

# Memo

Type of product	FS-8000		
Date of purchase			
Name		Tel	
Address			

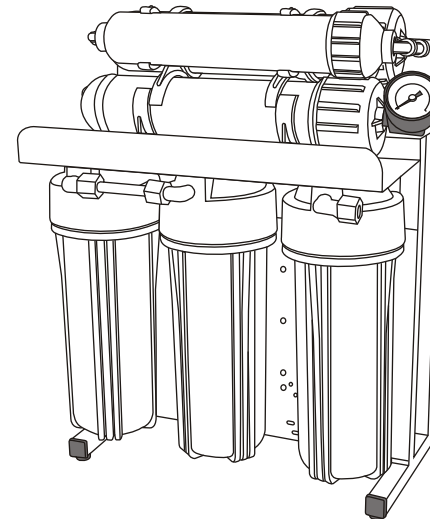


## REVERSE OSMOSIS SYSTEM

# FS-8000

## USER'S MANUAL

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- 02 What is Reverse Osmosis
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**Thank you very much for selecting Pure-Pro Water Corp.**  
In order to bring the best use of your system, please read the user's manual carefully before installation and follow the regulations.



## FAQ

pump can be added to increase the operating pressure to the ideal range. (click here for more information about our SuperPump).

The temperature of the source water should ideally be in the 70° to 77° F range for optimal performance. A temperature of 50° F, or lower, will reduce the output of the unit by 50% or more. Either hot or a mix of hot/cold tap water should never be used for the source water due to the minerals that are added to the water from most water heaters.

Finally, the amount of total dissolved solids in the source water can reduce the amount of water produced by a RO unit. The PurePro units are rated to treat water with a dissolved solid amount of 500 ppm or less. If your source water contains a higher concentration, it would be wise to install a mechanical pre-filter in line prior to the unit. These filters are available at most hardware stores. Because of the requirements of reverse osmosis units, it is wise to purchase a unit that is rated above the gallons per day that your needs require.

**Q: Is there any way I can check the purity of the water my reverse osmosis system is producing? Also, how often do I have to change the membrane?**

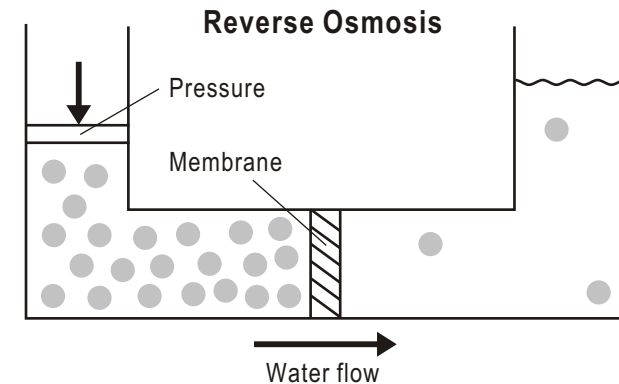
Reverse osmosis (RO) systems remove most of the impurities (heavy metals, minerals, nitrates, phosphates, and so on) in tap water, giving you pure, healthy water for your aquarium. If your RO product water is pure, your aquarium should have minimal algae growth, a steady pH level, and low phosphate and nitrate levels. If these conditions change, check your RO product water purity using one of the following methods:

- Use a conductivity meter (TDS meter), which will accurately measure the amount of impurities in the RO product water. Whereas regular tap water will have a reading in the range of 300-500, purified water should be in the range of 5-25.
- Measure the general hardness, alkalinity, and pH of the water with a test kit. Purified water will have a general hardness of 0 GH, alkalinity of 0 dKH, and a pH of 7.0. If your test values vary from those described above, you may need to replace the membrane.

The lifespan of the RO membrane depends upon the quality of your source water. Under most conditions, an RO membrane will produce about 25,000 gallons of purified water and last 2-3 years. However, high concentrations of certain minerals such as calcium, iron, and magnesium will shorten the lifespan of the membrane.

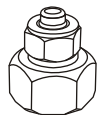
## What is reverse osmosis

Reverse osmosis was originally designed to make sea water drinkable for the navy. It is ideal for anyone on a low sodium diet. An R.O. membrane has a pore size much smaller than bacteria virus, or the cryptosporidium parasite. When functioning properly it will remove all microorganisms from tap water and produce sterile water. Reverse osmosis is the reversal of the natural flow of osmosis. In a water purification system, the goal is not to dilute the salt solution, but to separate the pure water from the salt and other contaminants. When the natural osmotic flow is reversed, water from the salt solution is forced to pass through the membrane in the opposite direction by application of pressure—thus the term REVERSE OSMOSIS. Through this process, we are able to produce pure water by screening out the salts and other contaminants.



# Components & Selections

## Components



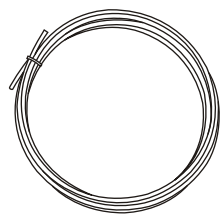
Feed water connector



Feed water connector head



Housing wrench

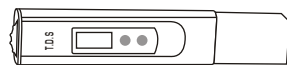


Three color coded tubing

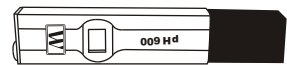
## Selections



UV water sterilizer



TDS meter



PH

FS-8000 Aquarium Direct Flow RO/ DI System

# FAQ

## Q: Why do I need RO water?

Tap water often contains impurities that can cause problems when added to an aquarium. These include phosphate, nitrate, chlorine, and various heavy metals. High levels of phosphate and nitrate fuel aggressive algae growth, and copper, often present in tap water due to leaching from pipes, is highly toxic to invertebrates. Because RO filters remove practically all of these impurities, they are becoming more popular among aquarists, particularly marine hobbyists.

## Q: What is the difference between reverse osmosis and deionization?

Reverse osmosis and deionization (DI) perform the same task of removing impurities from tap water. However, DI purifies water utilizing the principle of ion exchange to remove impurities and replaces them with pure water. In most instances, an RO unit serves as a well-rounded filtration method that removes the majority of impurities; coupled with a post deionization filter, the resulting water is 99.9% pure. Many RO units are available as a combined RO/DI unit or are able to accommodate an add-on DI unit that simply attaches to your existing RO unit.

## Q: How do I know if my reverse osmosis water is pure?

If your RO product water is pure, your aquarium should have minimal algae growth, a steady pH level, and low phosphate and nitrate levels. You can check the purity of your RO product water using a conductivity meter, TDS meter, or by measuring the general hardness and alkalinity of the water with a test kit. Purified water will have a general hardness of 0 GH and alkalinity of 0 dKH. If your test values vary from those described above, you may need to replace cartridges and/or the RO membrane.

## Q: I've recently purchased 80 gallon per day reverse osmosis unit and it is only producing 50 gallons per day. Is this unit defective? if it isn't, why is it not producing the rated 80 gallons per day?

It's not likely that you received a defective unit. But there are a few factors that effect the output of reverse osmosis units. These factors include; the source water pressure, temperature, and the amount of total dissolved solids within the source water.

The ideal operating pressure for a RO (reverse osmosis) unit is 65 psi (pounds per square inch). An operating pressure of 45 psi will reduce the output of a unit by 50%. There are pressure gauges available to monitor the operating pressure of the system. If the operating pressure is too low, an RO pressure boosting

FS-8000 Aquarium Direct Flow RO/ DI System




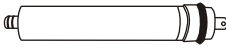
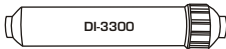
## Operation regulation

- A. With everything connected, turn on the water check for leaks.
- B. Within a few minutes (up to 15) the water will start to run from the water outlet .
- C. Let the water run for at least 30 minutes. This flushes the carbon filters on first time use.
- D. The system is now ready for use.
- E. Change filters regularly every 3 to 12 months and have the membrane checked annually.

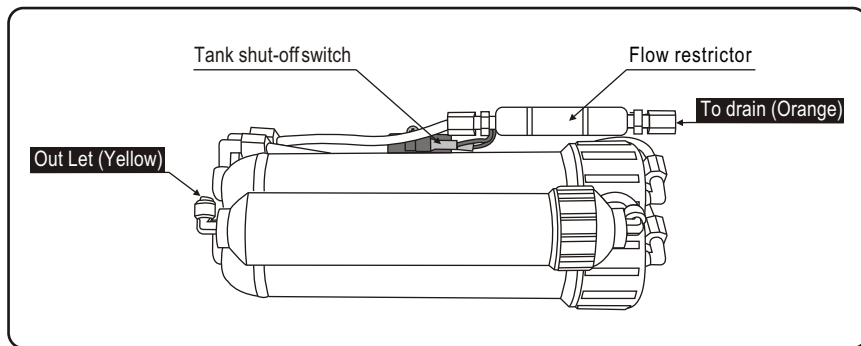
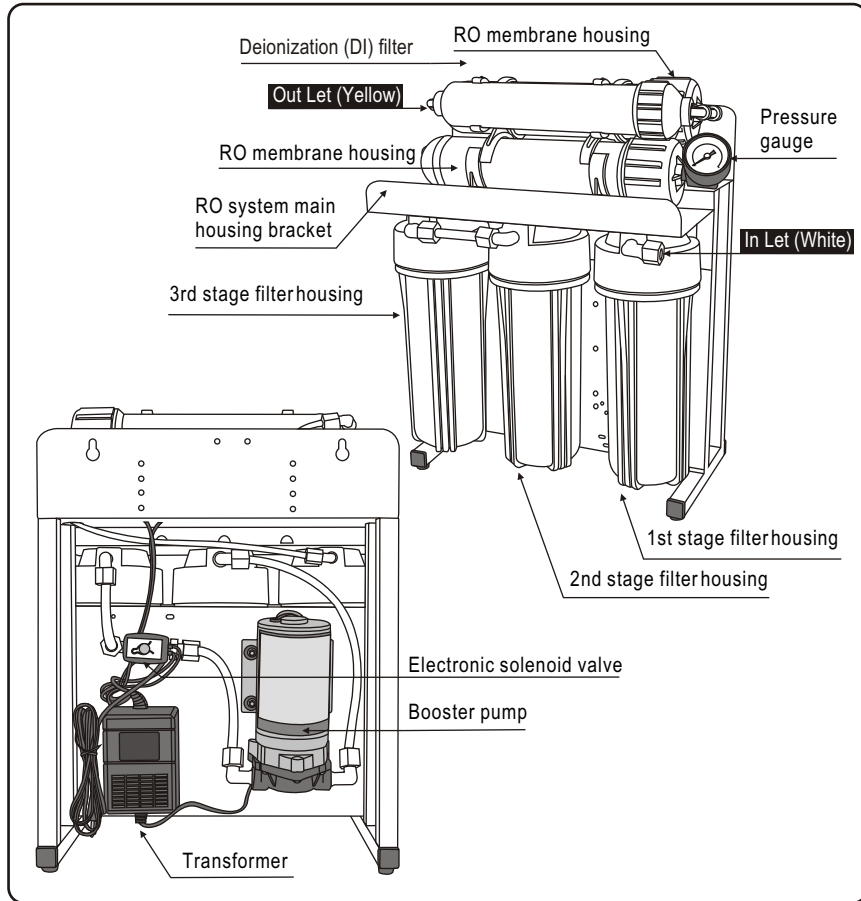
### Caution

1. Do not use hot water (over 45°C)!
2. Do not freeze the machine!
3. Switch off electricity and water source if away for more than 5 days, and drain out pure water.

## Cartridge Filters

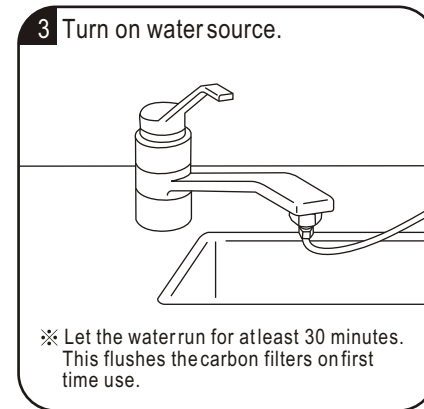
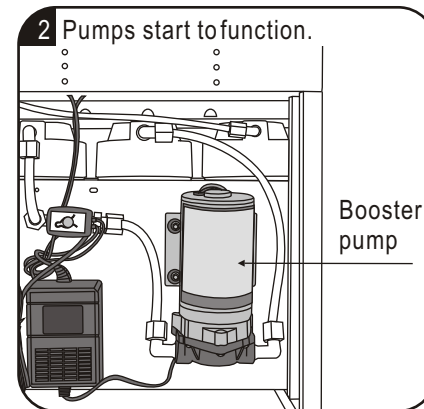
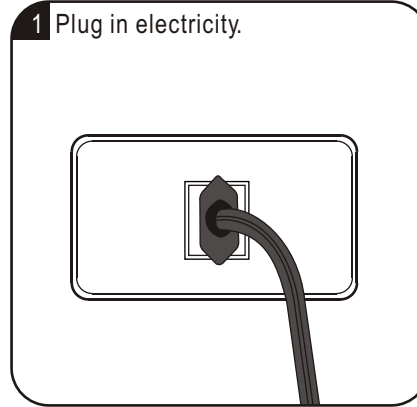
Cartridge Filters	Filter Description	Service Life
<p><b>Stage 1</b> 5 micron Sediment Filter</p> 	<p>This 5micron sediment filter is made of 100% pure polypropylene fibers. High capacity filter removes dusts, particles and rusts.</p>	3 Months
<p><b>Stage 2</b> Granular Activated Carbon Filter</p> 	<p>This granular activated carbon filter is composed of high-performance activated carbon that remove free chlorine, odor, organic contaminants, pesticides and chemicals that contributed to taste and odor.</p>	3 Months
<p><b>Stage 3</b> Block Carbon Filter</p> 	<p>This block carbon filter is composed of high-performance carbon that removes free chlorine, odor, organic contaminants, pesticides and chemicals that contributed to taste and odor.</p>	3 Months
<p><b>Stage 4~5</b> 200GPD TFC membrane 2 pcs</p> 	<p>200 Gallon Per Day Membranes are now available in residential sizes. Designed to perform in operating conditions similar to most standard under-the-counter home RO units, the TW30-1812-200 forms a tight fit in most standard residential housings.</p>	1 Year
<p><b>Stage 6</b> DI Filter</p> 	<p>Produce 99.99% pure water by simply attaching this convenient deionization filter with RO unit. Convenient post RO filtration DI unit (RO / DI unit) provides crucial supplemental filtration to remove most impurities for pure polished product water. Excellent in areas with hard water. Produce 99.99% pure water. It will give you 0 ppm TDS, Conductivity attainable less than 0.1uS/cm or resistivity of close to 18 meg.ohm</p>	1 Year

# The parts of FS-8000



FS-8000 Aquarium Direct Flow RO / DI System

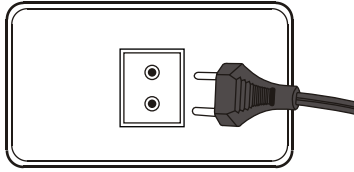
# Operation regulation



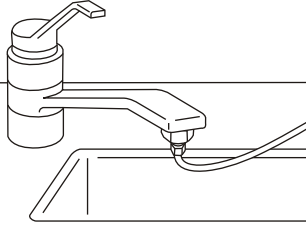
FS-8000 Aquarium Direct Flow RO / DI System

## Change membrane

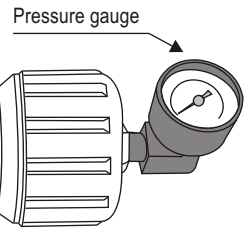
1 Unplug electricity.



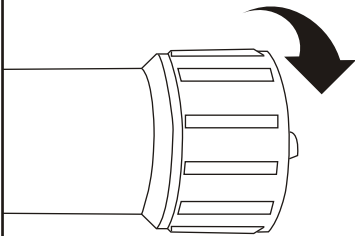
2 Turn off water source.



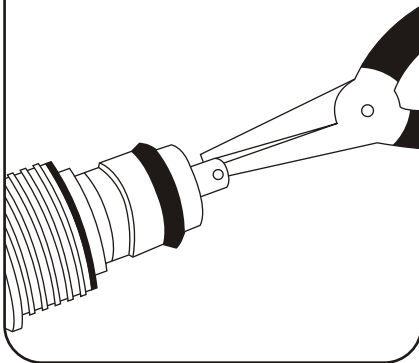
3 Loosen the pressure gauge.



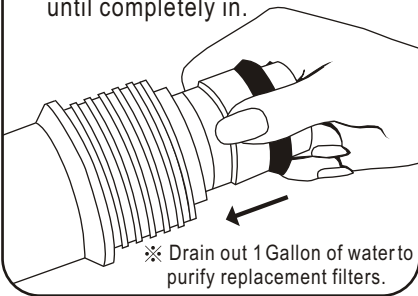
4 Remove the membrane housing cap anticlockwise.



5 Remove the membrane by a pincer.



6 Install the membrane by carefully pushing the spigot end into the socket at the far end of the housing until completely in.

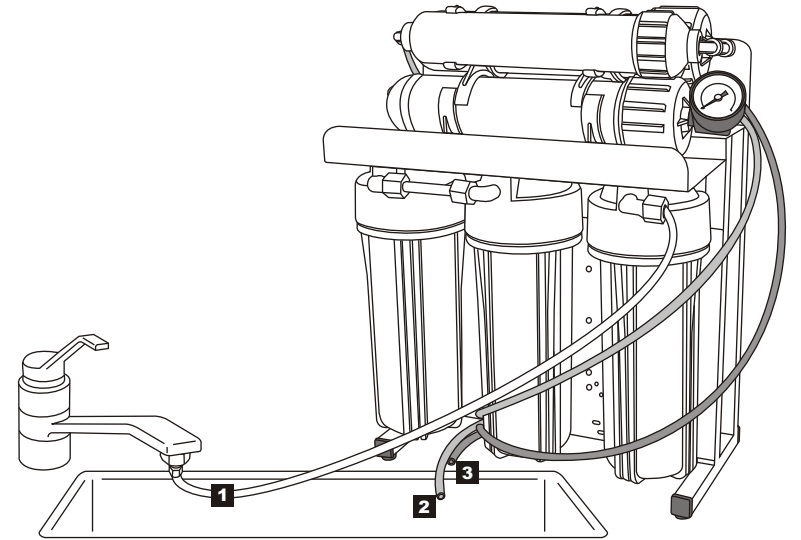


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**PUREPRO**  
DRINKING WATER SYSTEM

## Tubing connection diagram (1)

- 1 In Let (White)
- 2 Out Let (Yellow)
- 3 Drain (Orange)

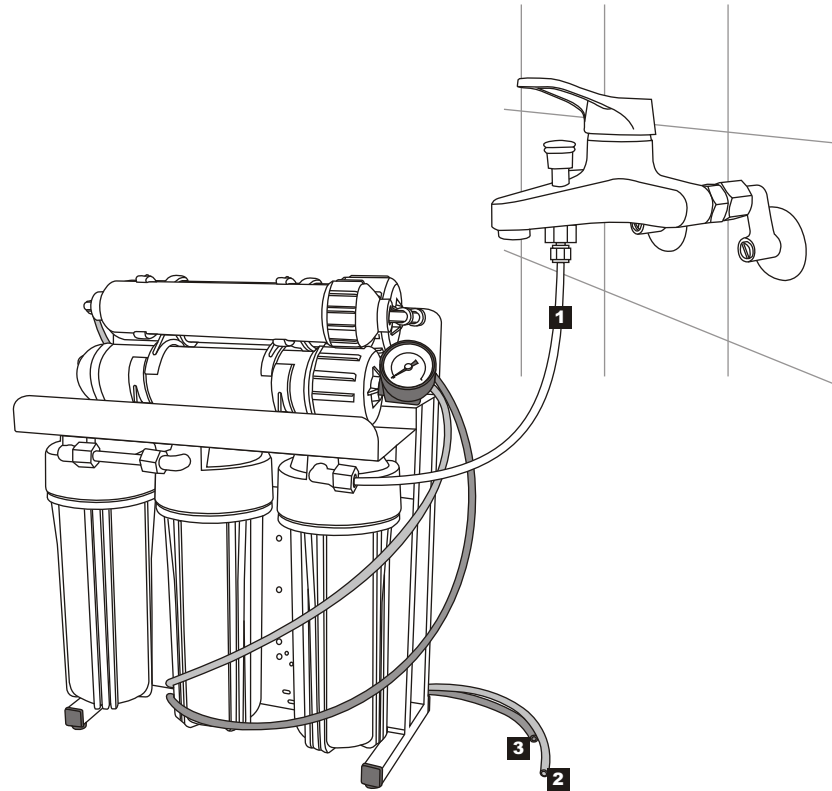


FS-8000 Aquarium Direct Flow RO/ DI System

**PUREPRO**  
DRINKING WATER SYSTEM

# Tubing connection diagram (2)

- 1** In Let (White)
- 2** Out Let (Yellow)
- 3** Drain (Orange)



PURE-PRO 07 REVERSE OSMOSIS SYSTEM

# Change filters

**1** Have a half-circle housing wrench ready.

**2** Unplug electricity.

**3** Turn off water source.

**4** Open housings clockwise with a wrench.

**5** Put the replacement filters in the housings and double O' ring.

**6** Loose the quick fitting.

**7** Remove the used filters from clips and replace with new ones.

PURE-PRO 08 REVERSE OSMOSIS SYSTEM