



Martechnic Navigation Ltd



Aquarius Plus - Potable Water Purifier

Martechnic Navigation – Aquarius Plus

Martechnic Navigation among the other activity it has , has established a dedicate company's section to supply high quality water treatment systems and accessories to our Marine Clients.

Our new department specialized in supplying a variety of standard and customized Reverse Osmosis (RO) and Water Purification Systems. Our systems are designed for residential and light commercial use.

We pride ourselves on service and provide our customers with the quality and durability of our products at competitive prices. We also, stock a full line of Reverse Osmosis and Water Treatment components for immediate delivery. Some of them are:

Pumps, Replacement Filter Cartridges (Standard, Slim Line and Big Blue), Membrane Elements, Membrane Housings, Filter Housings (Standard, Slim Line and Big Blue), Storage Tanks, Fittings, Flow Restrictors, Faucets, Shut-Off Valves, Tubing, Meter and Time Clock Valves, Resin and Brine Tanks, Media and Resin, UV Lights, Shower Filters, Water Testing Equipment, and many more items.

At Martechnic Navigation Water Treatment section our mission is to provide the highest quality of service and products in the water treatment industry. Therefore, through our commitment, our customers can be assured that their future filter requirements will be met with state-of-the-art solutions.



Aquarius Plus - Potable Water Purifier

The line of products for Marine Clients are :

- Aquarius Plus
- Aquarius Plus Kitchen
- Aquarius Plus GVII
- Aquarius Plus Kitchen GVII



Aquarius Plus – The Procedure

- **STAGE 1** : The water is coming out from the desalination system of a ship and flows to vessels Drinking Water pipe network . Upon enter to our DW station is passing through a polypropylene filter to reduce all existing particles up to 5 micron as rust, sand etc
- **STAGE 2**: A high quality carbon filter reduces up to 98% the chlorine and other chemical contentment.
- **STAGE 3**: An enzymatic filter is cleaning the water from all chemical solution existing in the water up to 1 micron! Disarming any possible activity against the human health .
- **STAGE 4**: A reverse osmosis membrane (TFC) separates the 95-99% of infected solutions from water molecules . All the infected molecules are washed and then drain to the vessels sewage network of the ship .
- **STAGE 5**: The water passing through the Aquarius Plus SYSTEM which extract all remaining chemical or infected solutions bad for the human body . At this stage the water has become A SAFE AND KRYSTAL CLEAR DRINKING WATER .
- **STAGE 6**: This Filter is developing the properties of the clean water with the addition of the demanding ingredients , for the healthy grown of the human body , non – organic solutions like Ca ,Mg ,Na , and all rest s are existing in many natural Mineral bottled Water .
- **STAGE 7**:This Filter controls the balance and stability of all mineral ingredients . This Alkalic filter changes the acidic parameters to a natural alkalic water .This reduces the acidity in the human body and produces ions of Ca , Mg , Na , K able to be absorbed from the human body 100%.
- **STAGE 8** : A UV lamp sterilizes 100% the DW before enter to your Glass

Aquarius Plus GVII

The Aquarius GVII unit is able to be attached on deck Drinking Water Cooler systems for producing most elegant mineral water. The upgrade of the system makes it look better, but also make it easier for maintainance. By using twist and quick-change cartridge design,we transform the filter change process faster, cleaner and easier for the crew.No tools are required for replacement ,but only the tool that had been included in the package.



Specifications

- Production :300LPD
- Water Storage Tank : 8L
- AC Input : 110V,220V or 240V(50/60Hz)
- Operation Pressure : 10 - 100 psi / 0.7-8.6 bar
- Dimensions (cm) : 45 (L) x 40 (H) x 25 (W)
- Weight : 11.5kg

Aquarius Plus GVII Kitchen

The Aquarius Plus GVII Kitchen unit is the most productive solution for applications in the kitchen onboard of the ocean or coastal vessels with production capacity 1000Liters daily. It is protecting the crew from bacteria infection through the feeding chain by using the reverse osmosis technology.

Specifications

- Production :1000LPD
- Water Storage Tank : 12L
- AC Input : 110V,220V or 240V(50/60Hz)
- Operation Pressure : 10 - 125 psi / 0.7-8.6 bar
- Dimensions (cm) : 40(L) x 45 (H) x 30 (W)
- Weight : 16kg



Aquarius Plus GVII Accesories

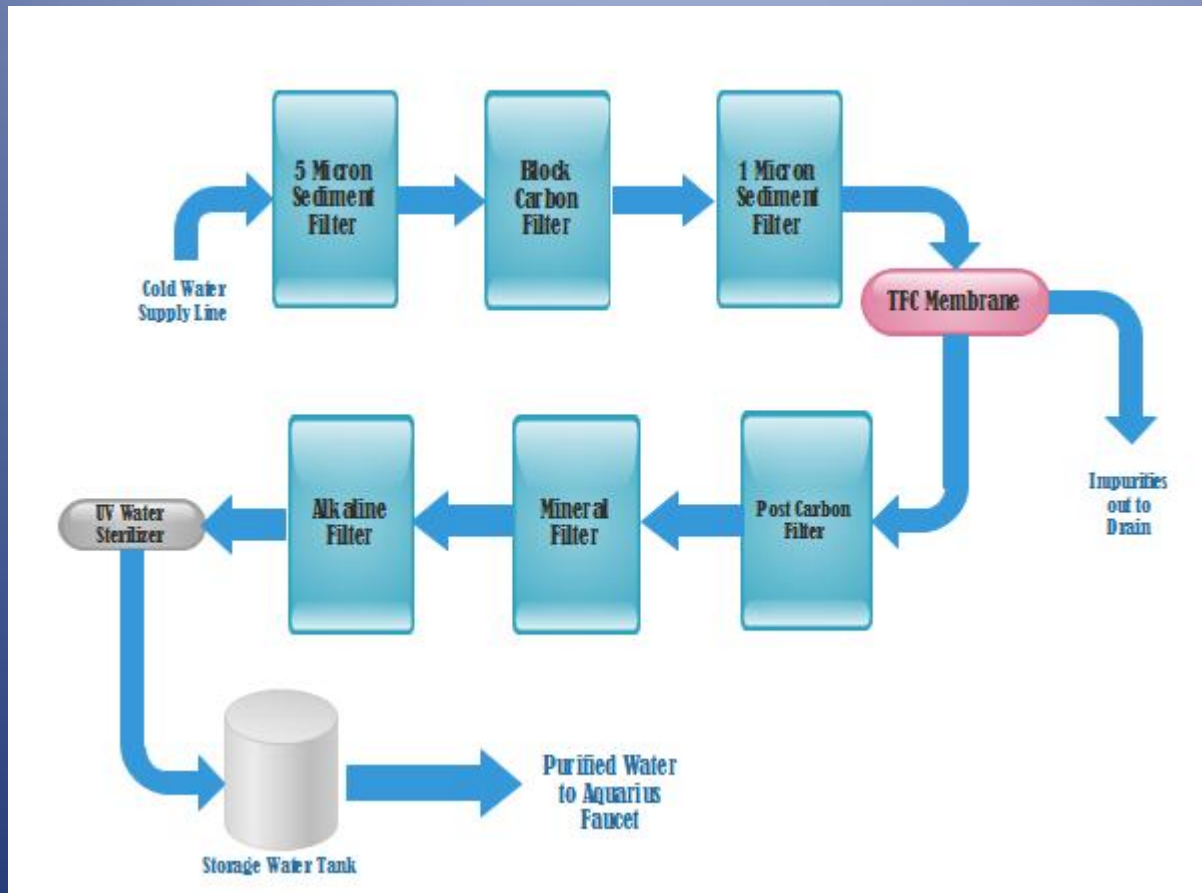
- Bigger Storage Tank



- Profiltration Unit



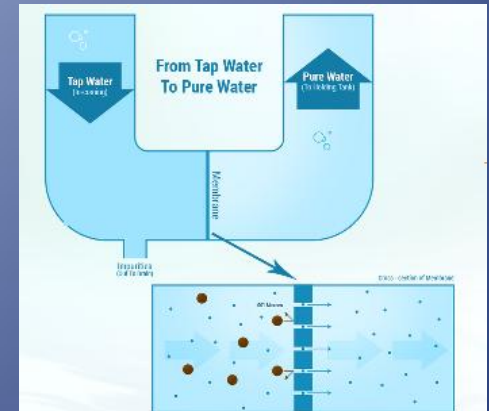
Aquarius Plus GVII Draft Diagram



How do Reverse Osmosis Filter Systems work & what do they do?

These are questions which we have been asked numerous times when helping our customers select filters or a water filtration system which is right for them.

- What does a Reverse Osmosis Filter System do?
- How does a Reverse Osmosis Membrane work?
- What does a Reverse Osmosis System remove?



What does a Reverse Osmosis Filter System do?

- Producing Drinking Water Using Reverse Osmosis

Although Reverse Osmosis seems like a complex system it is really a simple and straightforward water filtration process. And it's not a new process. High-pressure (pump driven) reverse osmosis systems have been used for years to desalinate water – to convert brackish or seawater to drinking water. Having a better understanding of how a reverse osmosis system works will eliminate the mystery and confusion you may feel when you look at a reverse osmosis system -- with its many colored tubes and multitude of filters. Read on to enhance your knowledge of residential reverse osmosis systems.

The most important points to remember:

- **All RO Systems** work the same way.
- Most RO (Reverse Osmosis) systems **look alike**.
- All RO Systems have the **same basic components**.
- The real difference is the **quality of the filters and membranes** inside the RO.

How does a Reverse Osmosis Membrane work?

Reverse Osmosis is a process in which dissolved inorganic solids (such as salts) are removed from a solution (such as water). This is accomplished by household water pressure pushing the tap water through a semi permeable membrane. The membrane (which is about as thick as cellophane) allows only the water to pass through, not the impurities or contaminants. These impurities and contaminants are flushed down the drain.

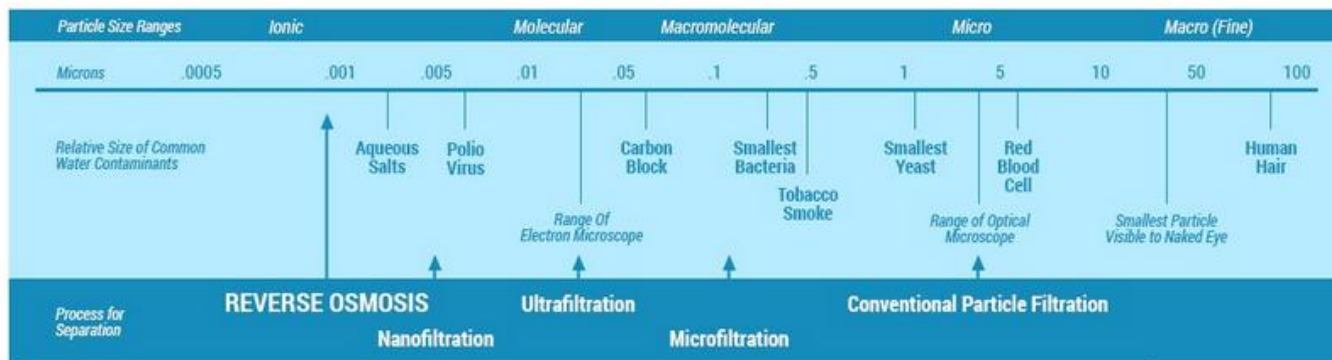
Ultimately, the factors that affect the performance of a Reverse Osmosis System are:

- Incoming water pressure
- Water Temperature
- Type and number of total dissolved solids (TDS) in the tap water
- The quality of the filters and membranes used in the RO System

What does a Reverse Osmosis System remove?

Osmosis System Removal

Below are the various particulate removal thresholds for various water purification methods.



TYPICAL REJECTION CHARACTERISTICS OF R.O. MEMBRANES

Elements and the Percent R.O. Membranes will remove

Sodium	85 - 94%	Iron	94 - 98%	Lead	94 - 98%	Manganese	94 - 98%
Sulfate	96 - 98%	Zinc	95 - 98%	Arsenic	95 - 98%	Cadmium	95 - 98%
Calcium	94 - 98%	Mercury	95 - 98%	Magnesium	95 - 98%	Barium	95 - 98%
Potassium	85 - 95%	Selenium	94 - 96%	Nickel	84 - 92%	Cyanide	84 - 92%
Nitrate	60 - 75%	Phosphate	96 - 98%	Fluoride	85 - 92%	Chloride	85 - 92%

% may vary based on membrane type water pressure, temperature & TDS