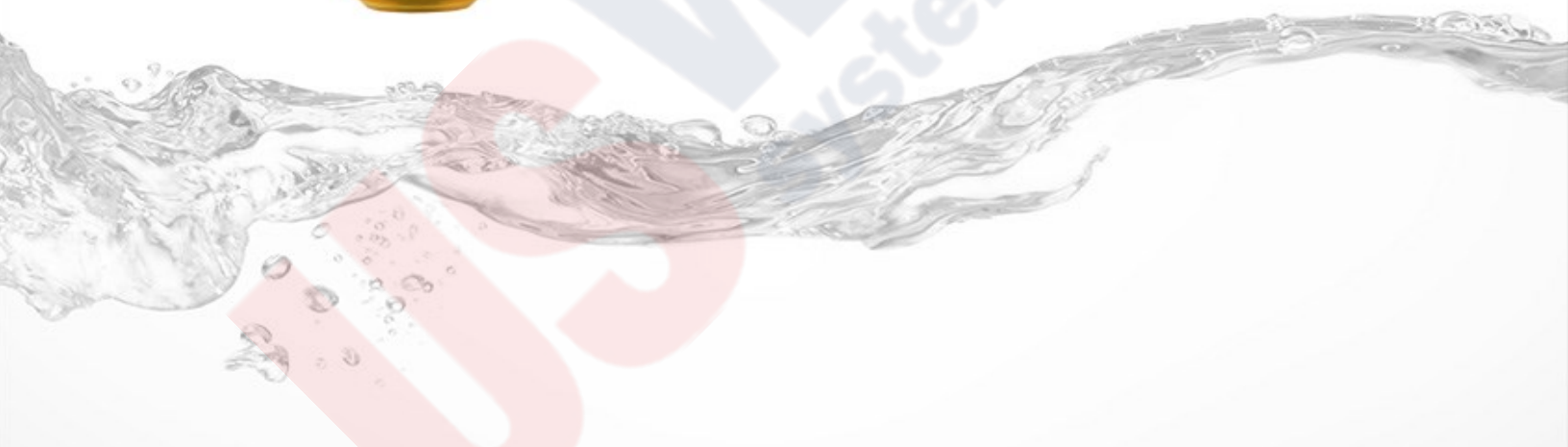


Greenwave Solo Salt-Free Water Conditioner



The logo features a stylized blue wave icon to the left of the text "Green Wave" in green, with "SOLO" in blue below it.



Owners Manual

Models:

385--GWS-1

REVISION # 1.0
REVISION DATE May 18 2016

US Water Systems Corporate Office
1209 Country Club Road
Indianapolis, IN 46234

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Unpacking / Inspection

Be sure to check the entire system for any shipping damage or parts loss. Also note damage to the shipping cartons. Contact US Water Systems at **1-800-608-8792** or visit www.uswatersystems.com/returns to report any shipping damage within 24 hours of delivery. Claims made after 24 hours may not be honored.



Introduction



The new standard in salt free water conditioning technology brought by America's Most Trusted Water Company. It prevents scale formation on plumbing and appliances while delivering softer skin and less soap usage. There is not a system on the market today that can prevent scale like the new Green Wave – pure and simple!

The Green Wave Solo is the new revolutionary and economic way to deal with hard water. The Green Wave Solo totally prevents lime-scale on and in appliances, pipes, fixtures - actually everything water touches. Our new Green Wave System is the new standard by which all salt free water conditioners will ultimately be judged. The new Green Wave Technology effectively "Seals" the plumbing and appliance surfaces so that calcium and magnesium (often called lime-scale) cannot stick. Additionally, the Green Wave water treatment method is environmentally friendly, uses no electricity and 100% safe for drinking water.

Hard water is also bad for your skin. Dermatologists and specialists often recommend that patients treat hard water because it is gentler to your skin. Skin irritations and infections can be prevented or considerably reduced by treating hard water before use. By using the Green Wave, no Calcium deposits are left on your skin and soap residues are rinsed off easier and cleaner. Your skin knows the difference!

Green Wave Benefits:

- Completely safe for drinking water
- Easy to fit and low maintenance
- No electricity needed - No waste water
- Long life cartridges of approximately 20,000 gallons - typically two months for the average family **(not intended for irrigation or other water usage actual usage could vary depending on lifestyle and water quality)**
- Extends the life of appliances: dishwasher, washing machine, water heater, faucets, etc.
- Glasses, silverware and cutlery stay like new
- Cleaner bathrooms, showers and kitchens
- Saves up to 40% on energy by reducing cost of energy bills
- Save up to 30% of your normal soap and cleaning products
- Softer and healthier skin - Reduces skin irritations and infections
- Low purchasing and maintenance costs, pays for itself within one year
- One-Year Money Back Guarantee on the Green Wave Solo.

How It Works

The Green Wave Solo system uses a unique and patented dosing system which adds a small amount silicopolyphosphate (a food grade material) to the water, effectively "sealing" Calcium and Magnesium from sticking to any surface or pipes. Silicopolyphosphate is a "food grade" product and is safe for human consumption according to the WHO and FAO recommendations. It meets all FDA requirements for being "food grade." Cities have used it for years on a smaller scale - it is completely safe - however if you don't want it in your drinking water... and you also want to remove 35,000 other contaminants that can be in your water, like chemicals, rocket fuel, pharmaceuticals, TCE, THM's and many others, then we suggest using Reverse Osmosis for drinking, cooking and the like.

Water Quality Parameters

NOTE: THE USAGE PARAMETERS AND VALUES ARE BASED ON TYPICAL HOUSHOLD USAGE IN A 2 BATHROOM HOME WITH 2 ADULTS AND 2 CHILDREN. IF THE SYSTEM IS BEING USED FOR IRRIGATION OR OUTSIDE SPIGOTS, THE USAGE NUMBERS DO NOT APPLY.

- Application: Municipal water, but can be used on surface or well water with proper pre-treatment
- Flow Rate: Designed to flow up to 15 GPM, but flow rate can be exceeded for short periods of time.
- Thread Size: ¾" FNPT
- Maximum Hardness: 80 GPG
- Maximum Iron: Zero
- Maximum Sulfur: Zero
- Maximum Manganese: Zero
- Maximum Oil: Zero
- Maximum Copper: 1.3 mg/l
- pH: 6 to 9
- Feed Water Pressure: 20 to 100 psi
- Feed Water Temperature: 38 to 100 deg F

NOTE: The Green Wave Solo system requires a five (5) micron pre-filter ahead of it, so if the Green Wave Solo is purchased, it is assumed that there is some type of existing pre-filter. If you have an older Green Wave, Pelican Water or any other tank-type salt free system, we can retro-fit it with the new Green Wave Solo Technology. Call one of our Certified Specialists at 800-608-8792 to get details.

Proper Installation

This water conditioning system must be properly installed and located in accordance with the Installation Instructions before it is used or the warranty will be void.

Do not install or store where it will be exposed to temperatures below freezing or exposed to any type of weather. Water freezing in the system will break it. Do not attempt to treat water over 100°F.



38° - 100° F

Do not install in direct sunlight. Excessive sun or heat may cause distortion or other damage to non-metallic parts.



No Direct Sunlight

Iron levels must be less than 0.0 mg/L

Fe

Less than 0.0 mg/L

Manganese levels must be less than 0.00 mg/L

Mn

Less than 0.00 mg/L

Copper levels must be less than 1.3 mg/L

Cu

Less than 1.3 mg/L

pH Range must be 6-9 S. U.

pH

Range 6-9 S. U.

Sulfur must be 0.0 mg/L

S

Must be 0.0 mg/L

Oil and Grease must be 0.0 mg/L

O&G

Must be 0.0 mg/L

Hardness must be < 80 GPG

GPG

Must be < 80 GPG

WARNING: Discard all unused parts and packaging material after installation. Small parts remaining after the installation could be a choke hazard.

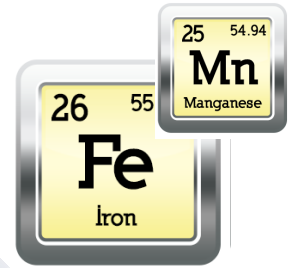


Discard All
Unused Material

An Important Note about *Iron, Manganese & Copper*

Iron and Manganese

Just as with conventional water softening media, the GreenWave water conditioning 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, present a problem, but if the water supply is from a private well confirm that the levels of iron (Fe) and manganese (Mn) are 0.0 mg/L respectively. Copper should be less than 1.3 mg/L.



Copper

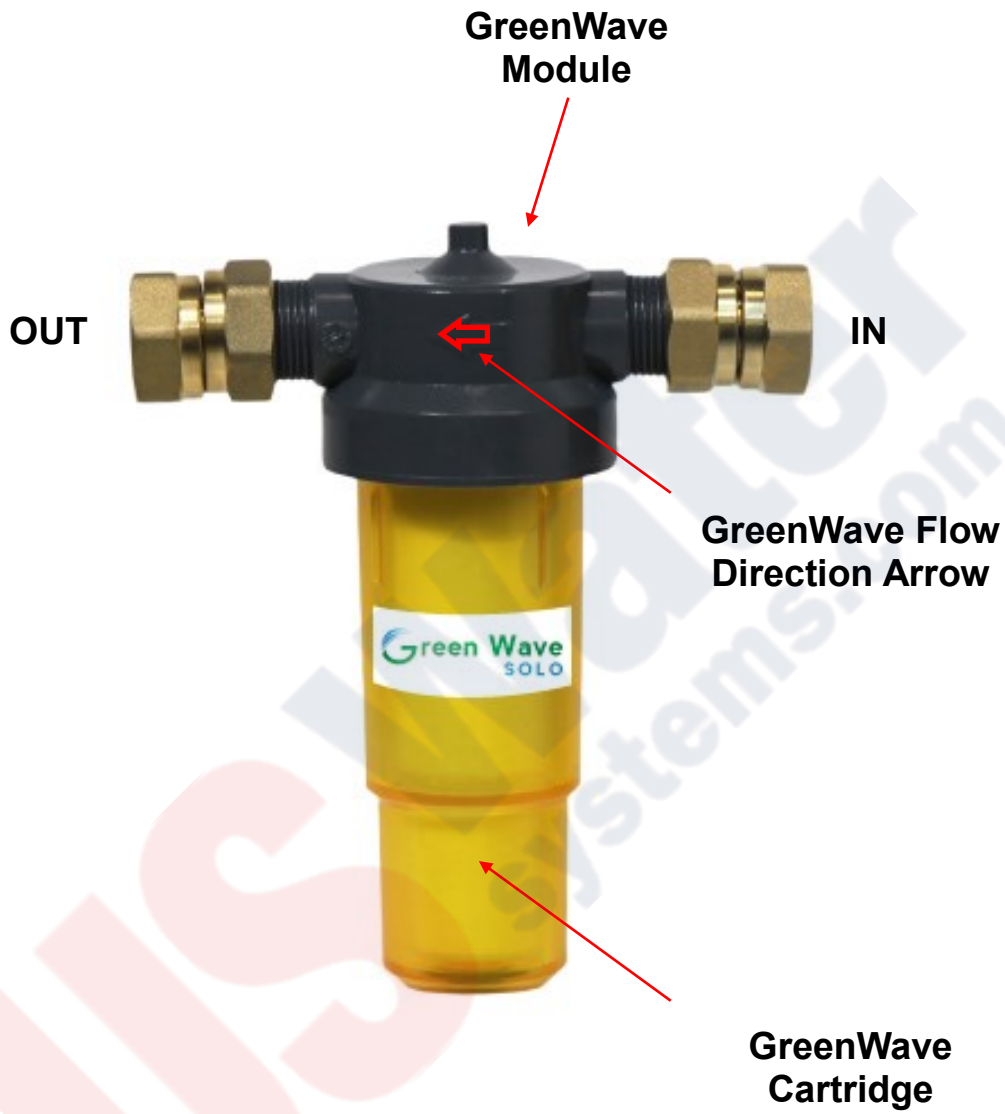
Copper usually originates from new copper plumbing upstream of the GreenWave system. If this condition exists, we recommend waiting 3-4 weeks before placing the system in operation. This will allow the copper surfaces to be fully flushed and develop a natural protective surface. To further minimize any problem with excess copper the installers should be advised to avoid applying excess flux on the inner surfaces of the pipe and to use a low-corrosivity water soluble flux listed under the ASTM 8813 standard. Once the plumbing connections are complete, place the GreenWave system in bypass prior to following the startup procedure and flush the plumbing for at least 10 minutes.



Cautions!

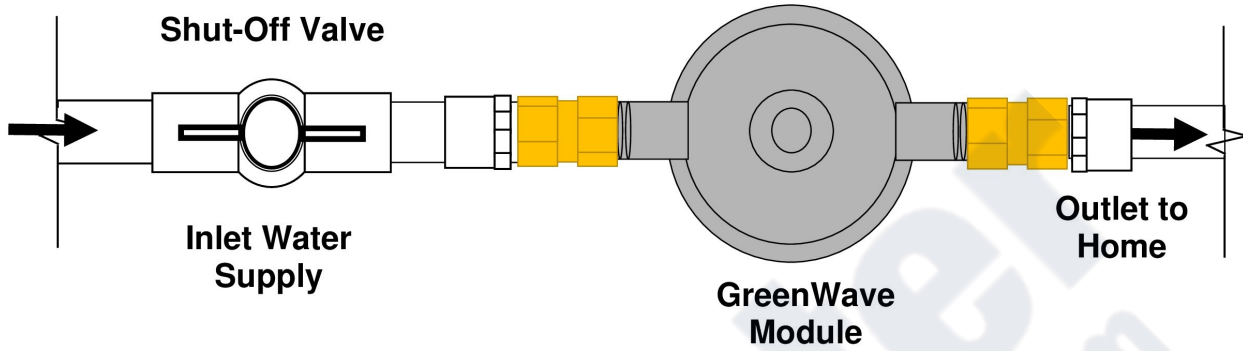
- Do not let the system freeze. Damage to the module may result.
- System must be operated in a vertical position. Do not lay it down during operation. The system may be placed in any position for shipping but when installing, it must be operated in the vertical position.
- Observe all local plumbing and building codes when installing the system.

System Overview



System Overview (Configuration)

Wall



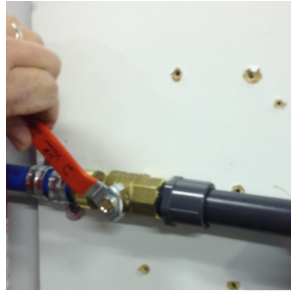
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Green  Wave
Solo Series



GreenWave Module Installation

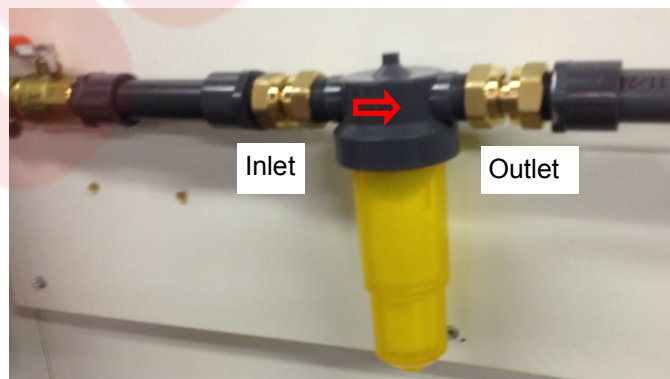
1. Find the desired installation location. Make sure outside spigots and irrigation systems are prior to the GreenWave module. If the GreenWave module is used to treat outside spigots and irrigation water, the yield on the GreenWave cartridges will be dramatically reduced. It is recommended that outside spigots and irrigation be plumbed in prior to the GreenWave module. If there is existing equipment, install the GreenWave module after the existing equipment.
2. Turn off the feed water and open a faucet or spigot downstream to relieve the pressure in the system.



3. Install the brass swivel connectors on the GreenWave module hand tight. These swivel connectors do not require Teflon tape. These connectors have rubber washers that seal the connection. Teflon tape would serve no purpose.



4. Cut the pipe and install the feed pipe into the GreenWave module. Be sure to use Teflon tape on all threaded connections other than the brass swivel connections. The inlet is identified by looking at the flow direction arrow on the side of the module. The arrow points away from the inlet connection. Install the outlet plumbing. The arrow points to the outlet connection point.



NOTE: There is a check valve on the outlet connection of the GreenWave module. If the GreenWave module is installed backwards, there will be no flow to the home when the water is turned on. **BE SURE** the flow direction is correct when installing the GreenWave module.

GreenWave Module Installation

5. Now secure the brass connectors.



6. Open a faucet or spigot downstream and slowly open the water supply valve. Continue to open it slowly until it is fully open and there is no air coming from the faucet or spigot.
7. Once the water is running clear, the system is flushed and ready to use. Be sure to check for leaks.

GreenWave Cartridge Replacement

The GreenWave treatment cartridge must be changed periodically. The frequency is dependent on the water usage and the water quality. Typical 4 people 2 bathroom households should get around (2) two months of usage. However, water with very high hardness levels may require a more frequent change. The cartridge should be checked periodically to determine if the media is still present. Once the media is gone the water will not be treated.

1. Turn off the feed water and open a faucet or spigot to relieve the pressure.



2. Use the supplied wrench to remove the GreenWave module sump by turning the sump counter-clockwise. Then spin the sump off by hand. Be sure not to lose the O-ring when removing the sump.

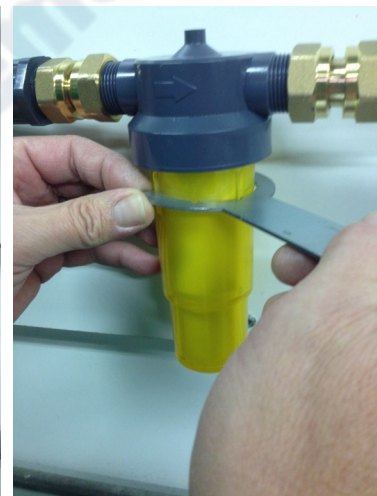


GreenWave Cartridge Replacement

1. Turn off the feed water and relieve the pressure at a faucet or spigot downstream.
2. Use the supplied wrench to remove the GreenWave module sump.
3. Remove the empty GreenWave cartridge from the GreenWave module sump and discard.



4. Install the GreenWave cartridge back into the sump. Be sure the O-ring is in place and lubricated with food grade silicon grease or corn or vegetable oil.



NOTE: DO NOT use petroleum based grease!

5. Install the GreenWave module sump and tighten it hand tight. Then turn it an additional 1/4 turn to snug it further.
6. Open a faucet or spigot down stream and slowly turn on the water supply.
7. Allow the GreenWave module to fill with water then check it for leaks.
8. If there are no leaks, run the water unit it is clear then shut off the faucet or spigot.
9. The system is now operational. Be sure to check for leaks one final time.

GreenWave Warranty Conditions and Limitations

LIMITED WARRANTY

US Water Systems, Inc. warrants the GreenWave system as follows:

- The Solo housing and sump are warranted to be free of defects in materials and workmanship for 5 years from the date of original purchase to the original owner.

Conditions

1. The GreenWave system must be properly installed in accordance with the instructions provided by US Water Systems.
2. Any component failure must not result from abuse, fire, freezing or other acts of nature, violence, or improper installation.
3. Equipment must be installed and operated in compliance with the local plumbing codes, and on an approved water supply.
4. Equipment is limited to use at water pressures not to exceed 100 PSI and temperatures not to exceed 100 degrees F.
5. Water supply must not exceed 1-PPM chlorine. For water supply exceeding 1 PPM chlorine, pretreatment is required. (Please contact US WATER.)
6. Information, including model number, sales number, and date of installation, must be provided for any claims pertaining to equipment in warranty.
7. Defective parts are subject to inspection by either US Water Systems, Inc. or any authorized representative before final commitment of warranty adjustment is made.
8. US Water Systems, Inc. reserves the right to make changes or substitutions in parts or equipment with material of equal quality or value and of then current production.

Limitations

Our obligation under this warranty with GreenWave Solo Housing and Sump is limited to furnishing a replacement for, or at our option, repairing any part or parts to our satisfaction that prove defective within the warranty period stated above. Such replacement parts will be delivered to the owner F.O.B. nearest factory, at no cost, excluding freight and local labor charges, if any.

US Water Systems, Inc. shall not be liable for freight, handling or labor charges, subsequent or consequential damages.

GreenWave Solo Maintenance Schedule

Component	Procedure	Frequency
GW Housing and Sump	Remove and clean with a mild disinfectant solution. Lubricate the O-ring with food grade silicone grease.	Annually
GW Cartridge	Replace cartridge as needed. Follow the aforementioned procedure.	As needed



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Limited 5 Year Warranty

For 5 years from the original purchase, at the original residential place of installation of this *GreenWave Solo* Water Conditioning System, *US WATER SYSTEMS, INC.* warrants the following:

FIVE YEAR COVERAGE

GreenWave Housing and Sump

We warrant that for five (5) years from the date of purchase, we will replace the GreenWave Housing and Sump at no charge to you except for transportation and standard labor charges.

GENERAL PROVISIONS

This warranty does not apply to any commercial or industrial installations or to any part of the water conditioner which has been subjected to misuse, neglect, alteration or accident; or to any damage caused by fire, flood, freezing, Acts of God, or any other casualty, or if the original serial numbers have been removed. Fouling or damage to the media caused by iron, sulfur, bacterial iron, silt, sand, tannins, organics, bacteria, hot water or chlorine voids the warranty on media.

These warranties are in lieu of all other warranties expressed or implied, and we do not authorize any person to assume for us any other obligation on the sale of this water conditioner. No responsibility is assumed for delays or failure to meet these warranties caused by strike, government regulations or other circumstances beyond the control of *US WATER SYSTEMS, INC.*

TO OBTAIN WARRANTY SERVICE, CALL OR WRITE: *US WATER SYSTEMS, INC. 1209 COUNTRY CLUB ROAD INDIANAPOLIS, IN 46234 (800) 608-USWA.*

ANY IMPLIED WARRANTIES OF FITNESS OR MERCHANTABILITY ARE LIMITED TO THE TERMS OF THIS EXPRESSED WARRANTY AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THOSE HEREIN. *US WATER* SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

THIS WARRANTY MAY BE TRANSFERRED TO A SUBSEQUENT OWNER WITH WRITTEN APPROVAL OF *US WATER* AND PAYMENT OF STANDARD TRANSFER FEE.