



FCI WATERMAKERS

CONTINUING TO IMPROVE OUR DESIGN & PROCESS

MEMBRANE REPLACEMENT PROCEDURE

As your watermaker ages, your membrane will start to deteriorate and produce lower grade water. When this happens, you will likely need to replace the membrane. This procedure will instruct you on how to do this.

1. Shut the thru hull and disconnect the high pressure (and low pressure if needed) hose connections from the end of the vessel(s).
2. Using the appropriate open-end wrench and slotted screwdriver, remove the four nuts on the end of the pressure vessel.
3. With the nuts off, push the rods back clear of the black anodized plate.
4. Holding the black anodized plate in both hands, twist and pull the plate clear of the vessel. The end plug assembly will be removed with the plate and the membrane will now be visible inside the pressure vessel.
5. Using a pair of needle-nose pliers, reach in and grab the exposed white tube. With a firm grip, pull the membrane out of the vessel. If you are taking the membranes out to be returned to FCI for evaluation, do not damage or mar the white tube. Damage will make it impossible for us to evaluate the membrane.
6. Notice where the brine-seal is when you pulled the membrane out of the vessel. There is only one brine seal per membrane. The cup portion of the seal must face the incoming flow from the high-pressure pump on each membrane.
7. Take the new membrane out of the bag. Take care not to get the membrane dirty.
8. If old membrane is being returned to FCI, rinse well with fresh water and place into the bag. Seal the end with tape and return immediately.
9. With the new membrane in hand, lubricate the brine seal with a silicone lubricant and slide into the vessel. Be sure the brine seal has not become un-seated or rolled.
10. Inspect the o-rings on the end plug, replace if needed, lubricate the o-ring and slide into the vessel.
11. Slide rods forward through the mounting holes and re-assemble nuts. Tighten until the washer does not turn freely. DO NOT OVERTIGHTEN.
12. Reconnect the hoses.

FOR EASIER APPLICATION, VIEW THIS INSTRUCTIONAL VIDEO



FAQS

Q: Why do you need to change a membrane?
A: The typical lifetime of a membrane is 3-5 years. Throughout this time, membranes wear out or get fouled. If production drops by more than 15% or the TDS of the water rises above 500 ppm, it's time to clean or replace the membrane.

Q: Clean or replace?
A: Although membranes may be chemically cleaned, in most cases the results are less than favorable. By the time you factor in the cost of labor and cleaners, you're close to the cost of replacement.

Q: What factors affect membrane performance?
A: Watermaker outputs are based on 4 factors: seawater temperature, seawater salinity, feed flow and operating pressure. If any of these factors change, the membrane performance is affected. Before changing your membrane(s), be sure to take these factors into account and make sure the feed flow and pressures are within operating limits.

Q: What tools will you need?
A: Standard slot screw driver, 9/16" open end wrench, needle nose pliers, silicone lubricant

EFFECTED PARTS

- 10-0001 – Membrane, SW, Aquamiser
- 10-0003 – Membrane, SW, Aquamiser, Dolphin, MaxQ, MaxQ+, MaxQ+ APC
- 13-0085 – O-Ring Kit, 2-1/2' PV, Complete Set
- 10-2073 – Seal, Brine, 2-1/2'

3/7/2018
5.1, Rev A