

# REDUCE YOUR RO SYSTEM DOWNTIME



## Downtime.

It's every beverage manufacturer's worst nightmare. You could have the most sophisticated piece of equipment with all the gadgets and gizmos, but if it's not working, you won't get much accomplished. When your production line is down, you have to make up for lost time, increased cost, and dissatisfied customers.

While downtime isn't always caused by equipment failure, it can certainly negatively impact your ability to generate clean, quality water needed for your products. Thankfully, eliminating downtime with your water purification equipment can be simplified into the following categories: pretreat to protect downstream equipment, proper maintenance, and quality parts and workmanship.



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## **Water System Design Basics: Pretreat to Protect Downstream Equipment**

When customers have problems with specific components repeatedly failing or causing problems and can't figure out the cause, the problem is usually that their pretreat systems aren't equipped to handle the job. In diagnosing these problems, pay attention to seasonal feedwater quality shifts.

For example, a manufacturer was seeing lots of fouling on their Reverse Osmosis (RO) membranes. The fouling was causing costly downtime so that the maintenance team could clean or replace the membranes. The membrane cleanings were being done in-house. The maintenance staff had to shut down production for these cleanings about once every six months, so they were just frequent enough to impact production and just infrequent enough for the staff to feel like they were relearning the process each time. When they called the Aqua-Chem service team, a complete system analysis and a membrane autopsy were performed. Thanks to the thorough systems analysis insight, the Aqua-Chem team determined that the carbon tower was undersized for the application. The carbon tower was correctly resized for the application, and the membranes are now only cleaned annually, and the fouling issue has been resolved.

This example demonstrates the importance of a thorough feedwater analysis and the benefits of choosing a competent and knowledgeable service partner to help keep your system operating at peak performance.

## Proper RO Maintenance

Like most things in life, if you don't take care of your equipment, breakdowns and failures are inevitable. Reverse Osmosis Water Purification Systems have pre-determined intervals for when specific maintenance needs to occur. Depending on the make and model, feedwater quality, and the number of hours put on it daily, this can be a frequent occurrence. For example, if your feedwater has a high level of particulate, you may need to change carbon and filters and clean the membranes more often. And if you run three, eight-hour shifts a day, you're going to reach the benchmark service intervals faster than someone only running one shift.

Many customers struggle with performing timely routine maintenance, usually due to a lack of knowledge, capabilities, monitoring, or handling. If you perform your own maintenance, it's essential to understand what types of maintenance are required and at what intervals. You can find this information in your equipment owner's manual.

Another solution is to take advantage of Aqua-Care's planned maintenance packages. Based on your application and equipment model, they can schedule appointments to perform all necessary maintenance and repairs. A preventative maintenance plan keeps your equipment running optimally, reduces downtime, and allows you to focus on getting work done.





## System Components: Quality Parts and Workmanship

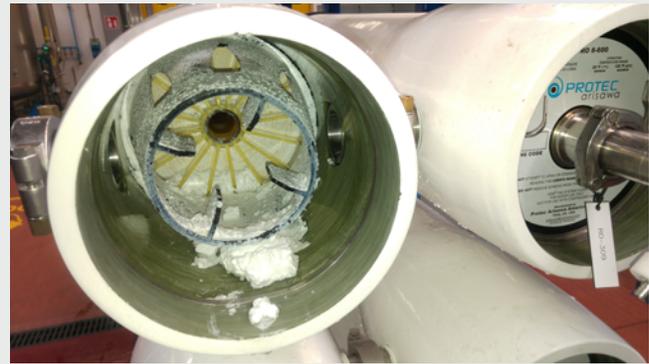
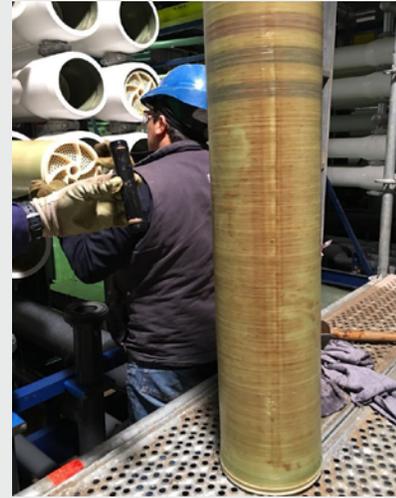
So, you use the right piece of equipment, and you take excellent care of it. What else could you do to reduce downtime? Not all equipment is created equal. Lower quality and poorly designed parts can wear faster than genuine, high-quality parts. Improperly sized gaskets can leak and wear quickly. Less efficient pumps will wear out more quickly and consume more energy. Cheap imported membranes will not be as efficient, creating more concentrate and could impact your final water quality. There are Aqua-Chem systems that have been in service for over 30 years, without any major repairs needed. Investing in high-quality replacement components delivers reduced downtime and a lower total cost of ownership (TCO).

When parts fail or need to be replaced, the quality of the parts and installation are equally important. While certain replacement parts may have a less expensive cost upfront, they likely will end up costing more in the future. Using genuine parts from Aqua-Chem keeps your equipment operating with the same quality that was built at the factory. And using a certified technician for the installation of those parts ensures that the replacement is performed to the manufacturer's specifications. In some instances, it also provides you with assurance in the form of a warranty.

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### Aqua-Chem Replacement Parts

Keeping your Reverse Osmosis System at peak performance by contacting Aqua-Chem for your replacement parts. Not only do we keep most items in stock, but we can also expedite the shipping. Also, if you need a hand, our experienced field service team is just a call away. **LEARN MORE**



If you're using Aqua-Chem Reverse Osmosis Equipment, you can take advantage of Aqua-Care. It includes an industry-leading two-year parts warranty, Aqua-Chem genuine parts, an industry-leading network of experienced and knowledgeable technicians, and fast emergency response times. It's Aqua-Chem's commitment to fully support you through the sale and throughout the entire lifetime of your ownership. The Aqua-Care program is a completely flexible comprehensive program that can include any or all of the following components:

- 1) Comprehensive on site services – our Field Service Technicians are well versed in all aspects of reverse osmosis – pretreatment, chemistry, RO machines, storage and distribution of process water
- 2) Consumables – these include but not limited to:
  - a. Filtration Products - bag, depth and pleated filters.
  - b. Chemistry - antiscalants, CIP chemistry, biocides, coagulants and more.
  - c. Carbon – activated carbon and change out services including commissioning of new carbon
  - d. UV lamps and sleeves
- 3) Membrane Program – membranes are high capital expense that can be unbudgeted for during system operation. The Aqua-Care program can include a set of membranes for your RO system, that is budgeted for and paid through monthly installments. The membranes can be taken at any time during the contract duration.
- 4) Spare Parts – our Aqua-Chem Service Division works with our customers to identify critical and recommended spare parts – these can be included in the Aqua-Care Service Agreement, or purchased separately.