

## Troubleshooting RODI Unit with Low or NO Production

This guide will address the steps to fully diagnose the problem. Once you have determined the cause of the problem then you can fix it and go back fishing.

### A. Check your Plumbing connection.

If this is a new unit, this is probably the issue. Turn off the incoming water connection. Remove the tubing that is attached to the unit. Get a bucket to catch the water. Turn on the water supply ... water should BLAST out of that tubing ... holding the tubing straight up, the water would go UP in the air 10 plus feet, if so, you have sufficient pressure. If not, recheck your fitting connection ... Do you have at least 50 PSI water pressure ... if not you may need a booster pump.

### B. Check your water pressure.

When filters get dirty it causes pressure to drop. When pressure is insufficient to force water through the membrane, more of the water will run down the drain. Normal waste water to pure water is 3 to 1. As the filters get dirty, the pressure drops and more water goes down the drain. Also when the membrane gets towards the end of its useful life, more water goes down the drain than is normal. If you have a new membrane & new filters it is probably a blockage or a pressure problem.

### C. Install new filters.

Do you have new filters? ... Old filters can slow/stop water production. They need changing at least annually and more often if you are on well water or you have poor city water. THIS IS THE MOST COMMON ISSUE.

### D. Replace the membrane.

How old is the membrane? It should be replaced every 3 years. Membranes will last longer if the pre-filters are changed frequently and the system is Fast Flushed on a regular basis. Membranes will reduce the quantity of water it produces over time, so if your unit stopped suddenly, it is probably not the membrane.

### E. Fast Flush the RO System.

While the unit is making RO water, "Fast Flush" system for 15 minutes. Then open & close the Fast Flush 10 times, pause only for one second each time. When you close the Fast Flush there should be a momentary decline in waste water as the fast flush closes to the flow restrictor position. If you cannot detect this momentary decline, remove the Fast flush and blow thru it while opening and closing the fast flush, you should notice the difference. You can also hold the fast flush up to a light and look through it. You will see a big opening when in the open position and will see a pinhole in the closed position. (If either fast flush test fails, you need a new fast flush). The fast flush process is important in clearing up any residue or particles in the system that may inhibit the

proper flow of the water. There are several times in this troubleshooting guide that will ask you to "Fast Flush the system," which means to repeat this 15 minute process. Remember, the Fast Flush is in the closed position to make RO water (black valve handle perpendicular, not parallel to the fast flush flow restrictor). This Fast Flushing of the Unit is the best way to reset the ASOV by getting any air out of the unit allowing the ASOV to shut off properly.

#### **F. Check the ASOV**

The ASOV is the white plastic square egg looking devise on top of your unit that has 4 screws on top of it and has 4 quick connect fittings. Refer to the illustration diagram of your unit. You want to test for sufficient pressure coming thru the first three filters of the unit. The test is like the step A above except you are removing the tubing coming from the pre-filters and into the ASOV. Remove tubing & test to see if you get a blast of water. If not, you have a pre-filter issue. If you get a blast going into the ASOV, re-attach and then remove the tubing from the top of your membrane housing ( ie this tubing that leaves the bottom of the ASOV) and again test for pressure ... if any decline in pressure running through the ASOV, you need a new ASOV.

#### **G. Remove the one micron carbon filter to add pressure.**

Remove the one micron carbon filter from the housing and replace the empty housing. Leave the other carbon filter in place and Fast Flush the system. This process can fix the problem as the elimination of the 1 micron filter increases the water pressure to the membrane and lets the system make water with less water pressure. If this works, you may need to replace your filters more often than in the past. While we like having two carbon filters to protect the membrane, you can operate a unit with only one carbon block if you just have low water pressure.

#### **H. Remove all filters and the membrane.**

1. Remove all pre-filters and the membrane from the membrane housing and re-install without them.
2. Turn water on the unit ... Leave Fast Flush open ... Let the water run for 2 minutes then close the Fast Flush. Question: Does water freely flow out the pure water side and the fast flush side? What happens when you close the fast flush? (Drain water should stop momentarily then come out at a slower rate than before.) .... If not, repeat the 15 minute Fast Flush the System.
3. If that test worked ... Re-insert the sediment filter & repeat step 2...  
(You should notice no change in output water pressure)
4. If that test worked ... Re-insert the 5 micron carbon filter & repeat step 2...  
(You may notice a slight reduction in output water pressure)
5. If that test worked ... Re-insert the 1 micron carbon filter & repeat step 2 ...  
(You may notice a slight reduction in output water pressure)

6. If that test worked ... Reinsert the membrane & repeat step 2 ... You will notice a significant change in water output ... the pureRO water should be a small constant tickle ... not just a drip every few seconds ... but a slow constant stream of pure RO water.

NOTE 1: If your RO production is still not good, you may need a new membrane... if your membrane is new then the cause of your problem is insufficient pressure ... get a PSI gauge and test your water pressure ... you would like to get 60 PSI ... During the winter, your water is colder and RO production slows down. A way to fix this cold water issue is to add a hot water connection to your units input water supply which would mix your cold water with hot water (Ideal water temperature is 77 degrees). Or you can add a booster pump.

NOTE 2: A rough calculation of reduced water production if you do not have 60PSI or you have cold water that is not 77 degrees: You will lose 2% of your production for every degree less than 77 degrees, and you will lose 2% of your production for every pound of pressure you have less than 60 PSI. So if your water temp is only 70, then you lose 14% of your capacity and if your PSI is only 50, you lose 20% of your capacity. A combined loss of 34% capacity means a 75GPD membrane will only produce 50 GPD.

#### **I. Remove fittings to find the blockage**

If you still have a blockage problem because water is not going thru the unit properly, you just have to take the unit apart. You will need to check every fitting by blowing thru each one to see if it is blocked. The first fitting to check is the check valve elbow located on the pure water output of your membrane housing, just unscrew it and blow through the fitting. Air should go thru the threaded side but not back through the quick connect side. If that doesn't do it... then disassemble the unit till you find the culprit.

#### **J. Send it to AirWaterIce for repair.**

If all else fails, you can send it to us for repair. Keep the lower sump housings and filters. Just send the top rail with the membrane inside of the membrane housing. If you bought your unit from us, we will fix for no charge and return to you for no charge.

AirWaterIce

15340 S Keeler Street Unit C

Olathe Kansas 66062.

Feel free to call us at any time if you need help with these steps.

**772 461 0256**