

The White Papers Series 2

Are Reverse Osmosis Desalinators Really High Maintenance?

Introduction

This document outlines the minimal maintenance of an R.O. desalinator with today's technology.

High Maintenance, Fact or Fiction

As technology continues to advance, maintenance on reverse osmosis desalinators is becoming ingeniously automatic. Many different types of elements and features are being created to minimize maintenance that could not have been done without the technological knowledge of today such as:

Feature

Fresh Water Flush

What it does

This feature removes salt water from the R.O. system's internal parts, and will flush the membrane with clean water. This process will prevent corrosion of the internal parts and reduces biological fouling of the membranes. If the R.O. system is not being used, a unique timing feature allows it to automatically flush itself with fresh water once every seven days.

Stainless Steel Fittings

The high-pressure connections and manifolds are 316L stainless steel for maximum corrosion resistance in seawater environments.

Cube Design Manifold

This precision-machined manifold routes water internally through channels, which eliminates leaks and/or maintenance that many filters and hoses can cause.

Commercial PreFilter

The CPF guards the membranes by filtering the feed water to a 5 micron rating.

Oil Water Separator

The OWS protects the membranes from polluted waters of oil and diesel to a 5 micron rating.

½ hp Booster Pump

The Booster Pump pushes water through the CPF and the OWS versus utilizing a High Pressure Pump which pulls water through. Using the Booster Pump extends the pre-filter element life.

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Are Reverse Osmosis Desalinators Really High Maintenance? (Cont'd)

Follow Simple Routine Maintenance

Like all power-driven equipment, following a routine maintenance schedule is highly important to provide superior mechanical protection for your R.O. system. The harshness and diversity of the climate and seawater conditions have been taken into consideration. Through the recommended services stated below, it will stop and/or detect any minor problems before they become costly major repairs. This is based upon factual data compiled from HRO Systems installations around the world.

Owners' Maintenance Timetable

- Change your pump oil every 500 hours
- Replace UV sterilizer lamp every 2000 hours
- Replace high pressure pump seals every 1000 hours
- Replace FWF element every 6 months
- Change your charcoal filter every 3 months
- Clean the mesh screen and housing of the sea strainer and the plankton filter weekly

The schedule must be adjusted to each individual's system depending upon the variables listed above.

Note: If the system is not being used for more than 3 months, it is recommended that storage chemicals be utilized. In cold climates, it is also recommended that food grade glycerin (propylene glycol) be utilized to prevent freeze up in storage.

Horizon Reverse Osmosis... Giving you peace of mind and plenty of pure, potable water wherever your voyage may take you.



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