

Reverse Osmosis Desalinators

Frequently Asked Questions

Watermaker FAQ's

Why Do I Need a Watermaker?

- An on-board Watermaker (Reverse Osmosis Desalinator) is economical and saves the boat owner money in many respects.
- Boat wash down with demineralized water leaving no spots, requiring no laborious drying time and protecting rigging and hull. Save thousands of dollars in rigging, save hundreds of hours in labor.
- No more buying water, no more trip diversions to buy water, no more bacterial and virus attacks.
- Water weighs 8.3 pounds per gallon. Storing minimal amounts of water and being able to make more as needed each day reduces the weight and draft of the boat, which saves fuel and allows more space for storage or fuel tanks to take longer voyages.
- With a Watermaker on board, you will use fresh water for more things.
- Peace of mind, all the while saving time and money.

What Capacity System Is Right For My Boat? Why Do I Need So Much Water?

- The typical R.O. system is generally operated for part of

the day, perhaps 4 to 6 hours. In that 4 to 6 hours, the water used must be made by the R.O. system. Determine what the pure water can be used for and the daily amount required for: Washing Machine; Drinking; Showers; Ice; Boat Wash down (softened water and leaves no spots); Dish Washer. Divide the total gallon usage by the amount of hours the system will be used. The resulting number is the Gallon Per Hour rating of the required R.O. System. ie: 170 gallons used per day divided by 5 hours operation would require a 34 gallon per hour system, or a 900 gallon per day system.

- Marine systems range from 7 to 283 gallons per hour of operation (170 to 6,800 gallons per day). Commercial systems up to 44,000 gallons per day.

System Differences?

- The Aqua Whisper Series is the work horse conventional R.O. system designed for frequent use in the typical pleasure craft from 40 to 100 ft. The H2O ECO Series recovers energy and is designed for the smaller boat under 40 feet and the boats without an A.C.

generator. Coral Sea Series are commercial rated for mega yachts and commercial boats.

Are Watermakers Noisy?

- The Aqua Whisper is 10 dB quieter than other brands.
- The H2O ECO has an unnoticeable hum.

Brackish Water Operation?

- Yes. Brackish water will not harm the R.O. membrane element or system. The Ultra Whisper will automatically adjust its pressure to operate in brackish water feed sources and produce the correct amount of product water. The Aqua Whisper's pressure can be manually adjusted to allow normal operation in brackish water feed sources. The resulting product water will be of very high quality, and safe to drink.

Flushing (storing) the System?

- Fresh water is required to "flush" or "store" the system. This is done automatically with the optional Fresh Water Flush, which protects the R.O. membrane and system.

Do They Take Up Much Space?

- Smallest and most compact available.
- Refer to brochure specifications.

Are They Expensive?

- A Watermaker is inexpensive considering the money and time saved in boat maintenance and rigging replacement if the water is used to clean the boat.
- Competitively priced, see price sheet.
- Ask local dealer for a quote including installation.

Life Expectancy of the System?

- Life expectancy is 20 years with proper maintenance, and can last the yacht's lifetime.

Power Consumption, Amperage Draw, Energy Recovery, and Power & Voltage requirement?

- The Ultra Whisper is an Energy Recovery R.O. system that draws about one ampere per gallon of water produced. Ideal for the smaller boat with no on-board AC generator.
- Each Series varies and are as efficient as possible. See brochure for specifications.
- Soft Motor Starter option reduces A.G. starting load by 50% allowing for lower kw generators.
- Systems are available in any voltage configuration and power limitation.
- Generator Size (AC Systems), and Battery Bank (DC Systems) requirements vary depending.

Automatic Shut Off with Full Water Tank or After a Set Time?

- Yes by installing a Tank Level Switch.
- The Coral Sea System can also be programmed to shut down at a given point.

Marina or Harbor Operation?

- Yes, with the Oil Water Separator installed, it will remove oil from the feed water; and the Ultra Violet Sterilizer will sterilize the product water.

How Long Does It Take to Make Fresh Water?

- Within just a few moments of start up, almost immediately.

How Does R.O. Work, and How Does the ETD Work?

- The R.O. membrane rejects the salt, and allows the potable water to pass through. Visit our web site.
- The Energy Transfer Device (ETD) in the H2O ECO Series recovers energy from the pressurized brine water and transfers that energy to the pressure chamber within the ETD.
- See brochure diagram.

Pump Material?

- High Pressure Pump:
- HP Pump 316L Stainless Steel.
- Energy Efficient ETD Pump

Are All R.O. Membranes Alike?

- Sea Recovery's R.O. membrane elements are manufactured by

Dow Chemical (Filmtec) to more demanding requirements and higher specifications.

- Industrial grade with high flux (more water per square feet of membrane) and high rejection (for higher productwater quality).
- Produces more water in a shorter package for ease and greater versatility in installation.

Can You Drink The Water, And If So What Does The Water Taste Like?

- Yes, it's delicious, low in minerals, softened, cool, oxygenated, very tasty, sweet, and doesn't leave spots on dishes or wash downs!

Can I Use the Water for My Batteries?

- No. Battery water requires distilled (0 PPM) water. Reverse Osmosis product water does contain small amounts of minerals, perfect for drinking and wash downs, not acceptable in a battery.

Must I Have a Genset to Use a Watermaker?

- No. We have 12 & 24 VDC systems available, as well as AC. systems that do require a generator.



Accessory FAQ's

Fresh Water Flush, How Does it Work?

- Automatically when the system is stopped, and it automatically re-flushes every 7 days.
- By using the ships on board water system to supply fresh water through the FWF Carbon filter, which removes any chlorine, and into the R.O. System.

Ultra Violet Sterilizer (UV) Do I Need It?

- Yes, if the feed water (intake) is from a harbor or polluted source.
- The R.O. membrane rejects bacteria and virus, yet should biological migration occur across the membrane then

the UV Sterilizer will destroy 99.9% of any biological intrusion into the product water.

What Options Does Sea Recovery Recommend?

- Automatic Fresh Water Flush protects the entire system and R.O. membrane.
- Other options depend upon available space, as well as operating conditions and locations. Refer to our web site or our brochure for specific information.

Is The Booster Pump Self-Priming and What Size Is It?

- No. Although the High Pressure Pump assists initial water draw, the Booster Pump should be mounted below water level for best performance.

- Our Booster Pumps are sized for maximum allowable pressure in order to gain maximum prefilter element life. This saves time and money for the owner.

Plankton Filter or Multi Media Filter?

- Both achieve the same results in prolonging the life of the prefilter elements. The Multi Media Filter provides longer intervals between maintenance.
- Either are highly recommended for harbor or shallow operation, as well as fishing grounds, and areas such as the Pacific North West where plankton levels are high.

Installation FAQ's

Installation Requirements?

- Dedicated Thru-Hull Inlet fitting and Sea Cock Valve.
- Over board Thru-Hull Discharge fitting.
- Product Water Tank Fill line connection.
- Electrical Circuit Breaker, and Electrical Wiring.

Where On the Boat Can It Be Installed?

- Anywhere. The typical choice is the engine room, but lazarets, closets, under settees or any other available space is acceptable.

What Size Thru-Hull is Required?

- From ½" to 1" depending on the system.

Above Water Line Installation?

- Yes, the system may be above water level, however the Booster Pump (supplied with the system) should be below water line.

Self (owner) Installation?

- Installing the necessary thru-hull fittings and electrical service should be performed by qualified and experienced technicians. Installation of the system

itself requires basic mechanical experience and may be performed by the user. Our comprehensive Owners Manual takes the installer through the process step-by-step.

Maintenance FAQ's

Pre or Post Treatment Chemicals and Options?

- Pre or post treatment chemicals are NOT required for the Sea Water Marine Systems.
- Pre and Post Filtration options are available such as Oil Water Separators, and Ultra Violet Sterilizers for use in dirty harbors.

Maintenance or Service requirement?

- Easy and inexpensive pre-filter cleaning or changing, 500 hour oil changes, and 2000 hour seal maintenance.
- Step-by-Step Maintenance and Service are explained in the Owners Manual.

Maintenance Costs?

- When regularly used, this averages less than ½ penny per gallon of water produced and can vary depending on the condition of the feed water.

Filter Changing & Cleaning Requirement?

- Pre-filter cleaning or changing frequency depends on the clarity of the feed water, and is required when the system automatically shuts off at 6 psi inlet pressure.

R.O. Membrane Element Changing & Cleaning?

- Reverse Osmosis Membrane cleaning as needed, on the average once every 2 years. R.O. membranes last an average of 5 years, and can last up to 10 years with proper maintenance and care.
- The FWF extends pre-filter and R.O. membrane life.

Storing, Winterizing (protection from freezing), and Pickling?

- Protection is required against freezing temperatures with food grade Propylene Glycol added to the Feed Water.
- The Automatic Fresh Water Flush eliminates the pickling requirement.
- Without the Automatic Fresh Water Flush, pickling should be performed if the system is not used for several months, and will last up to a year.

Spare Parts?

- Spares are available from our 350+ dealers around the world. Factory direct parts are shipped the same day ordered.

Are Maintenance Kits Available?

- Yes, Planned Maintenance Kits are available, from any of our 350+ dealers throughout the world, to ensure continual trouble-free operation.

Are Prefilter Elements Special & Cleanable?

- Yes. The prefilter elements are special polypropylene material and specific micron rating.
- Yes. The prefilter elements are cleanable several times prior to replacement.
- Use only prefilter elements supplied by the R.O. system manufacturer.
- Swimming pool filter elements and home under sink type filter elements are made from the wrong material, will fall apart in seawater, are large (loose) micron rating, and will cause fouling of and damage to the R.O. membrane element.



Why Choose Parker Sea Recovery and Village Marine?

1. Over 100 years in business and the undisputed leader for 100+ years with the largest global market share.
2. Most of our entire product line is type certified by the American Bureau of Shipping (ABS) assuring our customers of the highest level of quality and design.
3. **Safety features include:** High pressure and low pressure safety shutdown; Fail Safe Product Water Diversion Valve; Temperature compensated Salinity Probe; Industry Mechanical & Electrical Standards.
4. Worldwide factory trained network for sales, service, and parts.
5. Dedicated and knowledgeable support team committed to total customer satisfaction.
6. Over 350+ Sales and Service Dealers throughout the world.
7. The number one choice among leading boat builders worldwide.
8. Large system and parts inventory for immediate delivery.



To maintain peak performance, always use genuine Parker Sea Recovery and Village Marine the global leader in motion and control technologies, reverse osmosis water desalination, purification, and filtration units replacement parts. We reserve the right to change our specifications or standards without notice.

! WARNING: This product can expose you to chemicals including Di(2-ethylhexyl) phthalate (DEHP), which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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10-2023

Contact Information:

Parker Hannifin Corporation
Water Purification
2630 E. El Presidio Street
Carson, CA 90810

phone 310 608 5600
fax 310 608 5692
www.parker.com/waterpurification

Sales & Customer Support:
bwf.car.support@support.parker.com

Technical Support:
bwf.car.technical@support.parker.com



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