



Water Filters in Boats

The conveyance of water in reverse osmosis, deck wash, toilet, galley, air conditioning, hot water or any plumbing applications in boats will require some sort of water filtration. This water filtration ensures the reliability and effectiveness of the equipment used in these applications.

Some of the signs and symptoms of a failing water filtration is as follows;

- mild to severe stomach illness from drinking water,
- foul odour or taste in water,
- discolouration or cloudy water,
- build up of solidified salt in water line,
- water flow reduction and pressure build up in water line.

The common types of water filtration in boats are;

Strainers - These are coarse filters that are used to remove large solids. They can be washed easily and put back to work. It is typically located at the initial water inlet into the boat.

Dirt and Settlement Filters - These filters come in various forms. They are commonly rated from 1 to 25 micron. Filters rated to 1 micron are capable of filtering some larger organisms that causes stomach illness, such as giardia and cryptosporidium.

Pleated filters are probably the most commonly used. Because of its shape, pleated filters have a large surface area. All dirt and settlement filters should be replaced at least every 6 months. They are available as cartridges that will fit into standard filter housings.



Carbon Filters - Carbon is a very porous material which is capable of trapping very small molecules. It is so efficient in doing so that it traps gases, odour, taste and colour in water.

As an example, carbon filter is used to remove chlorine from mains water that boats may

use to flush the membrane in watermakers as chlorine can damage the membrane.

Another example is the use of carbon filter in storage tanks to remove odour and taste that occurs naturally when water is stagnant for a long time.



The most common carbon filters are available in cartridges that fit into standard filter housings. These cartridges should be replaced at least every 6 months.

Membrane Filters - Raw water, under pressure, flows across the membrane where some of the water penetrates the semi-permeable membrane as purified water, and the remainder leaves the membrane as concentrate.



Watermakers use a version of membrane called the reverse osmosis membrane. It is capable of separating metal and soluble salt ions.

Typical procedure to maintain reverse osmosis membrane is as follows, however always read and comply to more detailed procedure documented with specific watermakers.

1. Unit to be fresh water flushed after every use and every week if not in used.
2. If unit is not to be used for a period longer than 8 weeks, it should be filled with preservative solution.
3. Replace prefilters every 6 months.
4. Change fresh water flushing carbon filter every 6 months.

All Marine Solutions offers a wide range of water filters and services for all filtration applications. Call **07 5665 8166** or email info@allmarinesolutions.com.au to book in a job with **All Marine Solutions**.