Puregen Technology Inc. warranty card enclose in the RO unit package.

	TDS Reduction	Cyst Reduction	Barium	Cadmium	Chromium Hexavalent	Chromium Trivalent	Copper	Cysts	Turbidity	Fluoride	Lead	Radium 226/228	Selenium
ERO-436-FT	X	X											
ERO-450-FT	X	X											
ERO-475-FT	X	X											
ERO-536-FT	X	X											
ERO-550-FT	X	X	X	X	X	X	X	X	X	X	X	X	X
ERO-575-FT	X	X											
ERO-550P-FT (WITH BOOSTER PUMP)	X	X	X	X	X	X	X	X	X	X	X	X	X
ERO-435-SH	X												
ERO-450-SH	X												
ERO-480-SH	X												
ERO-535-SH	X												
ERO-550-SH	X												
ERO-580-SH	X												
ERO-550P-SH (WITH BOOSTER PUMP)	X												

● This system has been tested according to NSF/ANSI 58 or reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 58.

Table-Performance data sheet requirements

Substance	Influent challenge concentration mg/L	Maximum permissible product water concentration mg/L
barium	10.0 ± 10%	2.0
cadmium	0.03 ± 10%	0.005
chromium(hexavalent)	0.3 ± 10%	0.1
chromium(trivalent)	0.3 ± 10%	0.1
copper	3.0 ± 10%	1.3
fluoride	8.0 ± 10%	1.5
lead	0.15 ± 10%	0.010
radium 226/228	25pCi/L ± 10%	5 pCi/L
selenium	0.10 ± 10%	0.005
total dissolved solids	750 ± 40mg/L	187
turbidity	11 ± 1NTU	0.5NTU

Table-Performance data sheet performance claims for percent reduction

Substance	Influent challenge concentration	Reduction requirement
cyst	minimum 50,000/mL	99.95%



# LIMITED WARRANTY

## I. WHAT YOUR WARRANTY COVERS

Your PureGen Reverse Osmosis System is warranted to the original owner to be free of defects in material and workmanship from the date of purchase for one year. PureGen will, within 1 year of purchase, replace the entire unit (excluding the replaceable filters) at no charge. The replaceable filters are warranted for defects in material and workmanship only. Service life of replaceable filters varies with local water and is thus not warranted.

## II. CONDITIONS OF WARRANTY

System must be maintained and serviced with PureGen Reverse Osmosis system approved replacement parts and filters, PureGen company's liability is limited to the cost of repair or replacement (at our option) of any defective part; it does not include incidental or consequential damages of any kind. System must be installed by a licensed water treatment professional.

## III. WHAT PUREGEN DOES NOT WARRANT

Warranty is void if product failure or damage results from freezing, neglect, misapplication, fouling with sediment, or failure to operate the system in accordance with the manufacturers recommended procedures and guidelines:

- *The Reverse Osmosis System must be hooked up to a potable municipal cold water supply*
- *The hardness of the water cannot exceed 7 grains per gallon or 120 ppm*
- *The water pressure must be between 35 and 70 PSI*
- *Incoming water to the RO cannot exceed 90°F*
- *Incoming TDS/Total Dissolved Solids not to exceed 800 ppm*

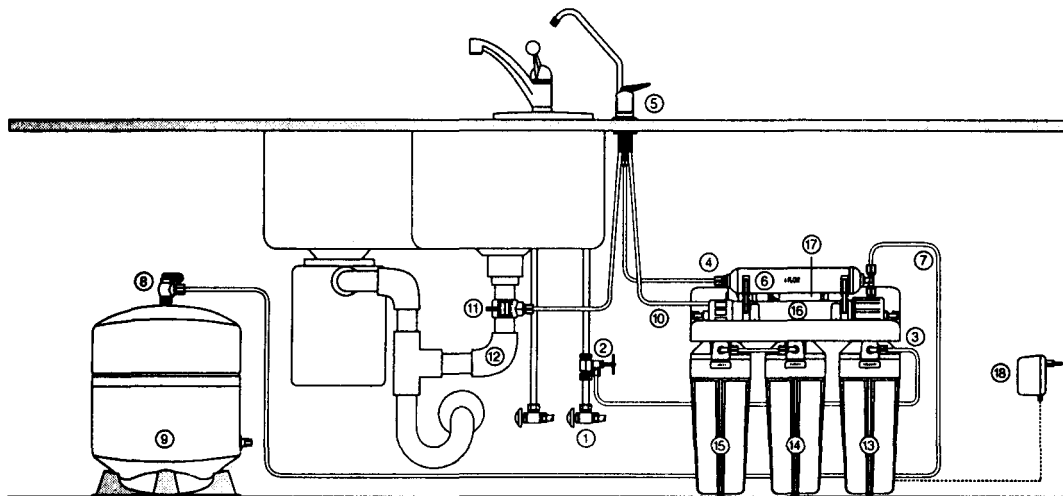
## IV. OBTAINING WARRANTY SERVICE

For warranty service, simply contact PureGen or your authorized dealers. Be sure to show proof of date of original purchase.

## V. LIMITATIONS AND EXCLUSIONS

PUREGEN WILL NOT BE RESPONSIBLE FOR ANY IMPLIED WARRANTIES. PUREGEN 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 ITS FAILURE TO FUNCTION PROPERLY. THIS EQUIPMENT.

# INSTALLATION DIAGRAM REVERSE OSMOSIS WATER PURIFICATION SYSTEM



① Cold water shou off valve

② Feed water adapter

③ Orange tubing: to feed water adapter

④ Blue tubing: to faucet

⑤ Faucet

⑥ Post carbon GAC

⑦ Yellow tubing: to storage tank

⑧ Tank ball valve

⑨ Storage tank

⑩ Black tubing: to drain

⑪ Drain saddle

⑫ Drain line

⑬ Sediment filter 5 microns

⑭ Pre carbon filter

⑮ Carbon filter BLOCK

⑯ Memberane

⑰ Booster pump ( Models with Pump only )

⑱ Transformer ( Models with pump only )

MODLE RO5-35P SHOWN  
WITH OPTIONAL AIR GAP FAUCET