



HYDROPONICS REVERSE OSMOSIS WATER FILTRATION SYSTEM



User Manual

Description:

Our Hydroponic System is a customized Reverse Osmosis water filter that is capable of reducing up to 99% of most contaminants. This system is designed for use with hydroponic or horticultural applications. This system is built to give the maximum amount of flow from the membrane while sending less waste water to the drain, compared to similar RO filters. Please read the following setup and maintenance guide to get the maximum results from your filter.

Precautions:

- Do not install the unit where the source/inlet pressure may be more than 80 psi or there are excessive water hammer/spike problems. Keep out of direct sunlight or high intensity lights, which degrade the housing and fittings over time.
- Do not drop or place heavy objects on top of unit.
- When replacing filter cartridges use the filter wrench to remove housing. Do not use the wrench to tighten the housings. Hand tighten the housings only. Take care not to over tighten.
- Do not install where leakage or failure may cause damage to property.

OPERATING REQUIREMENTS:

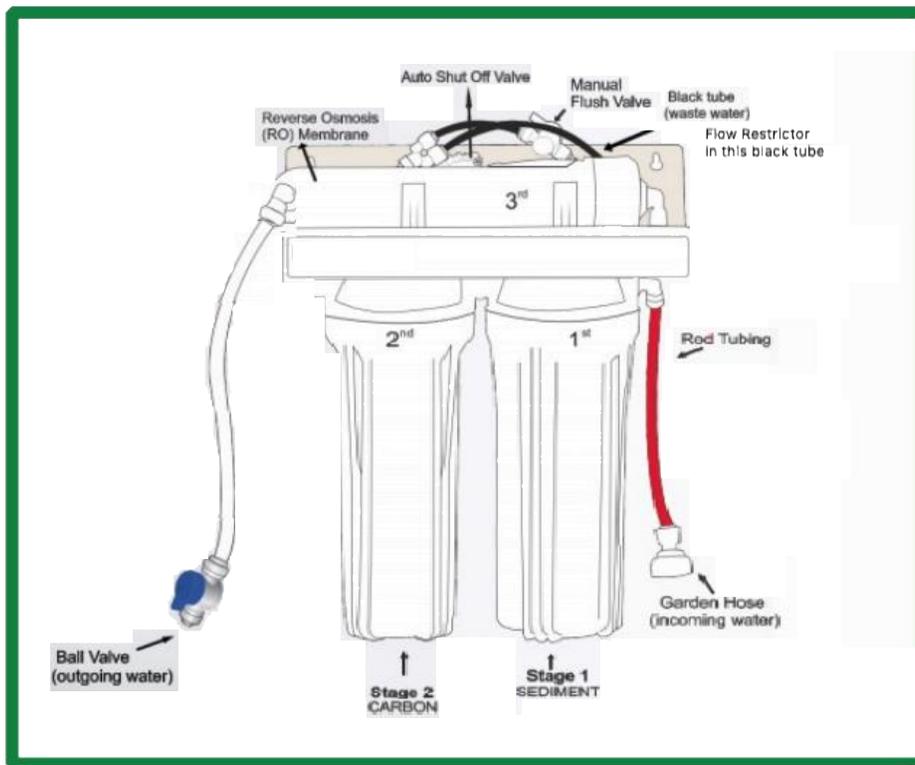
Minimum water pressure: 40 PSI, Maximum water pressure: 80 PSI, Optimal water temperature: 77°F (25°C), Maximum water temperature: 105°F (40.5°C) Typical rejection rate: 1:1.5

Filtration Stages:

1st Stage Sediment Block, 2nd Stage Carbon Block, 3rd Stage Reverse Osmosis Membrane

- 1st Stage: **Sediment Filter** - High-Capacity Polypropylene Sediment Filter (Nominal 5 Micron Rating) - Removes dust, particles, and rust. Protects and extends the life of the reverse osmosis membrane and system.
- 2nd Stage: **Coconut Carbon Block**: Gets rid of unpleasant chlorine, tastes, odors, cloudiness and colors. Also removes VOCs and other common chemicals from the water
- 3rd Stage: **Reverse Osmosis Membrane**: Reduces or removes Sodium, Sulfate, Calcium, Potassium, Nitrate, Iron, Zinc, Mercury, Selenium, Phosphate, Lead, Arsenic, Magnesium, Nickel, Fluoride, Manganese, Cadmium, Barium and Cyanide.

These are Standard 2.5" x 9.75" Reverse Osmosis Filters for 10" RO Housing.



- Upon initial startup of system, slowly turn the source water on until both the carbon and sediment filters have water in the housings. Next, open source water up all the way (do not exceed 80 psi). Flush the system for 30-45 minutes when the system is new and/or when you replace your membrane. This will flush out the food grade preservatives in the membrane.
- The first time you run water through the system please turn the inline shut-off valve to the 'off' position as soon as you see water flow from the blue purified water line. This will pressurize the system and is a good way to make sure that all fittings and connections are secured properly and that there are no leaks. It is also a good way to make sure that the automatic shut-off is working properly, meaning the black drain line is shutting off.
- Color Coding of Tubing:
 - Red Line: Water Intake from Garden Hose Connection
 - Black Line: Waste Water (can be slipped down a drain) – DO NOT USE THIS WATER
 - Blue/White/Yellow Line: Purified Water

Please Note:

It may take up to 24 hours total of running the system for the PPM & pH of the purified water to stabilize

Filter Change and Maintenance:

It is essential that you change your pre-filters regularly.

The carbon filter has a rated life of approximately 1,250 gallons of purified water produced.

We advise changing the sediment filter at least once a year or sooner if you have extremely dirty water.

Dirt can become embedded and cause slower flow rates. Use the included filter wrench to loosen the clear filter housing. Be careful not to overtighten when reinstalling. It is preferable to hand tighten filter housings after a filter change.

Membrane:

The Reverse Osmosis membranes have a useful life of 6 months to 2 years depending on how high your source water PPM reading is, if there are high levels of certain contaminants (such as iron & silica), how much water you produce and regular prefilter maintenance

If your water is highly contaminated, then you may need to change the membranes more often. If your water is relatively clean and you keep up with your pre-filter changes it may last you 2 years+.

There are two indications as to when to change your membranes.

1) test the RO and source/inlet water to see what percentage of the inlet water's PPM the RO System is filtering out (rejection %). You should see approximately 98% of the inlet PPM's being removed when the membrane is new. If the rejection % falls under an acceptable level (typically 90%) it's time to change the membrane.

2) When the flow rate of the product water slows down significantly. This can also happen if the pre-filters are clogged. But if you have changed your prefilters and the product water still flows slowly, then it can indicate that the membrane should be replaced.