HALO 5
MAINTENANCE FREE
WHOLE HOUSE WATER
FILTRATION & CONDITIONING

WHOLE HOUSE WATER TREATMENT SYSTEM

HALO 5
Solves Hard Water Problems

STAGE 1 Granular Activated Carbon (GAC)
NSF Certified acid-washed GAC for the general removal of chlorine, chloramines, gases, dyes, fuels, heavy metals, man-made pollutants, disinfectants, pesticides, TTHM, sodium hypochlorite, undesirable odors, undesirable taste and volatile organic contaminants. Our NSF/ANSI Certified GAC meets or exceeds all Food Chemical Codes, AWWA, ASTM and USP Standards.

STAGE 2 Centaur® High Activity Carbon (HAC)
Centaur® HAC is an outstanding material for successfully reducing free chlorine from water supplies. The end product is clean, fresh water with no objectionable taste or odor characteristics. Additionally, Centaur® HAC can be used for filtering waters having a wide range of pH levels and will impart a high “polish” to the filtered water. Our Centaur HAC is NSF/ANSI Certified under NSF Standard 42.

STAGE 3 Filter-AG Plus®
Filter-Ag Plus® is an all-natural, environmentally safe media with a large surface area and micro-porous structure. It is a highly efficient filter media for the reduction of suspended matter down to the 5 micron or less range and is thus, extremely effective at removing water turbidity. Our Filter-Ag Plus® NSF/ANSI Certified under NSF Standard 61.

STAGE 4 High Density Garnet Filter Media
Garnet is a high hardness, high density granular filtration media that can effectively filter down to the 10-20 micron range. It also provides an excellent support bed for the other filtration media. Our High Density Garnet meets AWWA specifications. It is also classified by Underwriters Laboratories Inc® in accordance with ANSI/NSF Standard 61.

STAGE 5 HALO ION Inline Water Conditioner
Our patented HALO ION Inline Water Conditioner uses multi-reversing polarity permanent magnetic fields to alter the molecular structure of positively and negatively charged ions of dissolved calcium and magnesium. This causes the hard water minerals that would normally cause lime scale to stay suspended in the water instead of attacking pipes and appliances. The conditioned water also helps prevent corrosion due to scale and will dissolve existing scale over time. With over 45 years of track record, the HALO ION Inline Water Conditioner is a proven, eco-friendly hard water treatment solution.

HALO filtration systems are effective at reducing chlorine, chloramines, and chlorination by-products from all of your household water. No more Chlorine Damage. No more bad taste & smell. No more bottled water.

HALO 5
Solves Chlorine Problems

WQA Tested & Certified
According to NSF/ANSI 61
INTERNATIONAL STANDARD
FOR DRINKING WATER ADDITIVES
LEAD FREE COMPLIANCE
Annex G, CA AB 1953

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Whole House Water Treatment System

**System Specifications**

<table>
<thead>
<tr>
<th>System</th>
<th>Tank Size</th>
<th>Wt. (lbs.)</th>
<th>H. (in.)</th>
<th>W. (in.)</th>
<th>Depth (in.)</th>
<th>Inlet/Outlet (in.)</th>
<th>Model #</th>
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<tbody>
<tr>
<td>HALO 5 - 1&quot;</td>
<td>10&quot; x 54&quot;</td>
<td>93</td>
<td>61</td>
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<td>73</td>
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<td>13</td>
<td>1.5&quot;</td>
<td>H5-150</td>
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<tr>
<td>HALO 5 - 2&quot;</td>
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<td>246</td>
<td>74</td>
<td>16</td>
<td>16</td>
<td>2.0&quot;</td>
<td>H5-200</td>
</tr>
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</table>

**System Capabilities**

- **HALO 5 - 1"**
  - 1,000,000 Gallons
  - For a family of four this system will last about 10 years
  - 2-8 GPM

- **HALO 5 - 1.25"**
  - 1,500,000 Gallons
  - For a family of six this system will last about 10 years
  - 2-8 GPM

- **HALO 5 - 1.5"**
  - 2,000,000 Gallons
  - For a family of six this system will last over 10 years
  - 4-15 GPM

- **HALO 5 - 2"**
  - 3,000,000 Gallons
  - For a family of six this system will last over 10 years
  - 8-25 GPM

**Installation at a Glance**

1. Plumb Inlet/Outlet to system at Main.
2. Plumb system drain line.
3. Flush system with Hose Bibb (20 mins).
5. Flush system with Hose Bibb (20 mins).
6. Force Regeneration (10 mins.).
7. Final Flush with Hose Bibb (20 mins).
8. Open system to household.
9. Test for Chlorine at Hose Bibb and Kitchen Sink and show customer results.

**Special Considerations:** The HALO 5 is a COMPLETE Whole House Water Treatment Filtration & Conditioning Solution. It is highly effective and eco-friendly. 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 additional treatment may be necessary. (3) Some tankless water heaters require additional treatment for optimum results. The HALO ION uses multi-reversing polarity permanent magnetic fields to affect the "ionic charge identity" of the CaCO3 and MgCO3 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.

Any questions, please call us at 800.591.0538. Available 24/7.

For Information please call 800.591.0538 or visit www.halowater.com
Congratulations on the purchase of your new HALO 5 Water Conditioning and Filtration System! You are now the owner of one of the most advanced, eco-friendly water treatment systems available! The following information and list of “tips” was designed to help you better understand and maximize the effectiveness of this advanced water treatment technology.

Understanding and Appreciating Aragonite:
In appliances, on dishes and on countertops where water is frequently left standing, you may begin to notice a powdered talc-like substance collecting. This powder is called Aragonite. Aragonite is a harmless, electrically neutral and non-corrosive form of calcite that is produced during the magnetic conditioning portion of the HALO 5 water treatment process. Prior to passing through your HALO 5’s magnetic conditioner, this Aragonite is actually the minerals that would have caused lime scale build-up and corrosion in your pipes and appliances. The Aragonite is a byproduct formed after hard water passes through your HALO 5’s magnetic conditioner and it is easily wiped off most surfaces. You should consider Aragonite as welcome proof that your HALO 5’s Water System is operating effectively.

Here Are A Few Simple Actions To Help Minimize Aragonite Left On Items Cleaned By Your Dishwasher.
1. Use ONLY powdered dishwasher soap. We recommend Cascade Complete.
2. CUT DOWN ON SOAP. Use only 1 Tablespoon TOTAL divided ½ into each dispenser cup. Too much soap may cause spotting, etching, filming and/or glazing.
3. Dishwasher hot water temperature should be at least 140° and hotter is better so, prior to starting your dishwasher, you should run the HOT water at the kitchen sink until it begins to flow hot. This ensures hot water for the dishwasher’s wash cycle.
4. Use (as directed) a rinse agent such as “Lemi Shine”. Available at most Target, WalMart stores and Amazon.com.
5. Turn off the dishwasher heating element and allow the dishes to cool dry. Open the dishwasher door slightly to allow steam to escape as soon as the wash cycle is complete.
6. Always store detergent in a dry place as moisture adversely affects dish detergent contributing to spotting. Purchasing small boxes of detergent, may make it easier to keep fresh product on hand. Check the expiration date for freshness because dish detergent actually does expire!

Tips To Remove & Prevent Lime Scale Film On Dishes, Glasses, Small Appliances & Plumbing Fixtures That Have Been Subjected To Untreated Water Prior To The Installation Of Your HALO 5 System: These items likely have soap scum and lime scale build up.
1. Place effected dishes into dishwasher and run a complete wash cycle substituting 1 cup of white vinegar for the soap. Some glasses can become permanently etched if too much soap has previously been used.
2. Residue and mineral build up can be cleaned from small appliances such as coffee makers by using a 2-1 solution of hot water and white vinegar. Simply pour the water and vinegar solution into the water reservoir of your automatic coffee maker and turn it on. After it has “brewed” the water and vinegar solution, repeat the process using water only. This will rinse any remaining vinegar from the appliance.
3. Lime Scale and hard water deposits which have built-up on faucets and plumbing fixtures prior to the installation of your new HALO 5 water treatment system should be carefully removed with the help of products such as “CLR” or “Lime Away”. Use these products only as directed by the manufacturer as they contain harsh chemicals which can ruin some finishes. “Lemi Shine” has also been reported to help remove mineral build up from dishwashers as well as from bathtubs, sinks and toilets.

Tips For Cleaning & Maintaining Your Bath & Shower Enclosures:
1. Use “CLR”, “X-14” or “Lemi Shine” as directed to remove any existing mineral build-up from your bath tub, shower walls, shower basin and glass doors.
2. Use a squeegee or wipe down shower doors and walls after each use to prevent spots caused by soap scum.
3. Applying “Turtle Wax” or a good liquid car wax on clear glass doors, chrome, brass and dark colored shower tile will help to promote water sheeting and discourage soap scum build-up.
4. HALO 5 treated water contains almost no chlorine. This water is more enjoyable to drink and to bathe in, but chlorine does help prevent mildew from developing. Proper ventilation and consistently wiping down the bath tub and shower enclosure after each use will keep your bathing area free of mildew.

Toilet Maintenance & Cleaning:
1. Adding bleach to toilet bowl will help prevent mildew and bacteria. This is particularly important for newer low-flush toilets that do not fully flush away deposits.
2. Infrequently used toilets, such as those located in vacation homes or in guest bathrooms, may be subject to rapid mineral build-up due to inactivity. Use a product such as “CLR” to remove this mineral build-up.
Activated Carbon
General contaminant removal capabilities.

**Contaminants Effectively Removed**

**Chlorine**
(Water additive used to control microbes)

**Sodium Hypochlorite**
(From natural erosion & used in water treatment)

**Commercial Additives**
- Cresol
- Ketones
- Toluene
- Phenol
- Toluidine

**Disinfectants**
- Bleach
- Calcium Hypochlorite
- Chlorophenol

**PCBs (Environmental pollutants)**

**Pesticides**
- Defoliants
- Herbicides
- Insecticides
- Methyl Bromide

**Solvents**
- Amyl Acetate
- Butyl Acetate
- Chloroform
- Diesel Fuel
- Glycols
- Methyl Ethyl Ketone
- Nitrobenzene
- Oxalic Acid
- Trichloroethylene

**TTHM (Total Trihalomethanes) (By-product of drinking water chlorination)**

**Pharmaceutical By-Products**

**Tar Emulsion (Topical medication by-product)**

**Undesirable Odors**
- Chlorinous or bleach odor
- Earthy or grassy odors
- Fishy odor
- Fruity odor
- Musty odor
- Pooey, bleach or geranium odor

**Unigirable Taste**
- Bleach or chlorine taste
- Garlic taste
- Medicinal taste
- Plastic Taste
- Rubber Hose Taste
- Rusty or Metallic taste

**Likely Source Of Odor Contamination**
Addition of chlorine as a disinfectant Geosmin produced by algae
Addition of chlorine and ammonia as a disinfectant (chloramines)

**Likely Source Of Taste Contamination**
Addition of chlorine as a disinfectant
Methane gas resulting from the decomposition of organic matter
Phenols from industrial waste or Chlorophenols
Addition of chlorine as a disinfectant
Addition of chlorine and ammonia as a disinfectant (chloramines)
Iron & manganese in the ground

**Limited Contaminant Reduction**

**Fluoride**

**Hydrogen Bromide**

**Precipitated Iron**

**Precipitated Sulfur**

**Contaminants Reduced**

**Acetic Acid** (Water chlorination by-product)

**Detergents**

**Heavy Metals** (Chromium, lead, copper, zinc and cadmium)

**Hydrogen Selenide** (Similar to arsenic)

**Hydrogen Sulfide** (Responsible for “rotten egg” odors)

**Lead** (Erosion of natural deposits, corrosion of household plumbing systems)

**Nitric Acid** (Strong antioxidant)

**Soaps**

**Vinegar**

**Contaminants Significantly Reduced**

**Alcohols** (Commercial by-products)

**Antifreeze** (Poisonous products)

**Chloramine**
(Water additive used to control microbes)

**Commercial Additives**
- Chlorophyll
- Ethyl Alcohol
- Ethyl Ether
- Mercaptans
- Propionaldehyde
- Propyl Acetate
- Propyl Chloride
- Tartaric Acid

**Solvents**
- Acetaldehyde
- Methyl Acetate
- Ozone
- Organic Salts

**Disinfectants**
- Lactic Acid
- Potassium Permanganate
- Radon (Gaseous element)

**DISCLAIMER:** The use of this product in and of itself does not necessarily guarantee the removal of the contaminants and pathogens listed above from water. Effective contaminant and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.
ARAGONITE is your friend

When water is subjected to temperature change (delta T), pressure change (delta P), friction and turbulence, dissolved minerals, primarily calcium carbonate (CaCO₃) and magnesium carbonate (MgCO₃), 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 CaCO₃ and MgCO₃ 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.
LIMITED LIFETIME WARRANTY

HALO Water System's point of entry residential water filters and conditioners (up to 13" diameter mineral tanks) are warranted to the original owner at the original residential installation location to be free from defects in materials and workmanship from the date of manufacture as specified.

1. HALO will provide one replacement tank for any tank that fails due to a manufacturing defect.
2. HALO warrants that components for the equipment will be available for the lifetime of the system.
3. HALO will provide comparable components of our selection to replace any obsolete items.
4. HALO will, within five years from date of install repair or replace warranted defective control valve parts at no charge.
5. HALO will provide replacement carbon media at no charge (except freight and handling) for 10 years from the date of installation due to media failure. (Chlorine only)
6. This warranty gives you specific legal rights that may vary from state to state.

CONDITIONS OF WARRANTY

1. The system must be installed and maintained according to local codes and secondarily in accordance with manufacturer’s recommendations. Contact HALO if there are any conflicts between local codes and our printed instructions.
2. The system must be maintained with HALO approved replacement components.
3. Failures resulting from fire, freezing, neglect, accident, alteration, abuse, improper installation or acts of nature are not covered.
4. Water pressure must be regulated between 40 to 80 pounds per square inch working or static pressure. Pressure exceeding 80 pounds per square inch (psi) working or static pressure voids all warranty.
5. Pressures exceeding 120 pounds per square inch and vacuum in excess of 5"HG (17 Pa) voids warranty on tank.
6. Internal water temperature exceeding 120°F voids warranty on tank.
7. Influent chlorine must not exceed 1 mg/L.
8. HALO does not warrant to perform, pay for, or finance any repairs and/or installations. The customer must contact the HALO representative prior to any repairs or replacements.
9. If a recirculation pump is in use at the location of the HALO system, install a secondary HALO ion conditioner on each recirculating loop present in order to ensure expected results.

OBTAINING WARRANTY SERVICE

Prior to any Warranty actions, including replacement or removal of parts and/or equipment, Service Tech must put system on by-pass and immediately contact HALO to provide model number, serial number and photos of system and problem site. All returns must be accompanied by a “Return Merchandise Authorization” (RMA) number. All defective warranted part(s) along with a copy of this warranty, original purchase receipt, and the RMA number. (HALO will at our option, repair or provide replacement more two parts at no cost, except freight, handling, on-site labor charges.) You can contact HALO at (800) 591-0538 or email us at warranty@halowater.com.

LIMITATIONS AND EXCLUSIONS

This warranty is exclusive and in lieu of any other warranty expressed or implied, including but not limited to, any implied warranty of merchantability of fitness for a particular purpose. HALO shall not be liable for any loss or incidental or consequential damages resulting from the misuse or inability to use the equipment by the buyer or any user.

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