Watermaker - operation manual

Demo document for SY Northwind

1 Overview

The reverse osmosis watermaker produces fresh water from sea water using a high-pressure pump and membranes. Product water quality is measured by the salinity probe in parts per million (ppm).

2 Start-up

Open the sea water inlet valve. Start the boost pump and check prefilter pressure. Start the high-pressure pump and slowly raise the operating pressure to 800 psi. Product water is diverted overboard until salinity falls below 500 ppm.

3 High salinity alarm

If product salinity exceeds 500 ppm the diversion valve sends product overboard. Causes: worn high-pressure pump seals, damaged membrane O-rings, fouled or aged membranes, or low operating pressure. Check pressures before replacing membranes.

4 Prefilters

Replace the 20 micron and 5 micron prefilters when the pressure drop across them exceeds 10 psi, or every 50 hours of operation in coastal water.

5 Fresh water flush and pickling

Flush with fresh water after every use. If the unit will not be used for more than seven days, pickle the membranes with the storage chemical as described in this section.