



Facts

and

Filters

Reverse Osmosis

Reverse Osmosis (RO) systems can reduce levels of many substances that may be in water, like those that cause foul tastes, smells, or colors, and substances that may cause adverse health effects in some susceptible populations. They also remove fluoride and the minerals associated with "hard" water.

RO involves the movement of water through a membrane with microscopic openings that allow water molecules to pass through. Because this process is relatively expensive, RO systems are generally used only to treat drinking and cooking water supplies.

A drawback to RO units is that most "waste" several gallons of water for each gallon they produce (that is, they generally recover only a small percentage of the water entering the unit; the remainder is sent to the sanitary sewer system). However, RO units can vary dramatically in this regard, and there are high-efficiency models available.

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- ▲ Properly maintaining equipment is essential because inadequately maintained filters can actually reduce water quality.
- ▲ All filtering systems are different. It's important to make sure the device you choose addresses your particular concern.
- ▲ Questions regarding specific devices, as well as specific guidelines for maintenance, should be directed to the manufacturer.
- ▲ Individuals with specific concerns about medical conditions should discuss options with their doctor.

 American Water Works Association



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RO systems can lower the pH of water to below state and federal standards. RO systems also remove beneficial minerals such as calcium, magnesium and fluoride. Removal of these minerals along with the lower pH makes the water similar to distilled water. Thus, some consumers may not like the taste of RO water. Sampling RO water is recommended before purchasing this equipment.

RO systems are usually installed below the kitchen sink. RO systems consist of the pre-filter, RO membrane unit, a pressurized storage tank for the treated water, a post-filter, and a separate delivery tap for the treated water supply. Because these components require a significant amount of space, available room beneath the sink should be considered.

When comparing purchase to lease/rent options, consider the initial costs of the system. RO units range in cost from less than \$300 to \$3,000 or more. Installation and maintenance costs can vary and should be a factor when deciding on a system.