



## AquaSolve®

### Anti-Scale System

#### What is AquaSolve?

AquaSolve is an anti-scaling water treatment technology designed to protect plumbing components, pipes, fixtures, valves, fittings, hot tanks, etc. from the negative effects typically caused by water hardness. AquaSolve is an environmentally friendly alternative to water softening or any other treatment device designed to address scale. AquaSolve prevents scale by transforming dissolved hardness minerals into harmless, inactive microscopic crystal particles. These crystals stay suspended in the water and have a greatly reduced ability to react negatively and form scale compared to untreated hard water.

#### How does AquaSolve differ from a Water Softener?

AquaSolve uses a specially designed media to convert the dissolved primary hardness mineral (calcium carbonate) into a relatively insoluble microscopic crystal so that it cannot cause harm downstream. A water softener, on the other hand, uses the principles of “ion exchange” to remove calcium and magnesium ions from water while replacing them with sodium ions. A water softener requires a control valve, backwashing, drain line, regeneration and a brine tank to store salt while AquaSolve requires nothing but an inlet and outlet connection.

## Frequently Asked Questions

#### Does AquaSolve remove the important minerals in water?

No. AquaSolve preserves the beneficial mineral content while preventing the possible negative scale formation associated with these minerals. By rendering the hardness minerals harmless while still keeping them present, you truly get the best of both worlds. Other treatment methods fall short. In a 2005 report on Nutrients in Drinking Water, the World Health Organization writes...“We conclude that hard water is good because it contains nutrients valuable in themselves...To minimize heart disease risk, the ideal water should contain sufficient calcium and magnesium to be moderately hard.”

#### What are some of the ideal applications for AquaSolve?

Virtually any application where scale reduction or scale removal from water hardness is required or desirable. For example: Hotels, Restaurants, Apartment Buildings, Office Buildings, Condo Complexes, Boilers, Irrigation Systems, Humidifiers, Distillers, Steam Generators, Solar Heating Systems, Tankless Water Heaters, RO Pre-Treatment, Misting Systems, Tract Homes Builders, Laundromats and numerous Food Service applications are all ideal applications for an AquaSolve system.

#### How about other chemicals found in city water, such as Fluoride and Chlorine, does AquaSolve remove them?

No. We all know the important role that chlorine (or chloramine) plays in a public water system. It assures the delivery of safe potable water to every customer. Fluoride is commonly added to municipal water systems because of the proven benefits it possesses in helping to develop children’s teeth and to prevent tooth decay. AquaSolve media, by itself, does not remove either of these additives from water. Please contact your local authorized AquaSolve Rep for the system most appropriate for your specific application.

### What factors may effect AquaSolve's system performance?

Water chemistry and peak flow rate are the guidelines used to assure optimal system performance. Most municipally treated (city) water falls well within our performance guidelines to ensure scale control results. However, there are chemistry limitations related to possible foulants and interference ions. Water known to contain visible dirt and debris must be strained using a wye-pattern strainer or equivalent (100 mesh) before AquaSolve tank systems. More details are available on the product data sheets and IOMs. As with any water treatment technology, correct sizing of the system is important to ensure proper performance. However, AquaSolve is more forgiving of how variations and unplanned peaks than a conventional water softener.

### Does the media in a AquaSolve system need to be replaced?

Yes. Tank-based systems require media replacement every three years. Systems should be installed with this in mind. An isolation valve with a by-pass loop is recommended for most commercial applications so the tank(s) can be taken off-line for media replacement. Please refer to and follow the instructions in the Installation, Operation & Maintenance manual included with the AquaSolve system.

### What are the ongoing maintenance costs and considerations for AquaSolve?

One of the great benefits of the AquaSolve technology is the dramatically reduced maintenance requirements. Other than the planned media replacement, there is nothing else required. For tank systems, the media replacement is once every three years.

### Are there any application limitations to AquaSolve?

Untreated well water may pose a limitation to AquaSolve due to the unknown chemistry it often possesses. High hardness is never a problem for

AquaSolve, but with well water, hardness minerals are often accompanied by other contaminants with levels outside of our operating guidelines. Additionally, closed-loop systems that do not offer a "blow-down" or "flush valve" are not recommended because the micro-crystals need to exit the system.

### How easy is it to install an AquaSolve system?

For anyone who has ever installed a Water Pressure Reducing Valve or a Backflow Preventer, installation of an AquaSolve system will be relatively easy. Smaller tank systems offer 1" FNPT Stainless Steel connections. Larger tanks offer 2" FNPT Stainless Steel connections. AquaSolve installation accessories are offered to accommodate most applications. AquaSolve systems are compact, allowing for easy installation when space is limited. AquaSolve's light weight makes it easy for the installer to transport with nothing more than a hand truck.

### Why is AquaSolve a "Green Technology"?

AquaSolve is truly a "Green product" because it saves water and energy in the following ways:

1. Reduces Energy Consumption – AquaSolve uses no electricity and reduces energy consumption by keeping heat transfer surfaces free of energy-robbing scale formation.
2. Reduces Chemical or Raw Material Consumption – AquaSolve requires no chemical or significant ongoing consumable (salt, as an example)
3. Reduces Waste Water Discharge and Water Consumption – Because AquaSolve does not discharge or require backwashing it meets both objectives.
4. Reduces Space Requirements – AquaSolve systems use approximately 75% less floor space than water softeners.
5. Retains nature's minerals in the water. The beneficial minerals, calcium & magnesium, are completely retained.



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