

# MAINTENANCE

## General Maintenance

General maintenance depends upon the feed water quality and use of the machine. To build a proper maintenance schedule, a maintenance checklist (provided with machine) should be used. The maintenance checklist will allow the service person to track machine usage, filter changes, water quality, changes in feed water and aid in the routine maintenance of the machine.

The following is a “rule-of-thumb” guide to performing general maintenance and service on the water vending machine. Any questions or concerns regarding machine maintenance should be directed to Aqua Star International.

## Maintenance Schedule

### Daily

Clean and disinfect the customer contact surfaces  
**(Recommended disinfectant solution for customer contact surfaces:  
1 ounce chlorine bleach in 1 gallon of water)**  
Clean exterior of machine  
**( Recommended cleaning solution for exterior of machine:  
Off the shelf cleaning solutions such as 409, Fantastic,  
or Simple Green)**  
Check machine for good working order

### Weekly or Bi-monthly

Clean and disinfect customer contact surfaces  
**(Recommended disinfectant solution for customer contact surfaces:  
1 ounce chlorine bleach in 1 gallon of water)**  
Evacuate, clean and disinfect the sump area  
Clean the coin path inside the coin mechanism  
**(Do not ever use any oil based product or lubrication product. Only use  
a damp cloth soaked with water)**  
Visually inspect sediment filters, replace if needed  
Test and record chlorine level before and after pre-filters,  
Replace carbon filter (s) if necessary  
Measure Total Dissolved Solids of product water from reverse  
osmosis membrane. Compare to raw water supply. Replace  
membrane if needed  
Run reverse osmosis system and verify good working order  
Test for taste, odor and turbidity  
Check machine for good working order

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6 months

Sample for total coliform  
Replace ultraviolet lamp carbon block filter.  
*(be sure to reuse Teflon sleeve in center of carbon filter)*

12 months

Replace ultraviolet lamp and carbon block filter  
*Refer to page 33-37*

**\*\* Your actual maintenance schedule may vary according to water quality, machine usage and MUST CONFORM TO ALL STATE AND LOCAL REQUIREMENTS \*\***

## Filter Maintenance

Aqua Star International recommends frequent replacement of the pre-filters in order to minimize any possible fouling of the reverse osmosis element. *It is a common belief that in the long run, such replacements will save you money in membrane replacements.*

The following points should be observed when changing filters:

- 1 Filter housings are to be screwed on only hand tight
- 2 Relieve line pressure before attempting to unscrew filter housings
- 3 Unscrew filter housings counter clockwise with the filter wrench provided
- 4 Discard all old filters, *they cannot be used again*
- 5 Clean filter housing with warm soapy water
- 6 Install only approved filters (consult Aqua Star)

## Reverse Osmosis Maintenance

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Reverse osmosis membranes may get fouled depending on many different influences. Once decreased flow rates and/or water quality is noticed the membrane should be cleaned. To determine the rejection rate of the membrane use the following formula:

$$\begin{aligned}\text{Raw water} - \text{Product water} &= X \\ X \text{ divided by Raw water} &= Y \\ Y \times 100 &= \text{rejection \%}\end{aligned}$$

Example : Raw water = 470  
Product water = 30

$$470 - 30 = 440 \quad 440/470 = .936 \quad .936 \times 100 = \mathbf{93.6\% \text{ Rejection}}$$

This rejection level is good and the membrane would not need replacement

Example : Raw water = 610  
Product water = 270

$$610 - 270 = 340 \quad 340/610 = .557 \quad .557 \times 100 = \mathbf{55.7\% \text{ Rejection}}$$

This rejection level is very low, this membrane needs replacing

Additional information regarding reverse osmosis membrane operation and/or functioning should be directed to a customer service representative of Aqua Star International.