



Deciding what water maker is right for you

OpenOcean Watermakers and thinking out side of the box

In the beginning, manufacturers and designers used brass or bronze high pressure pumps and then left them full of salt water between uses. After a year or less the pumps failed due to corrosion so the manufacturers scratched their heads and tried stainless steel. They were sure that this would solve the problem but stainless steel rusts especially in an oxygen starved environment. On a Yacht you are constantly cleaning stanchions and push pits because the "stainless steel" rusts, some grades worse than others. The new stainless pumps failed when left full of sea water albeit slower than the brass and bronze but corroded none the less. Lets try titanium cried the designers and it worked much better again but the cost was so high that the average boat owner would not or could not pay the price.

Open Ocean Water makers design team decided to think out side the box.

What would happen if you simply flushed the system with fresh water after each and every use? The first Open Ocean Water maker was designed with simple, worldwide available components that are flushed every time they are used and the first one is still running perfectly without a problem 8 years later! They are inexpensive because they use off the shelf mass produced parts used in the car wash, cleaning and many other high pressure liquid handling industries.

Beware the water maker companies that make expensive, proprietary parts that will fasten them to you forever for parts and service.

We are often asked about our "Service Department" The same person that builds them is the man on the email or phone in the unlikely event of a problem. If you design and build a water maker properly the first time Service Departments are a thing of the past.

Electronics and Water Makers

How many times have you listened to experienced cruisers advice to keep your boat as simple as possible? Open Ocean thinks the same way. Simpler is better on a Yacht or Launch especially if you prefer to sail or dive or explore the environment rather than fixing dodgy equipment.

For example: most water maker companies would like you to think you need electronic probes to test the fresh water produced before it is put into your tanks. Open Ocean suggests that if you taste the water first, it is a lot more accurate than a device measuring "Total Dissolved Solids" and your taste buds can't fail.

Let's look at what you need to automate most water makers.

1. A microprocessor / computer to send the commands.
2. Relays to convert the control voltage to the motors running voltage.
3. Timers to make sure the boost pump is on before the high pressure pump
4. Electric control solenoids and electric valves to control the flow of sea water
5. Low pressure switch to make sure your filter is not dirty
6. High pressure switch to make sure some parts of the process has not failed due to electrical problems....
7. A salinity probe monitoring the product water and then sending a signal to the microprocessor to send to the solenoid to open the electric valve to divert the water to the tanks.
8. Led screens or flashing lights to tell you what is or is not happening

I think you are getting the picture!

A Simple Solution: No automation

OpenOcean Water makers have two simple on / off switches and a couple of valves to operate the system. After a few times the operation becomes second nature.

It works like this

1. Turn on the first switch on and look overboard to see if the water is flowing through the system
2. Turn on the second switch to operate the high pressure pump
3. Set pressure to 800 PSI
4. Taste the water and move valve to Tank position and fill your tanks.

To shut off you simply reverse the procedure and move the second valve to flush for a minute or two.

That's it! Done for the Day

How much water is needed on a cruising or racing boat?

Simply put "The more the merrier"

OpenOcean Water makers start at 70 liters per hour and up to 210 liters as standard. We believe that if you are making water it might as well be a large amount as a small amount. Why not have enough water to wash down the boat after a passage or during a passage or simply wash out the cockpit area and dive gear after a swim. Why purchase a 10 to 30 liter per hour system when a 70 liter Open Ocean system is priced lower and better designed?

Engine Driven, Electric AC, Electric DC. What is right for me?

There are pros and cons for every system

Engine driven systems are the most reliable systems available bar none. They use the power of your engine to make water and are not dependent on generators or alternators. Sailors tend to run their engines much more often than they care to admit, so running the engine enough to make water is not a problem. OpenOcean Engine driven water makers are modular in design and can be installed with little loss of useable space, a big bonus for any sized boat. They produce large amounts of water in a short running time. The only con is the engine driven high pressure pump has to be mounted on the engine similar to an extra alternator or fridge compressor so installation costs are a little higher.

Electric AC

If you have a Generator onboard 5 kva or larger a 230V or 110V water maker would be an excellent option.

OpenOcean builds a direct coupled high pressure pump and hollow shaft AC motor that is commercial quality and extremely reliable. It is modular in design and is installed in usually unused areas of the boat. It will produce from 70 to 210 liters per hour depending on the amount of membranes and there are no silly flashing lights or electronics to fail. The only con is you need a generator of over 5 kva to operate.

Electric DC

Open Ocean is developing a 70 liter per hour 12 volt water maker that will run at 70 amps @ 12 volts. We will not introduce this unit until extensive testing is completed. We will use an off the shelf high pressure pump and parts just like our other models with optimum flow rates for long membrane life. Our competitors use proprietary pumps that to achieve low amps draw they have a very low flow rate and the membrane will only last 2 or 3 years. We hope to have it ready for the market by November this year. Cons, the water maker will depend on a large alternator and battery bank.

12 volt Energy Assisted Water Makers

These units are power assisted by a Clarke type or reciprocating piston high pressure pump that uses the rejected pressurized salt water to push the back side of the piston saving power. The con is the reliability of the system. They use lots of O Rings, Poppet valves and other high maintenance items and you will find yourself on a first name basis with the service dept while waiting for parts in the third world. OpenOcean does not manufacture this type of Water maker.

Open Ocean Water Makers mission statement:

To constantly strive to build the most **reliable, simple and affordable** water makers possible, using easily purchased parts available worldwide.