

# AquaSolve®

## Scale Control Systems Series M8400

### Eco-friendly solution for scale control due to hard water conditions

PVI AquaSolve Anti-Scale Systems are suitable for commercial applications and have flow rates up to 75 gpm (284 lpm) per tank for the reduction of scale formation caused by hard water. Operation of the system may be 24 hours per day 7 days per week because there is no backwashing or regeneration process.

### Operation of the System

Water containing dissolved calcium and magnesium bicarbonate hardness passes through a bed of proprietary media inside AquaSolve systems. The media transforms the dissolved hardness into microscopic nano-crystals. These nano-crystals are inert and pass through the plumbing system without attaching to internal plumbing surfaces. There is no need for backwashing because the system operates in an up flow direction.

### Media

AquaSolve is powered by AquaSolve high performance scale control media. It is certified by WQA to NSF/ANSI standard 61. The media is proven to reduce the formation of calcium and magnesium bicarbonate scale in plumbing systems, water heaters, and on water heating elements. Our media does not require salt or chemicals, or waste water from regeneration and has up to three year life cycle before replacement is necessary.

### Tanks

All models feature non-corrosive fiberglass tanks with a thermoplastic inner liner. All tanks are certified by WQA or NSF to NSF/ANSI standards.



Series M8400

### Plumbing Connections

All plumbing connection components of the AquaSolve system are constructed of durable polymers. Systems 12" in diameter and smaller have a tank head with 1" FNPT inlet and outlet connections. Systems 14" and 16" in diameter have a 2" FNPT inlet and outlet connections constructed of robust machined Stainless Steel.

### Standards

Independent scientific testing has confirmed media assisted crystallization technology provides scale reduction of over 95+%. Testing was conducted under protocol based on DVGW W512 test to access control of scale formation.



Systems are certified through WQA against NSF/ANSI Standard 61, CSAB483.1, and to 372 for Lead Free compliance.

#### WARNING

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

# Ordering Information

MODEL NO.	DESCRIPTION	PIPE SIZE	SPACE REQUIRED WxDxH (IN.)	WEIGHT LBS. KGS	
M8408-COM	12 gpm Scale Prevention System	1"	9 x 9 x 49	36	16
M8410-COM	20 gpm Scale Prevention System	1"	11 x 11 x 58	49	22
M8414TM-COM	50 gpm Scale Prevention System	2"	20 x 20 x 85	124	56
M8416TM-COM	75 gpm Scale Prevention System	2"	20 x 20 x 85	145	66

## Feed Water Chemistry Requirements

pH	6.5 to 9.5
Hardness (maximum)	30 grains (513 ppm CaCO <sub>3</sub> )*
Water Pressure	15 to 150 psi (1.03 to 10.34 bar)
Temperature	40°F to 100°F (5°C to 38°C)
Free Chlorine	< 2 ppm
Iron (maximum)	0.3 ppm**
Manganese (maximum)	0.05 ppm**
Copper	1.3 ppm***
Oil & H <sub>2</sub> S	Must be removed prior to AquaSolve
Total Phosphates	< 3.0 ppm
Silica (maximum)	20 ppm****
TDS	1500 mg/l*****

### NOTICE

Water known to have heavy loads of dirt and debris may require pre-filtration prior to AquaSolve.

\*Systems using AquaSolve technology are effective at controlling lime-scale formation inside the plumbing system at influent hardness levels up to 75 grains per gallon (1282 mg/l) of calcium carbonate. Due to variances in water chemistry, 30 grains per gallon is a recommended hardness maximum due to potential aesthetic issues related to soft scale residue formation outside of the plumbing system. Testing should be performed to determine proper application where hardness levels exceed 30 grains per gallon.

\*\*Just as with conventional water softening media, AquaSolve media needs to be protected from excess levels of certain metals that can easily coat the active surface, reducing its effectiveness over time. Public water supplies rarely, if ever, present a problem, but if the water supply is from a private well, confirm that the levels of iron (Fe) and manganese (Mn) are less than 0.3 mg/L and 0.05 mg/L, respectively.

\*\*\*Pursuant to the EPA drinking water standards, the copper concentration permitted is up to 1.3 ppm. Typically originating from new copper plumbing, high levels of copper can foul AquaSolve media. For applications with copper concentration greater than 1.3 ppm, please consult Watts Water Quality Technical Service. To further minimize any problem with excess copper, avoid applying excessive flux on the inner surfaces of the pipe and use a low-corrosivity water soluble flux listed under the ASTM B813 standard.



\*\*\*\*AquaSolve media does not reduce silica scaling. While silica tends to have a less significant effect on scale formation than other minerals, it can act as a binder that makes water spots and scale residue outside the plumbing system difficult to remove. This 20 ppm limitation is for aesthetic purposes.

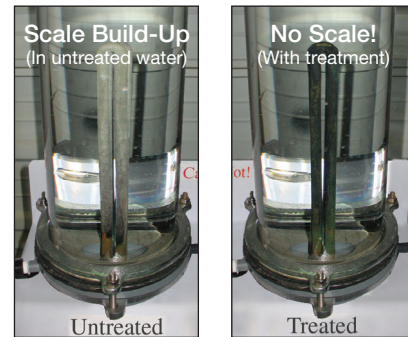
\*\*\*\*\*All other contaminants must meet the requirements of the USEPA Safe Drinking Water Act. Specific Mineral and Metal MCL's, identified in Watts published Feed Water Chemistry Requirements, supersedes the USEPA SDWA.

## Specifications

MODEL NO.	TANK SIZE (IN.)	DISTRIBUTOR TYPE	LITERS OF MEDIA	SERVICE FLOW RATE
M8408-COM	8 x 44	Standard	3	12
M8410-COM	10 x 54	Standard	5	20
M8414TM-COM	14 x 65	Standard	12.5	50
M8416TM-COM	16 x 65	Standard	19	75

## Proven Results!

Lab tests conducted at the PVI test facility, located in San Antonio, Texas indicate AquaSolve systems control new scale formation and aid in the reduction of existing scale. Tests were conducted in water temperatures to 120°F and hardness levels of 17 grains per gallon. Photos (below) show scale formation in untreated water and no scale in the treated water.



AquaSolve systems helps control hard scale formation inside the plumbing system at influent hardness levels of 30 grains per gallon of calcium carbonate and less.

AquaSolve is not a water softener or a chemical additive (like anti-scalants or sequestrants). It is a scale prevention solution with proven third party laboratory test data and years of successful residential and commercial applications. AquaSolve is the intelligent scale solution and is a great alternative to water softening (ion exchange) or scale sequestering devices.

For additional information, access on-line literature ES-M8408-COM/M8410-COM and ES-M8414TM-COM/M8416TM-COM

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