FILTER MAINTENANCE AND CHANGE INSTRUCTIONS:

This recommendation is intended for maximum efficiency of RO water production by your system.

1, <u>Filter Maintenance</u>

- a, It is OK to put pre & post filters of the shelf for several years.
- b, Keep the sealed, non-opened filter in an air tight container to prevent it from absorbing contaminants from the air.

2, <u>Membrane Maintenance</u>

- a, The dry packed membrane usually has a two-year shelf life. To prolong the shelf life, we recommend you keep the non-opened dry membrane in the refrigerator.
- b, Once used, we recommend you run the RO system every day, at least 10-15 minutes (about 1 gallon or 4 litres drinking water.) This helps to maintain the membrane performance.
- c, If the RO system is not used for a few weeks, drain the storage tank. To bring the unit into service fill the tank and drain it twice, to allow to refill. Your RO system will then be ready to reuse.
- 3, <u>Filter & Membrane Change Procedures:</u>
- a, Shut off the water supply.
- b, Turn off the tank ball valve by turning the handle through 90 degrees.
- c, Open the tap fully for continuous flow.
- d, Slide the housing wrench in (bowl spanner) over the filter bowl. Use one hand to hold the system and the other hand to turn the wrench clockwise to separate the head from the bowl.

<u>NOTE:</u> IF IT IS TOO TIGHT TO OPEN THE HOUSING YOU MAY TRY TO UNPLUG THE FITTING BETWEEN THE RED TUBING AND THE SYSTEMS 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. The **Carbon Prefilter** can be installed either way up. The **blue GAC post filter** must be installed the correct way up with the white tapered cap to the top. Make sure the O-ring is in place and smear a little petroleum jelly on the O-ring. Replace the filter bowl and tighten by turning the bowl anti-clockwise.
- f, Repeat previous step for all other filter changes. (See separate instructions for membrane change below.)
- g, Turn on the water supply and make sure there are no leaks.
- h, Let the water drip from the tap for about 10 minutes. If the water flow is less than 1 cup (8 oz or 240 ml) per minute, it may be a signal to change the membrane.

i, <u>Membrane Change Procedure:</u>

Shut off water supply.

Unscrew the cap of the membrane housing.

Slide out the used membrane and discard. (You may need thin nosed pliers to grip the membrane spigot.) Insert the new membrane with the 2 O-rings into housing first with the black brine seal at the open end of the membrane housing.

Be sure it is fully seated into bottom end.

Screw cap back on to the membrane housing, make sure O-ring is still in place.

Turn on water supply & check for leaks.

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

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CLEANING PROCEDURES:

- 1, System Cleaning Procedures
- Shut off the source water supply to the RO System a.
- b. Open the RO System tap and de-pressurise the RO System and Storage Tank
- Remove the pre-filter cartridge, post-filter cartridge and RO membrane. Discard or prepare for cleaning. с, If the RO membrane element is to be reused, disinfectant solution should be introduced into the permeate tube outlet sufficient to remove bio film in this vulnerable area, before reinserting the membrane into the housing.
- d, 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 the o-ring grooves thoroughly. Remove the existing o-rings. Discard o-rings or prepare for cleaning.
- Rinse off all housing piece with clean water to remove the soap. e.
- f, Replace o-rings, and lubricate with petroleum jelly.
- Pour a small amount of disinfection solution (as per manufacturers instructions), g, into each of the clean housings and replace housing on the RO System.
- Disconnect RO storage tank from the system. h.
- 2, **RO Storage Tank Cleaning Procedures**

Recommended items:

- * Tank sanitiser feeder or small filter housing with fittings and tubing (see Fig. 1)
- * Disinfectant solution (E.g., Milton Sterilising Fluid)
- * Pressure gauge and air pump.
- The tank should be empty. Check the air pre charge pressure with an accurate gauge (low pressure type a, 0-12 lbs). The average tank pressure should be 8-10psi (when the tank is empty).
- Fill the tank sanitiser feed with the recommended disinfectant dosage, and connect the feeder to the water b, supply and the RO storage tank.
- с, Turn on the 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. If the tank has not been sanitised for over a year, leave the solution in for 20 to 30 minutes. Turn off the water supply valve and the RO storage tank valve. Disconnect the sanitiser feeder, and connect the RO storage tank to the RO unit (the tank ball valve should remain closed).
- Open the feed water valve and open the RO System tap until water flows freely from the spout. Close the e, tap. Hold the disinfectant solution in the RO System, including the tubing and tap, for a minimum of 10 minutes. Open the tank ball valve.
- f, Shut off the feed water valve. Let water flow freely from the tap for three minutes. Shut off the water at the source water supply with the RO System tap open.
- When the flow of water has stopped at the RO System tap, remove the filter housing bowls and membrane g, housing from the RO System. Replace the filters and membrane according to the service life.
- h, Replace the housings on the RO System. Open the source water valve and allow the water to flow from the RO System Tap.

BECAUSE SOME OF THE DISINFECTANT MAY STILL BE IN THE SYSTEM, THE SYSTEM SHOULD BE FLUSHED PRIOR TO USING THE WATER FOR 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.

