

# OPTIMA

## The Optima Vision Series Installation Guide

Thank you for choosing Purely H2O for your aquarium water treatment needs. Our line of water treatment systems are built using the absolute finest aquarium safe components and filter medias. All replacement components and accessories for your new system can be found on our website at [www.purelyh2o.com](http://www.purelyh2o.com) or at your local authorized dealer. If you are unsure of where to find a local dealer or need to find a part for your system please call us toll free at (877) 803-7462. Please take some time to read this manual before installing your new system. If you have questions regarding any information that is not included in this manual please call us at (877) 803-7462. Below you will find basic information regarding your new aquarium water treatment system. If you follow these simple guidelines and change your filters according to schedule you will enjoy your new Optima Vision for years to come.

### startup

#### **Before unpacking your system**

Inspect the box for shipping damages. If shipping damages are found, contact the carrier and report the damages before removing the contents from the box.

#### **If no shipping damages are found**

Proceed to unpacking the contents. Check all fittings for breaks and be sure that there are no missing contents from the box.

#### **Now we will identify the hoses**

- **THE RED HOSE** - The input hose on the optima Vision will be located on the lower right hand side of the system and will be **RED**. This hose will already have your supply fitting installed for you. **(This is where you will hook up the water to be filtered, the supply water)**

- **THE BLACK HOSE** - The drain hose will come out off the right side of the system and will be **BLACK**, this hose needs to be placed in the sink or in the drain field closest to your installation location. **(This is waste water and is not to be added to your aquarium.)**

- **THE YELLOW HOSE** - The product hose will be located on the bottom left hand side of the system and will be the bright **YELLOW** hose. **(This is the good water that will be added to your aquarium.)**

## Before installing your system

Before installing your system we suggest having a few items handy.

**Towel** - Keep a towel handy in case the system has a leak or fittings need to be tightened.

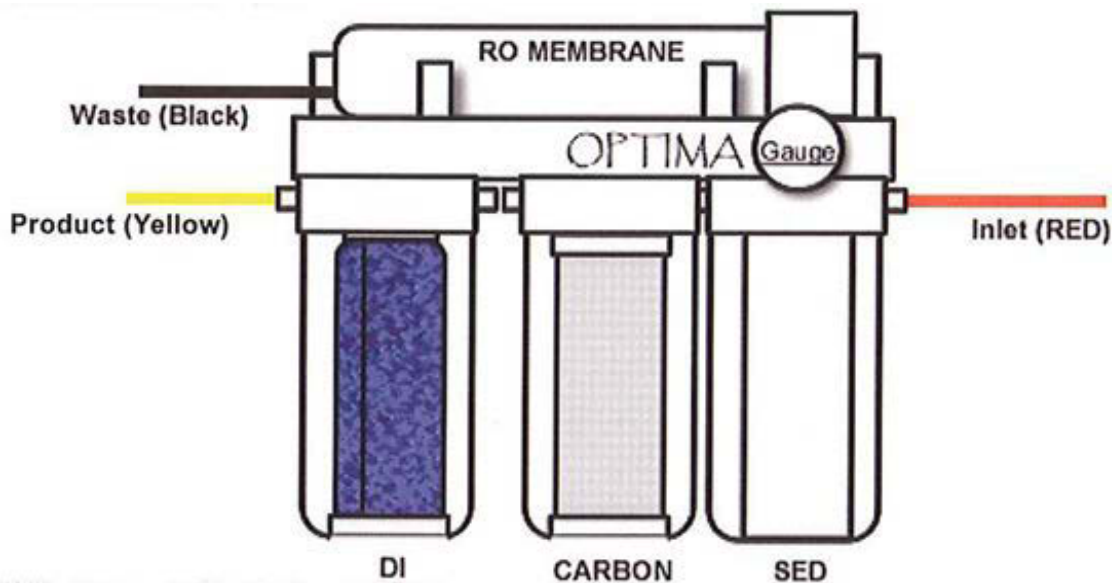
**Scissors** - A pair of scissors for cutting the tubing to lengths best suited for your install.

**Teflon Tape** – In case your fittings have become loosened to the point where tightening them will not work.

**Cell or Cordless phone** – In case you need to call us at **(877) 803-7462** for help!

## System Basics

The Optima Vision is the first of our Optima RO DI system series and was built to last! The Optima Vision uses a 1 micron pre filtration system to ensure the highest degree of protection for the powerful Dow membrane. This system is built completely with quick connect fittings and is held together by a solid aluminum bracket that was custom designed by us for this system. With its acrylic high pressure filter housings, double O-ring seals, Solid aluminum bracket, high pressure gauge and high pressure quick connect fittings you can depend on a long trouble free life for your new Optima Vision Series Aquarium RO DI system!



# Filter Maintenance

## Your system consists of 4 stages

Each stage of your system plays a very important part in the purity of your water! Each stage is designed to protect the following stage as we will explain below. Taking the time to understand how this works will help you get the most out of your system.

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- **Stage One – 1 micron sediment filter.** This is a spun wound polypropylene filter that removes particulates from the water down to 1 micron in size. This filter protects the carbon block from particulates that would clog it and reduce efficiency and flow rate. This filter should be changed every four to six months or when you experience loss of production or system pressure.

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- **Stage Two – 1 micron carbon block filter.** This filter is designed to remove particulates and more importantly, caustics that would do harm to your RO membrane. We suggest changing this filter every 3 to 6 months or when you notice a loss of pressure or reduced output.

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- **Stage Three – Reverse Osmosis Membrane.** This is the workhorse of the system. The RO membrane is the stage that removes the majority of the (TDS) Total dissolved solids. This stage can not be exposed to caustics (chlorine, pesticides etc..) and is completely dependent on the carbon block (stage 2) to survive when used in a municipal application or where chlorine is used as a disinfectant. This stage has the ability to keep itself clean by flushing excess waste out of the BLACK drain line. Flush kits are available as an add on that will assist in this process and allow the membrane to run more efficiently. This filter should be changed every 2 to 3 years or when you notice a loss of output that can't be fixed by flushing the system.

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- **Stage Four – Deionization Chamber.** The clean up crew of the system. This filter removes any charged particles that made it through the RO membrane. This is the filter that provides the 0 TDS (Total Dissolved Solids) reading in the product water. This filter works by combining positive and negative charged resins and magnetically removes like charged particles from the water. Much like a home water softener.

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# Quick Connect Fittings

Your system was designed with some great technology! One of the key components we use is quick connect fittings. These fittings are the absolute easiest to use and can be used over and over again without having to worry about leaks or worn threads. With patented O-ring seal technology you will get the perfect seal every time. No compression nuts or annoying crush sleeves. Just push in the hose and go!

01



**Cut the front end of the tube vertically before inserting it into the fitting**  
**Make sure the outer surface of the hose is smooth and clean and free from scratches**

02



**Push the hose firmly into the fitting until you feel a pop.**

03



**Gently pull the tube away from the fitting to ensure a tight seal.**

04



**To remove the tube from the fitting, simply push the collet toward the fitting and gently pull the tube away from the fitting. The collet is shown orange here for demonstration purposes.**

05



**The collet has a convenient oval shape for easy installation and removal of the tubing.**

06



**The tubing is locked into the fitting by small metal teeth inside the fitting that are released when the collet is pushed toward the fitting.**

**When the tube is firmly pushed in to the fitting the teeth are tightened around the hose for a leak free installation every time. If you find a leak after installation, simply push the tube into the fitting until the leak stops!**

# Troubleshooting

**Milky colored water.** This is normal for a new system and will go away after a week or so. If this continues beyond that time please contact us.

**Drain keeps running.** There are several reasons why this might happen. **#1** – You may have purchased a system that does not include an auto shut off system. If you are unsure, please contact our support department. **#2** – Your system pressure may be too low and you may need a booster pump for your system to operate correctly. **#3** – Your system may have a clog or a leak. Check to make sure that all of your hoses are free of kinks and there are no puddles around the system.

**Funny taste or smell.** If your system begins to put off a fowl odor, you may need to change filters and or sanitize the system with a mild bleach and water solution. If this is not the case you should check the TDS after the membrane. If the TDS after the membrane reads high you will need to change the membrane and clean the membrane housing.

**Slow Production.** If your system is producing less than the rating of the system there are several things you can do to troubleshoot the problem. **#1** – Your water pressure may be too low and the addition of a booster pump may be needed. **#2** – Your prefilters may be clogged, try removing the first two filters on your system (Sediment & Carbon) one at a time until the pressure returns to normal. Once you have found the problem filter, replace it. **#3** – If it is nearing the 6 month period from the day you purchased your system, the prefilters need to be replaced according to schedule so this may be the problem.

**DI filter changed color.** This only applies to systems that have a DI chamber (RO DI). If your system is RO only this does not apply to you. The Di that comes with your system is a color change indication resin. This means that as the filter becomes exhausted the filter will turn from blue, green, or purple to gold. When the filter has changed completely to gold it is exhausted and needs to be replaced. However, due to the fact that the color change indication is not always accurate, you may wish to use a TDS meter to judge the exhaustion of your filter.

**DI canister not filling with Water.** This is completely normal and the filter is functioning normally. Unlike the filters before the membrane, this filter is being fed by a very slow input of water. The water that is going in to this stage is being fed from the bottom of the filter through to the top. The other filters are fed through the walls of the filter and the water is then channeled up through to the top of the housing from inside the filter. The up flow design of the DI filter along with the slow process of the RO water feed allows for superior contact time with the DI resin and allows extremely high quality product water.

**If your problem was not addressed in this section, please contact our customer support department at (877) 803-7462 or email us at [purewater@clearwire.net](mailto:purewater@clearwire.net)**

## FAQS

**Q) Does reverse osmosis remove parasites?**

**A)** The largest allowable pass through in a reverse osmosis membrane is 1/10,000<sup>th</sup> of a micron. The size suggested by the NSF to remove parasites is 1 micron. This makes the filtration quality of reverse osmosis 10,000 times better than the recommended value!

**Q) Where does the TDS go after the RO removes it?**

**A)** The RO membrane has the ability to clean itself. The particulates in the water are flushed down the drain. This is why the RO membrane lasts so much longer than the other filters in the system.

**Q) How much water does this system waste?**

**A)** the typical waste to product ratio for a reverse osmosis system is 4 to 1 under the correct pressure. The ratio will change in favor of the product as the pressure increases. There are other ways to improve the waste to product ratio as well. Please call us at (877) 803-7462 if you would like to explore options to improve your waste to product ratio.

**Q) How important is water pressure to my system?**

**A)** Water pressure is very important! Optimum pressure to run an RO system is 60 PSI. Anything below 40 PSI is too little pressure for the system to function correctly and will cause under production and over waste. Low pressure will also cause the membrane to clog much sooner. If your pressure is under 40 PSI you need to consider the addition of a booster pump.

**Q) How often should I change my prefilters?**

**A)** It is suggested to change the prefilters every 6 months. This frequency may vary depending on the quality of your source water. High levels of particulates and or chlorine in your source water would suggest a more frequent filter change routine. It is not suggested to exceed 6 months under any circumstances.

**Q) I have high iron, will this harm my system?**

**A)** Iron is very hard on a membrane as it is one of a short list of substances that the membrane is unable to remove from its surface. If you know you have high iron, we suggest the addition of a water softener with iron removal capabilities. This will remove the iron up to 2 ppm. Anything below this is not a concern as the membrane should last 2 years at this level.

**Q) Where do I find filter replacements for my system?**

**A)** We carry a full line of filters for your system and they are available for purchase 24 hours a day on our website or you can call our sales office at (877) 803-7462. Our system filter sizes are industry standard and can be found in any store that carries water treatment products. However, our systems are supplied with extremely high quality, one micron or lower filters. They are industry standard size but better than standard quality. Any substitution if necessary, should be temporary.

## Changing the Prefilters

- #1** – Turn off the input water to the system. Place a towel under the system or position it over a sink. Unwrap all of the new filters before you begin.
- #2** – Starting with the first canister, get a firm hold of the lower canister and turn it counter clockwise. There will be water that releases from the system, have a towel handy for this.
- #3** – Remove the old filters from the system and discard them. Do not lose the O-rings that are located inside the rim of the canisters, the system will leak uncontrollably without them.
- #4** – Clean the inside of the canisters with a mild soap solution and rinse completely with water. Be sure all of the soap is rinsed out before adding the new filters.
- #5** – Insert the filters into the correct housings. If you have an RO DI system, be sure the arrow on the DI is pointing up when installing it into the canister.
- #6** – With the filters installed in the canisters, push the canister into the cap and turn clockwise until it will no longer turn. Once the canisters have been replaced and tightened firmly, run the system for 10 to 15 minutes before using the water, inspect for leaks during this time.

## Changing the Membrane

Important – Your membrane is coated with a biocide that needs to be rinsed off before using the water. Please run the system for a minimum of a half hour each and every time you replace the membrane. If you need more information on this please call us at (877) 803-7462.

- #1** – Turn off the input water to the system. Place a towel under the system or position it over a sink. Unwrap the membrane from the clear plastic packaging before you begin.
- #2** – Remove the hose from the membrane inlet and unscrew the cap counter clockwise. Be sure not to lose the O-ring located inside the cap.
- #3** – Slide out the old membrane and discard it. If the membrane is hard to remove, you may need to use pliers or a screwdriver to pry it loose. Be careful not to damage the membrane housing or the O-ring located inside the cap.
- #4** – Clean out the membrane housing with warm soapy water and completely rinse the housing. Do not insert the membrane into the housing until you have completely rinsed out the soap.
- #5** – Push the new membrane into the housing by inserting the side with the 2 small O-rings first and pushing the element firmly into place. Screw the cap back on to the housing and turn it clockwise until snug. Be sure to run the system for no less than a half hour and discard the water before using the system.