

EFFECTIVELY CONTROL HARD WATER SCALE AND CORROSION

RESIDENTIAL WHOLE HOUSE TREATMENT



Protect your home from Hard Water Damage
DISSOLVE SCALE - PREVENT SCALE - INHIBIT CORROSION

COMMERCIAL WATER HEATER PROTECTION



Keeps Process and Domestic Hot Water Systems free of Hard Water Scale & Corrosion without chemicals.

MULTI-TENANT APARTMENT BUILDINGS & CONDOS



Effective Control of Hard Water Scale for Heating, Cooling and Domestic Water Systems

HALO ION

CONTROL HARD
WATER PROBLEMS
MAINTENANCE
FREE



HALO ION FEATURES

- Installs Inline with existing pipes
- Requires No Drain Line
- Requires No Electricity
- Requires No Chemicals
- Maintenance Free
- 25 Year Warranty!
- 100% Made in USA.

HALO ION BENEFITS

- Controls Hard Water Scale & Corrosion
- Effective Chemical Free Treatment
- **DISSOLVES EXISTING SCALE**
- **PREVENTS NEW SCALE FORMATIONS**
- **INHIBITS CORROSION**
- No Slimy Feeling Water
- Clothes Cleaner. Dishes Brighter.



THIS IS
NOT A
SOFTENER

What difference does the HALO ION make?



WITHOUT TREATMENT

After nearly 7 years of service on
San Diego Municipal Water
with no water treatment installed.
Accumulation of Scale & Corrosion



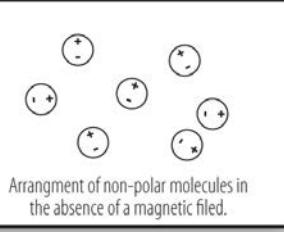
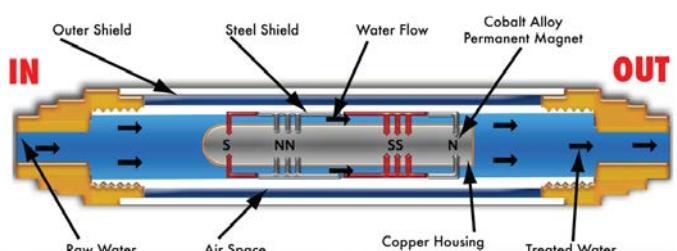
WITH HALO ION

After nearly 7 years of service on
San Diego Municipal Water
NO EVIDENCE OF SCALE OR CORROSION
(The marks on the back wall of the heater are where we ran a fingertip along the back to demonstrate the presence of the Aragonite scale)

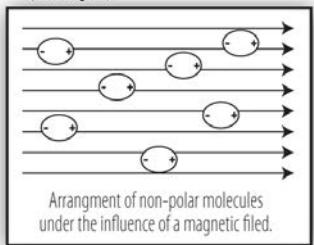


HALO ION: Explained

The HALO ION uses multi-reversing polarity permanent magnetic fields to affect the "ionic charge identity" of the CaCO_3 and MgCO_3 so that they remain suspended in the water rather than precipitate out as hard water scale. This is the essence of the "conditioned effect" delivered by the HALO ION. The HALO ION conditioned effect lasts for about 36 hrs. on the cold side and 24 hrs. on the hot side.



Arrangement of non-polar molecules in the absence of a magnetic field.



Arrangement of non-polar molecules under the influence of a magnetic field.

NON-CHEMICAL HARD WATER TREATMENT

RESIDENTIAL UNITS: All HALO ION Series Inline Water Conditioners include a 10 Year Manufacturer's Warranty and are 100% Made in USA

ION-I	1 1/8"D x 4 1/2"L	1/4" Compression	Refrigerator/Icemaker	3 GPH
ION-H	1 1/8"D x 5)L	1/4" Compression	Humidifier	6 GPH
ION-GH	1 1/4"D x 7 1/2)L	Hose Bibb	Plant Watering/Car Washing	5 GPM
ION-6	1 3/4"D x 9)L	3/4" FIP	Water Heaters/Recirculating Loop	6 GPM
ION-9	2 1/4"D x 9 1/4)L	1" FIP	Whole House (1-2 bath)	9 GPM
ION-12	2 1/4"D x 13)L	1" FIP	Whole House (3-4 bath)	12 GPM
ION-20	2 1/4"D x 17)L	1" FIP	Whole House (4-6 bath)	20 GPM
ION-35	2 1/2"D x 16)L	1 1/2" FIP	Whole House (Multi-Unit)	35 GPM
ION-50	2 1/2"D x 16 1/2)L	2" FIP	Whole House (Multi-Unit)	50 GPM

INSTALLATIONS OF THE HALO ION INLINE

Each HALO ION is sized according to the max. flow rate at which it will condition the water effectively. The HALO ION does not restrict water flow.*

When installed on a "once through" application the ION can be oriented either horizontally or vertical. However, on any recirculating application the ION must be installed vertically.



SPECIAL CONSIDERATIONS: The HALO ION Inline is a COMPLETE Whole House Water Treatment Conditioning Solution. that is highly effective and eco-freindly. Because the HALO ION is a physical (non-chemical) treatment system for control of hard water scale & corrosion, there are a couple of special cases to be aware of: (1) If a Hot Water Recirculating Loop is present we recommend treating that loop with an additional ION unit. (2) If the Hot Water heater is not turned over every 24 hours aditonal treatment may be necessary. (3) Some tankless water heaters require additional treatment for optimum results. Any questions, please call us at 800.591.0538. Available 24/7.

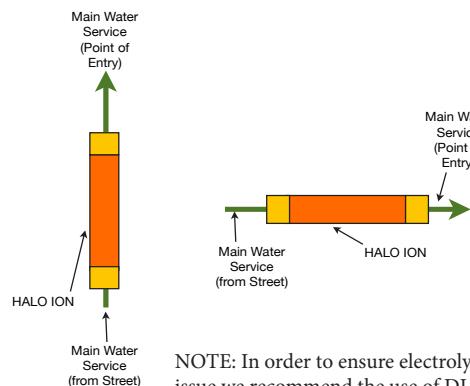


Commercial ION Systems

For information and details on commercial grade HALO ION systems, please call 800.591.0538 or visit www.halowater.com

Main Line - Whole House Install

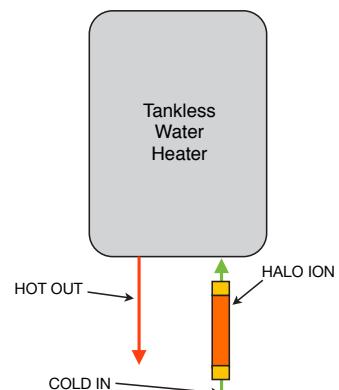
HALO ION can be installed vertically or horizontally in once through applications



NOTE: In order to ensure electrolysis is not an issue we recommend the use of DIALECTIC UNIONS on all ION Inline Installation.

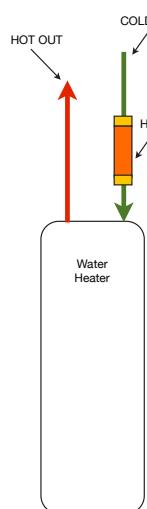
Tankless Water Heater

HALO ION Installed on Cold Water Inlet



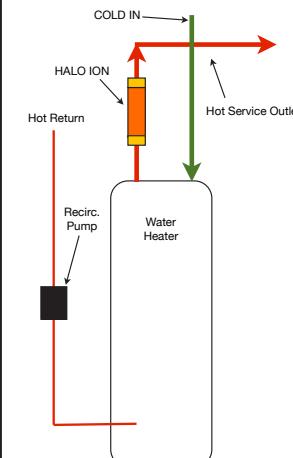
Water Heater - (Once Through)

HALO ION Installed on Cold Water Inlet



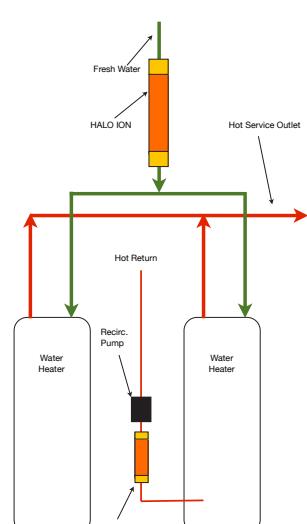
Water Heater - (w/Recirc. Loop)

HALO ION Installed on Cold Water Inlet

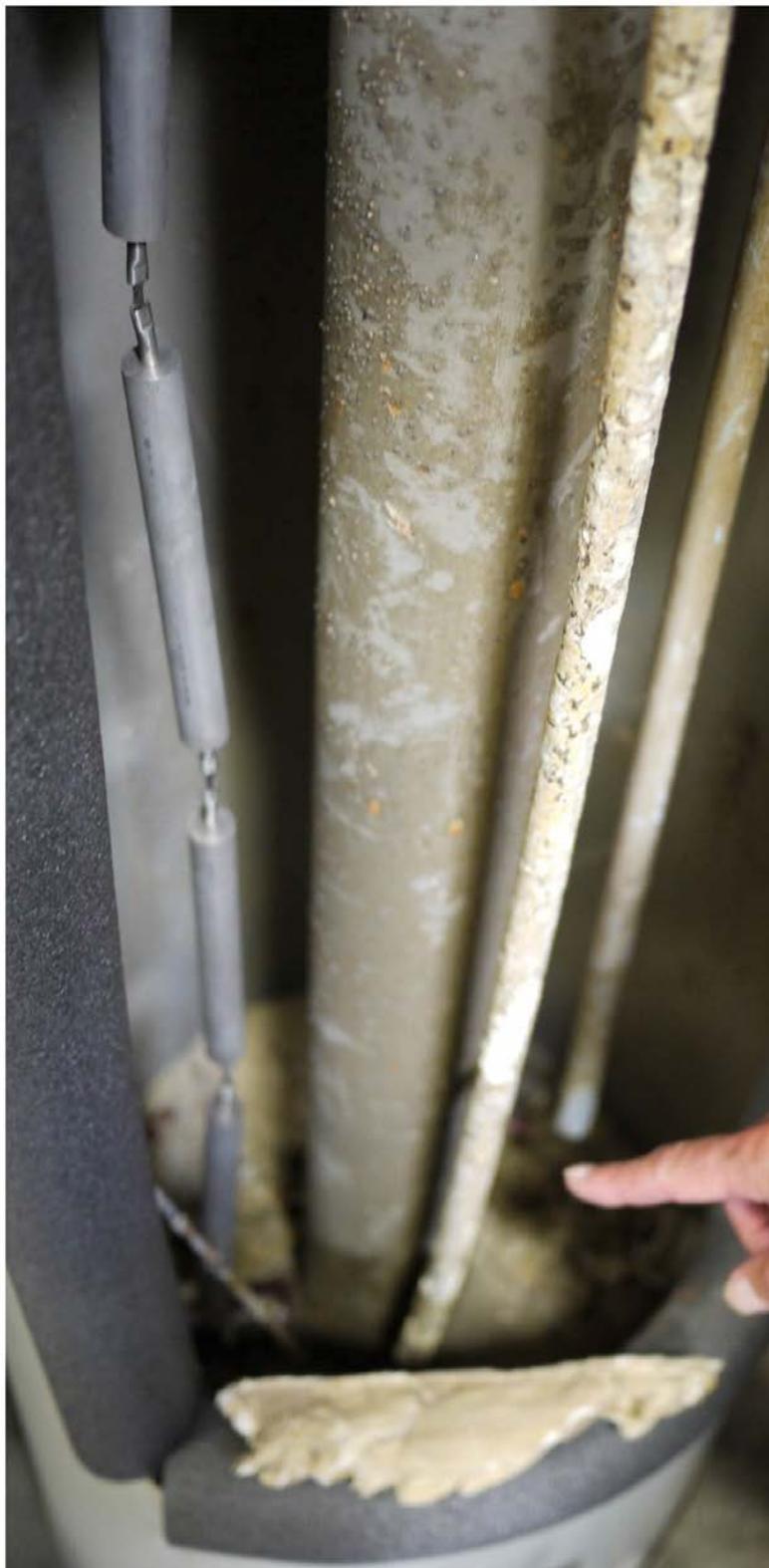


Commercial Water Heater - (w/Recirc. Loop)

HALO ION Installed on Cold Water Inlet & Hot Return



What difference does the HALO ION make?



WITHOUT TREATMENT

After nearly 7 years of service on San Diego Municipal Water
with no water treatment installed.

Accumulation of Scale & Corrosion



WITH HALO ION

After nearly 7 years of service on San Diego Municipal Water
with HALO 5 (INCLUDES ION) water treatment installed.

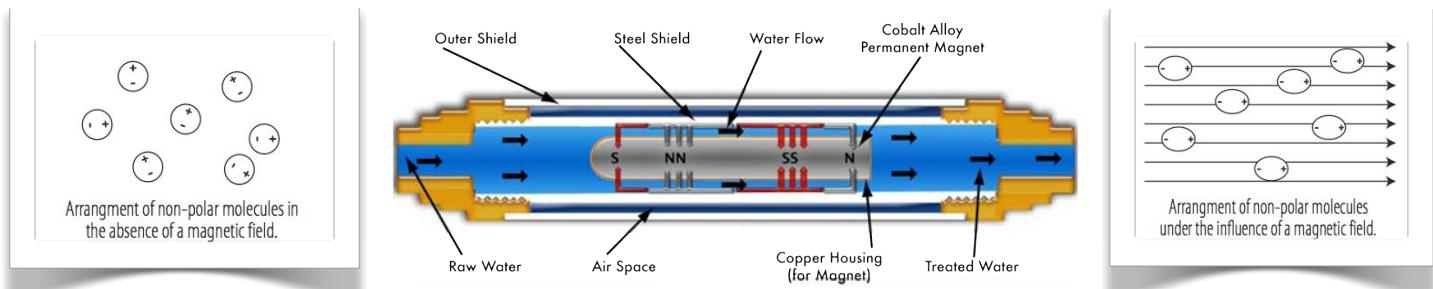
NO EVIDENCE OF SCALE OR CORROSION

(The marks on the back wall of the heater are where we ran a fingertip along the back to demonstrate the presence of the Aragonite talc.)

ARAGONITE is your friend



Magnetic Water Conditioning - Explained



When water is subjected to temperature change (ΔT), pressure change (ΔP), friction and turbulence, dissolved minerals, primarily calcium carbonate (CaCO_3) and magnesium carbonate (MgCO_3), will precipitate out of solution and deposit on heat transfer surfaces of plumbing systems and equipment in the form of a rock-like buildup, commonly called lime/scale.

At the molecular level, the negatively and positively charged ions of these minerals are attracted to and bond tightly together with one another, thus forming the lime/scale deposit known as calcite. These mineral deposits act as a great insulator and require more energy to heat or cool water in many different types of residential, commercial, institutional, and industrial applications.

As water passes through the HALO ION's treatment chamber, it is subjected to a series of reversing-polarity, permanent magnetic fields, which interrupts the natural scale forming characteristics of CaCO_3 and MgCO_3 by temporarily altering their ionic charge identity.

Instead of being attracted to one another, the molecules are caused to act like ions of similar charges and repel one another as they precipitate out of solution.

This leaves the molecules in a physical state of suspension known as aragonite (an amorphous mud-like or powdery form), which will flow through a plumbing system or drop to a low area within equipment so that it can easily be blown down or bled off.

Aragonite can also be removed by other physical means such as centrifugal separation and filtration equipment.

Since chemicals are unnecessary in this type of treatment, the purity of the water is not effected in any way, and it can be safely and legally discharged to a sanitary sewer or even to the environment, where allowed.

The presence of aragonite in the water provides an additional benefit in terms of corrosion protection. A thin film of the soft aragonite will adhere to all wetted surfaces of the plumbing system and equipment, keeping free oxygen and other corrosive properties in the water from reaching and attacking the metallic components, thus preventing corrosion.



ION Series - Inline Water Conditioners



How does the HALO ION Series Inline Water Conditioner work?

The patented system, when installed in a water supply line, controls the formation of scale and corrosion deposits without the use of chemicals. Water passing through the alternating magnetic fields causes most minerals (iron excepted) to stay suspended in the water so they cannot form a hard, brittle scale. The entire process bonds calcium ions to each other rather than to your plumbing and plumbing fixtures.

Water passes, under pressure, and with minimal turbulence, through alternating magnetic lines of force perpendicular to the water's flow direction. This causes a polarizing effect upon non-polar constituents in the water, and provides the energy of activation level necessary to cause the dissolved Calcium Carbonate (Calcite) CaCO_3 within the water to recombine and form "aragonite" (an amorphous powdery form) when the solubility limit is reached. Unlike crystalline CaCO_3 , aragonite can easily remain suspended in the water stream rather than attaching to system walls as "scale".

The presence of aragonite in the water provides an additional benefit in terms of corrosion protection. A thin film of the soft aragonite, which normally forms as a result of long term magnetic treatment, actually prevents free oxygen within the water from attacking the metallic components through which the water travels, thus preventing corrosion.

How is your product different from traditional water softeners?

Most water hardness treatment systems use ion exchange with salt as a regenerate which can have adverse effects on our health and the environment. While ion exchange systems substitute salt (sodium) for calcium, the HALO ION Series Inline Water Conditioner transforms dissolved calcium to crystallized calcium. Calcium in its crystallized state is rendered harmless and free from its hard properties and scaling effects.

What is your product used for?

The HALO ION Series Inline Water Conditioner has several uses. It is primarily used for commercial applications where scale prevention is required, such as; water heater pretreatment, reverse osmosis pretreatment, etc. It is also used for residential applications where HALO ION Series water is desired for both taste and functional use.

What is special about the HALO ION Series Inline Water Conditioner?

The HALO ION Series Inline Water Conditioner has been in use since 1964. It is the most widely used, recognized and reliable maintenance-free system available today. In addition, recent local bans on soft water equipment or wastewater discharge permits are not applicable to this system.

What is so important about not using chemicals or sodium in treating the water?

1. You are not spending money on them.
2. You are not ingesting them in part or in whole.
3. You are not adding to the pollution of the water supplies.

If the HALO ION Series Inline Water Conditioner does not use chemicals or sodium, what does it use?

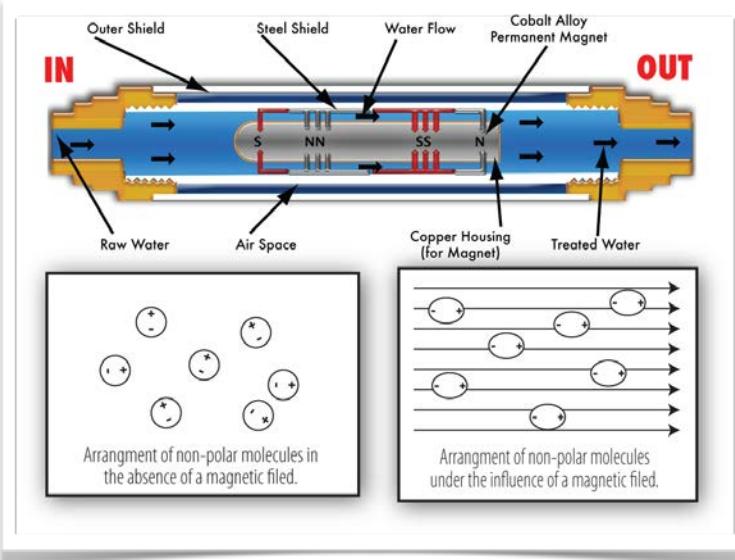
Just water! The HALO ION Series Inline Water Conditioner alters the state of the water through a multi-stage magnetic process; it does not add anything to it.

Will the water test soft after the system is installed?

NO. Remember that the calcium is still present in the water but in an altered state. A test for hardness in reality is a test for the presence of minerals Calcium and Magnesium, which have naturally hard properties. The HALO ION Series Inline Water Conditioner renders these harmless.

Won't the calcium crystals revert back to their dissolved state in my water heater?

The calcium crystals will remain suspended for approx. 24 to 72 hours. Normal water usage indicates that a typical household will turn the hot water over in a correctly sized water heater at least once per day. This means that the suspended calcium crystals will be washed down the drain before they have the chance to revert back to a dissolved state. At times when the water does sit for example if you are away on vacation, as soon as water is drawn through the unit the water is conditioned and any water that has been converted back to hard will quickly wash through. This prevents any scale from building up over time.





**25 YEAR WARRANTY
ON THE
HALO ION WATER CONDITIONER**

www.halowater.com

TO THE OWNER:

This water conditioner is guaranteed for a period of one (1) year and warranted for an additional twenty-four (24) years on a pro-rated schedule to be free of all defects in materials and workmanship. Upon receipt of the defective unit, freight pre-paid and proof of purchase, a new or refurbished water conditioner (at our discretion) will be furnished F.O.B. factory. There shall be no guarantee or warranty expressed or implied other than that contained herein.

**TO MAKE THIS WARRANTY EFFECTIVE AND PERMIT ANY CLAIMS UNDER THIS WARRANTY:
The owner shall fill out and return this certificate to HALO WATER SYSTEMS, 690 Carlsbad Village Dr., Suite 204, Carlsbad, CA 92008 within 30 days after installation.**

Ph.: 800.591.0538 Fx: 760.471.7793

**PLEASE RETAIN A COPY OF THIS DOCUMENT FOR YOUR RECORDS
AND RETURN THE ORIGINAL TO THE ADDRESS ABOVE.**

CUSTOMER INFORMATION

OWNER'S NAME		MODEL #		
ADDRESS		CITY	ST	ZIP
DATE INSTALLED	APPLICATION	EMAIL		

INSTALLER INFORMATION

COMPANY NAME		INSTALLER		
ADDRESS		CITY	ST	ZIP
PHONE		EMAIL		