

# US Water Systems Homeland Security Whole House Filtration System



## HOMELAND SECURITY FILTER

### Owners Manual

*390-PWFMS2-A, 390-PWFMS2-B, 390-PWFMS2-C*

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## Unpacking / Inspection

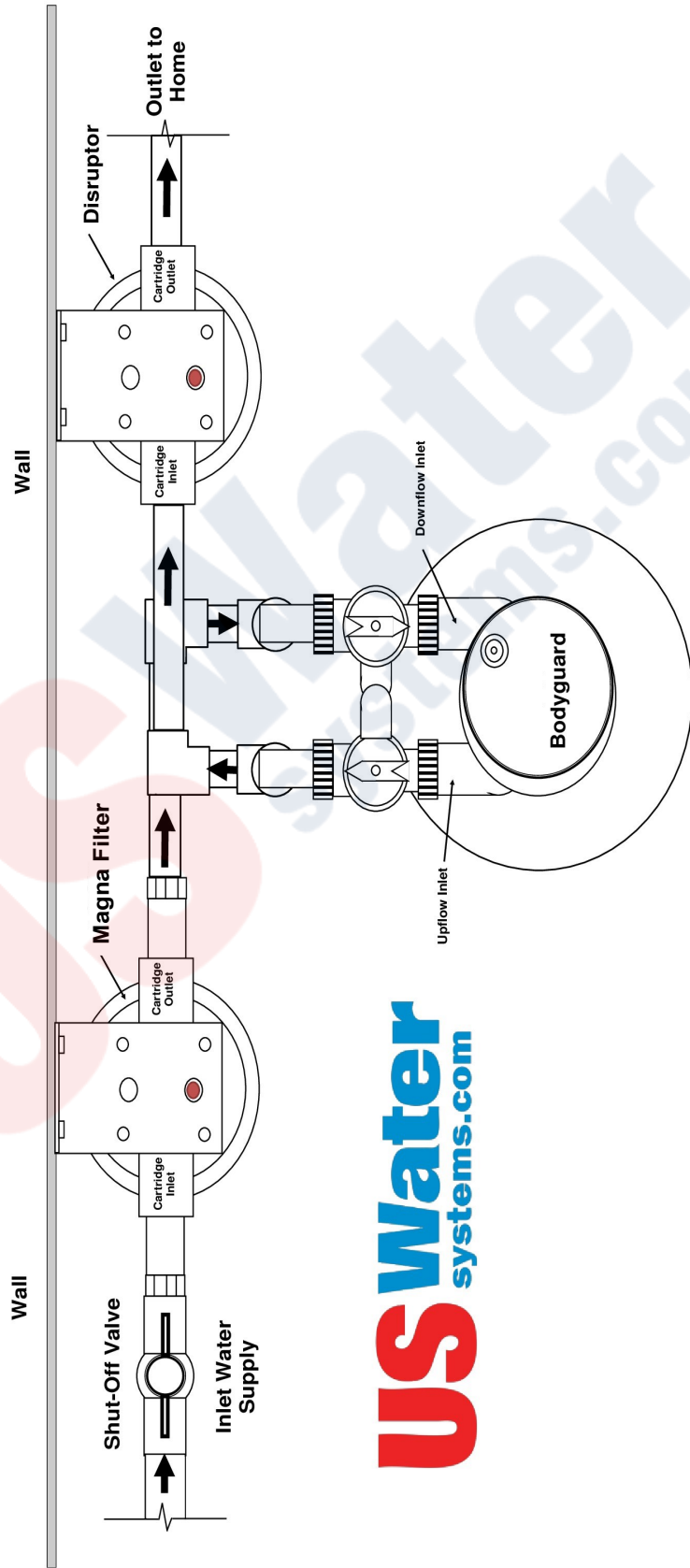
Be sure to check the entire system for any shipping damage or parts loss. Also note damage to the shipping cartons. Contact US Water Systems at 1-800-608-8792 to report any shipping damage within 24 hours of delivery. Claims made after 24 hours may not be honored.

Small parts, needed to install the system, are in a parts bags. To avoid loss of the small parts, keep them in the parts bag until you are ready to use them.

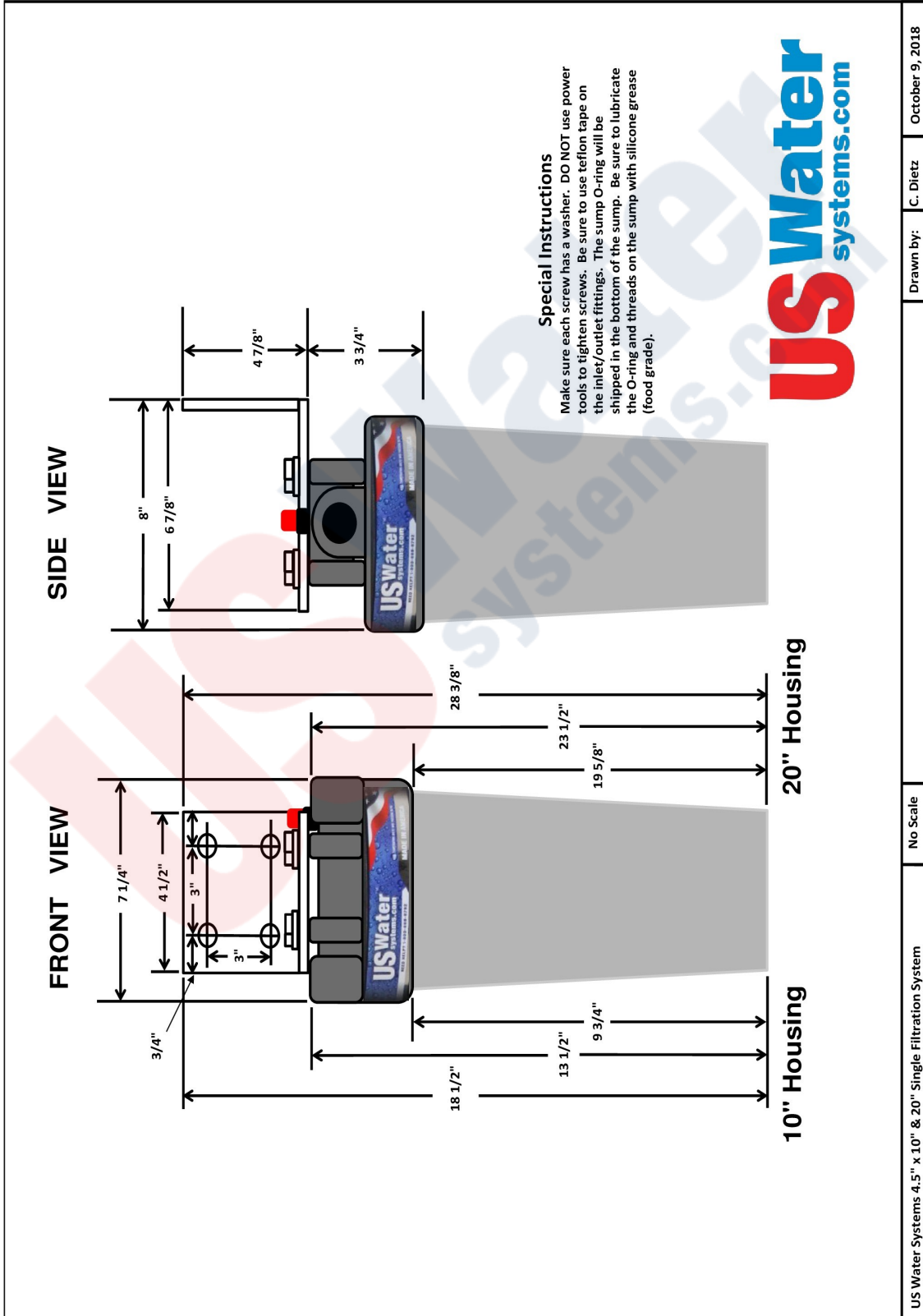
## Safety Guide

- Check and comply with your provincial / state and local codes. You must follow these guidelines.
  - Use care when handling the filter system. Do not turn upside down, drop, drag or set on sharp protrusions.
- **WARNING:** This system does not remove biological contaminants. US Water Systems recommends that bacteria levels be checked periodically to ensure there is no bacteria present. Coliform and E.coli most importantly.

# US Water Homeland Security Filter

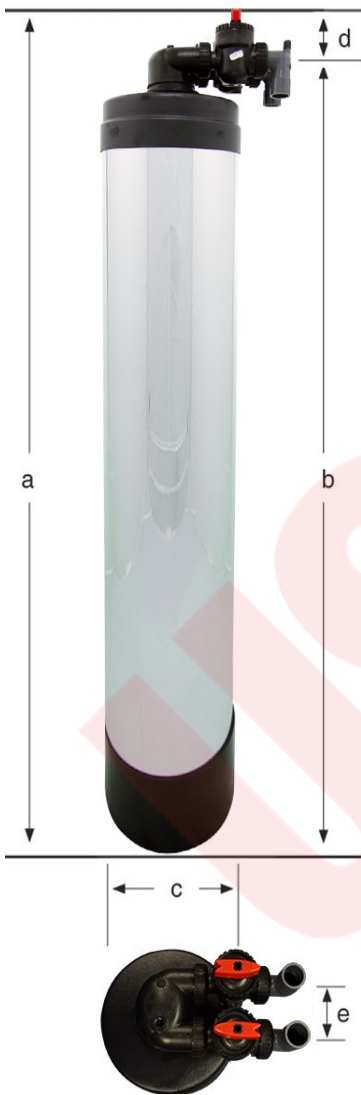


**System Dimensions**



## System Dimensions

US Water Bodyguard systems are complete, self-contained, loaded with media and ready to use. A simple inlet and outlet connection is all that is required for installation. Please review operating pressures, temperatures and water chemistry limitations to ensure compatibility.



### Specifications

Inlet/Outlet Connection	1" NPT
Temperature	40° - 110°F
Water Pressure	15 min, 100 max (PSI)

### Dimensions (nominal - inches)

	PWFMS2-A	PWFMS2-B	PWFMS2-C
A	55.0	61.0	61.0
B	52.5	58.5	58.5
C	9.0	10.0	13.0
D	2.5	2.5	2.5
E	3.0	3.0	3.0



## US Water Magna Filter Specifications and Operation

### Magna Benefits

- **Magna Seal** - It has a positive “o-ring seal” unlike traditional “flat top” filters
- **Magna Media** – A 10” filter has 18 square feet of pleated polyester commercial grade media, and a 20” filter has 36 square feet of pleated polyester commercial grade media – compare that to other brand pleated filters which have 30-50% less.
- **Magna Contaminant Capacity** – Traps 12 times sediment depth filters, 8 times string wound filters, 2 times other pleated sediment filters.
- **Magna Clear Sump** – Enables you to see when the filter is getting dirty.
- **Magna Made in USA** – Nothing made outside of the U.S. and conforms to NSF/ANSI 61

**Magna** is a Latin word which means “great,” and that is the true and accurate meaning of the US Water Magna Filter. The Magna Filter comes in two sizes: 4.5” x 10” for homes up to 3 bathrooms and 4.5” x 20” for homes with more than 3 bathrooms. This is a true commercial-grade filter.

### Features

- Cartridge has 222 double o-ring seal for a positive barrier
- System conforms to NSF/ANSI 61
- Low pressure drop - typically < 3 PSID (clean)

### Specifications

- Micron Rating: 5 Microns
- Media: Pleated Polyester
- Peak Flow:
  - 4.5” x 10” - 12 GPM
  - 4.5” x 20” – 25 GPM
- Maximum Pressure: 100 PSID
- Pipe Size: 1” MNPT

## US Water Magna Filter Specifications and Operation

### Maintenance

The Magna Pre-filter can be installed for up to a year. The Magna filter should be changed annually or sooner depending on the water usage or water conditions.

### Pretreatment Guidelines

- Turbidity < 3 NTU
- pH 5-9.5
- Iron < .3 ppm
- Manganese < .05 ppm

This systems' performance is dependent upon the incoming water quality and factors such as iron, sulfur and manganese need to be addressed ahead of the US Water Magna Pre-Filter. Life expectancy of the filter varies with the water supply, but many users experience filter change intervals in excess of a year when coupled with proper pre-treatment

### Where to Install

The Magna Pre-filter should be installed as the first line of treatment in the US Water system. In cases where there is extreme sediment levels in the water, it may be beneficial to install a backwashing sediment filter before the Magna Pre-filter. Water feeds with iron and other precipitants may cause premature failure. If there are known extreme contaminant levels, those contaminants should be removed first. For installation questions please call 1-800-698-8792.

**WARNING!** The US Water filtration system should not be installed in direct sunlight. The heat and UV light may cause the material to disfigure. Due to the transparency of the filter housings, photosynthesis may occur and cause algae to form on the outside of the filter and on the inner filter housing wall. **Make sure the system is sheltered from the sun.**

**WARNING:** *If extreme contaminant levels are present in the feed water, iron removal and sediment control should be installed prior to the US Water Magna.*



## Bodyguard Equipment Introduction

### US Water Bodyguard™ Premium Whole House Chemical Removal Filter

The US Water BodyGuard is a non-electric carbon filter that removes chlorine, chloramines, chemicals, pesticides and a multitude of other contaminants through Prolonged Contact to deliver the way nature intended it, using all NSF Certified Components.

The BodyGuard delivers clean, great-tasting water from every tap in your home by removing chlorine, chloramines and other chemicals in your tap water. The US Water BodyGuard removes the highest percentage of most contaminants of any filtration system on the market, due to the large amount of carbon that it contains. In many cases, the BodyGuard has 2 or 3 times the amount of carbon as our competitors\*. It also reduces or removes other harmful contaminants including the following:

- Chemicals
- Chlorine
- Chloramines
- Dioxin
- Heavy Metals
- Herbicides
- Odors
- Pesticides
- Pharmaceuticals
- Tastes
- TCE
- THM
- VOC's
- ... and many others

### Benefits

- The system reduces or removes chlorine and other chemicals
- Unlike ordinary carbon filters it also removes or reduces chloramine
- Delivers great-tasting water from every tap in your house
- Softer skin and hair – You will see the difference after one shower
- Great tasting beverages, coffee and tea
- Eliminates Bad Tastes
- Eliminates Foul Odors
- Treats up to 1,000,000 Gallons or 5 Years
- Extremely User Friendly
- Easy to Install
- Wastes No Water
- Uses No electricity
- Lifetime Warranty on all Parts
- 5-Year Performance Warranty
- 90-Day Satisfaction Guarantee

*Includes bypass valve and 1" MIP connection fittings. Installation kit is available.*

## US Water Disruptor Filter Specifications and Operation

### Cutting-Edge Technology for Severe Water Problems

### US WATER ELECTRO-ABSORPTIVE NANOFIBER FILTER USES MECHANICAL FILTRATION AND ZETA CHARGED ELECTRO-ADHESION

The US Water Disruptor Filter is manufactured with Nano Alumina Fibers that have a Zeta potential of 51 millivolts. Many contaminants are actually "magnetically" removed from the water supply and "secured" in the Charged Filter. This is truly "disruptive technology."

US Water Disruptor Filter System is "disruptive technology" in that a filter system can now remove the following contaminants:

- Arsenic V
- Bacteria (99.999%)
- Chromium 6
- Cryptosporidium
- Cysts (99.9%)
- Fulvic Acid
- Humic Acid
- Iodine
- Iron
- Lead
- Legeonella (99.99%)
- Silica
- Tannic Acid
- Tannin
- Virus

The US Water Disruptor media is manufactured from a naturally occurring element called boehmite, which has no known Health Side Effects. In fact, boehmite has long been used as an additive to food products and digestive analgesics. Additionally, it has passed testing for NSF/ANSI Standard 42 and 61 for potable water and USP Class VI testing and endotoxin testing. US Water Disruptor Filtration is the final barrier against the problem contaminants such as fine colloids, silica, tannin, and other organics.

### Features

- Two models: 12 GPM and 25 GPM
- 1" Inlet handles up to 25 GPM
- Cartridge has 222 double o-ring seal for a positive barrier
- System conforms to NSF/ANSI 61
- Rated at 100 psi
- Low pressure drop - typically < 3 PSID (clean)

## US Water Disruptor Filter Specifications and Operation

### Maintenance

The Disruptor Pre-filter can be installed for up to a year. The Disruptor filter should be changed annually or sooner depending on the water usage or water conditions.

### Pretreatment Guidelines

- Turbidity < 1 NTU
- TOC < 50 mg/l
- pH 5-9.5
- Iron < .3 ppm
- Manganese < .05 ppm

This systems performance is dependent upon incoming water quality and factors such as iron, sulfur, manganese, sediment and other particulates need to be addressed ahead of the US Water Disruptor Pre-Filter. Life expectancy of the filter varies with the water supply, but many users experience filter change intervals in excess of a year when coupled with proper pre-treatment

### Where to Install

The Disruptor Pre-filter should be installed as one of the last pieces of equipment in the line of treatment in the US Water system. Water feeds with iron and other precipitants may cause premature failure. If there are known extreme contaminant levels, those contaminants should be removed first. For installation questions please call 1-800-698-8792.

**WARNING:** *If extreme contaminant levels are present in the feed water, iron removal and sediment control should be installed prior to the US Water Disruptor.*

## US Water Filter Installation Instructions

1. Install the Magna system in the desired location in the water treatment system. Typically this will be the first component in the line of treatment. The cap is marked "IN" and "OUT" on the top of the housing.
2. Mount the housing to the bracket using the supplied screws, orienting the housing to match the applications' desired flow direction.



## US Water Filter Installation Instructions

3. Install threaded nipples or other threaded fittings in the housing. Be sure to use Teflon tape on the fittings. Tighten them with channels locks. If flex pipes with rubber gaskets are used there is no need to Teflon tape the outer fittings. If a normal plumbing fitting is used then be sure to Teflon tape the outer fitting.
4. Mount the filter to the wall using the necessary fasteners for the wall type. Mark the hole locations on the wall using a marker or pencil while holding the filter housing level. If this is



to be mounted to a studded wall, a mounting board can be used. A shelf board or plywood can be mounted to the studs, then the filter housing can be screwed to the plywood or shelf board. (Shelf board pictured below).



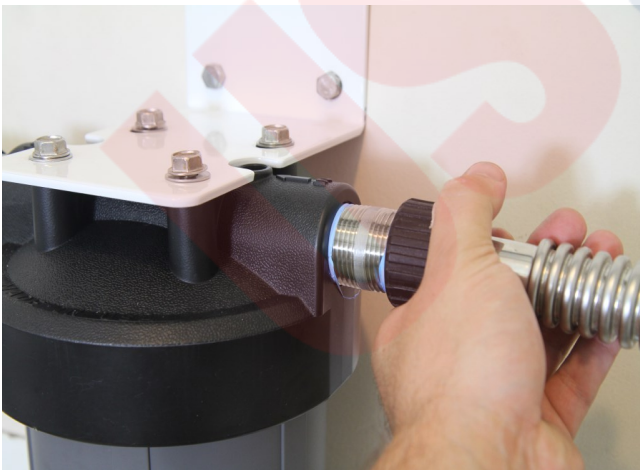
## US Water Filter Installation Instructions

5. Shut off the water and release the water pressure at the lowest sink or spigot. Cut the pipe and connect it to the filter. Connect the inlet plumbing to the inlet on the filter housing . Tighten with channel locks.
6. Connect the outlet plumbing to the outlet on the filter housing. Tighten with channel locks.

**NOTE:** *The connections above are made using the installation kits used with the US*



*Water Systems Modular Filtration System. These flex pipes have a rubber gasket and*



*do not require Teflon tape. If pipe fittings are used be sure to use Teflon tape on the threads prior to installing the fitting on the filter housing. If copper pipe and fittings are being used make sure all solder joints within 12-15" of the filter housing are completed and the pipe is cool, prior to connecting it to the housing fittings.*

## US Water Filter Installation Instructions

1. Remove the sump from the filter housing and install the filter. A very small amount of silicone grease or water can be used to lubricate the O-rings on the filter. The filter housing cap has a coupling that will accept the o-ringed nipple on top of the filter. Install the filter so the nipple on the top is fully seated in the filter housing cap.

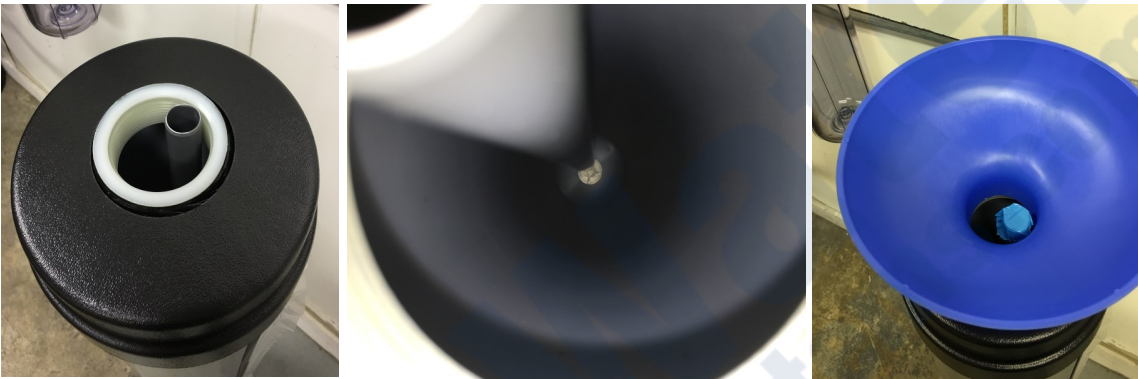


2. Lubricate the O-ring on the filter housing sump and install it. Tighten the filter sump hand tight. That should be adequate. Do not use abrasive tools to tighten the housing or damage may occur.



## Bodyguard Tank Installation

1. Make sure that the distributor tube is secured to the bottom of the tank. It should not pull out of the tank.
2. The distributor tube should be even with the top of the tank. There is an o-ring inside the tank head that seals around the distributor.



3. Cover the distributor tube opening with a cap or piece of tape. Duct tape works exceptionally well for this.

**NOTE: IT IS IMPERATIVE THAT NO MEDIA (carbon) BE ALLOWED INSIDE THE DISTRIBUTOR TUBE. CARBON SHOULD NOT BE ALLOWED TO ENTER THE DISTRIBUTOR UNDER NO CIRCUMSTANCES.**



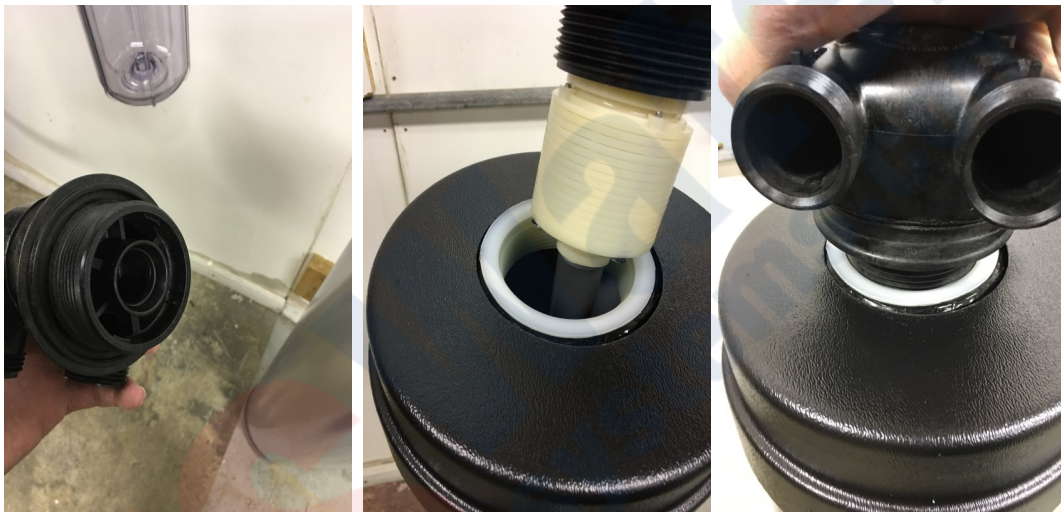
4. Add the gravel & carbon.
5. Place the included funnel inside the tank opening securely. It is easiest to do this if there are two people (one to hold the funnel and one to pour the media), but one person can do it, especially if you secure the funnel to the tank with duct tape, being careful not to spill the media.
6. A mask or a cloth should be worn over the nose and mouth as the carbon fines can cause irritation to the nose if breathed in. However, the carbon is in no way toxic.
7. Pour all included gravel in the tank first followed by the all the carbon.



## Bodyguard Tank Installation

**The tank should now be filled approximately 70-80%. US Water does not send extra media.**

8. Be sure to remove the tape and wipe the top of the tank and distributor tube with a clean cloth.
9. Fill the tank with water until it is approx. 4" from the top. Be sure to let the carbon soak for a minimum of 2 hrs.
10. Lubricate the o-rings on the head with food grade silicone lubricant\*. (part #995-1014081, not included) Make sure that the upper basket (Figure B) is securely attached to the tank head. [\* If food grade silicone is not available, use corn or vegetable oil.]



11. Install the head back on the tank and tighten hand tight. Do not use tools to tighten the head or damage may occur.

**\*\*\*\*NEVER USE A PETROLEUM BASED LUBRICANT OR VASOLINE\*\*\*\***

12. Install the bypass on the tank head. Lubricate the O-rings on the bypass and hand tighten the nuts.



## Bodyguard Tank Installation

13. Assemble the tank connectors using the locking clip and the O-ring.



14. Make  
O-

twisted then lubricate it with silicone grease or corn oil. Hand tighten the nuts on the bypass.

sure the  
ring isn't

**NOTE:** It is normal for the bypass and connectors to move/float when the nuts are tightened. This is an intentional design feature intended to allow flexibility with the connections and possible tank deflection. These connections will be tight once the water is on and pressure is applied.

## Bodyguard Tank Installation

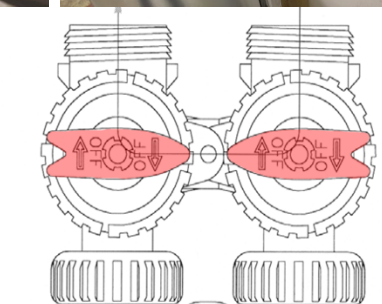
1. Place the US Water Bodyguard tanks in the desired location on a flat level surface.
2. Make sure the tank head is tightened securely by hand tightening—Do Not Use a Wrench. Hand-tight is recommended.
3. Connect the inlet piping from the Magna filter to the DOWNFLOW inlet on the US Water Bodyguard carbon tank.



4. Connect the outlet of the US Water Bodyguard carbon tank (marked upflow inlet) to the US Water Disruptor cartridge inlet port.



5. Keep the US Water Bodyguard tank in the bypass position until startup.
6. Proceed to Disruptor Installation



## US Water Disruptor Installation

1. Install the Disruptor system in the desired location in the water treatment system. Typically this will be the first component in the line of treatment. The cap is marked "IN" and "OUT" on the top of the housing.
2. Mount the housing to the bracket using the supplied screws, orienting the housing to match the applications' desired flow direction.



## US Water Disruptor Installation

3. Install threaded nipples or other threaded fittings in the housing. Be sure to use Teflon tape on the fittings. Tighten them with channels locks. If flex pipes with rubber gaskets are used there is no need to Teflon tape the outer fittings. If a normal plumbing fitting is used then be sure to Teflon tape the outer fitting.
4. Mount the filter to the wall using the necessary fasteners for the wall type. Mark the hole locations on the wall using a marker or pencil while holding the filter housing level. If this is



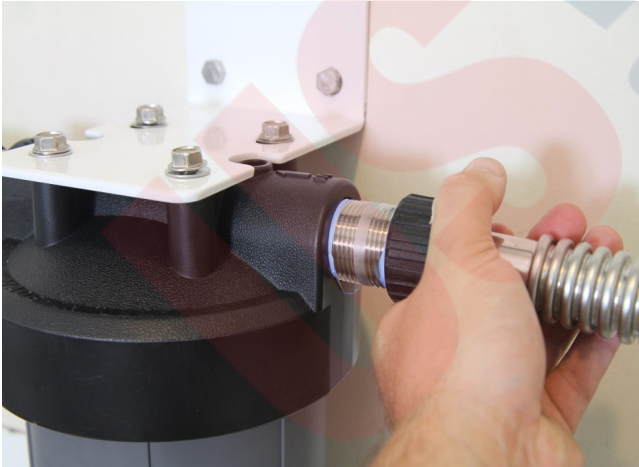
to be mounted to a studded wall, a mounting board can be used. A shelf board or plywood can be mounted to the studs, then the filter housing can be screwed to the plywood or shelf board. (Shelf board pictured below).



## US Water Disruptor Installation

5. Shut off the water and release the water pressure at the lowest sink or spigot. Cut the pipe and connect it to the filter. Connect the inlet plumbing to the inlet on the filter housing . Tighten with channel locks.
6. Connect the outlet plumbing to the outlet on the filter housing. Tighten with channel locks.

**NOTE:** *The connections above are made using the installation kits used with the US*



**Water Systems Modular Filtration System.** *These flex pipes have a rubber gasket and do not require Teflon tape. If pipe fittings are used be sure to use Teflon tape on the threads prior to installing the fitting on the filter housing. If copper pipe and fittings are being used make sure all solder joints within 12-15" of the filter housing are completed and the pipe is cool, prior to connecting it to the housing fittings.*

## US Water Filter Startup Instructions

1. Install the sump on the filter housing without a filter. Open a faucet or spigot down stream of the filter housing. Slowly open the water shutoff valve and let the filter fill. Air will be pushed out of the filter through the open spigot or faucet downstream. Once there is no air coming out of the faucet or spigot, turn the water supply on fully and shut the faucet or spigot.
2. Check for leaks. If there are no leaks Proceed to Bodyguard Startup.

## Carbon Filter Start Up

**WARNING: FLUSH THE BODY GUARD TANK BEFORE INSTALLING ANY DOWNSTREAM FILTER CARTRIDGE IN THE SYSTEM.**

1. Slowly open the Carbon Tank Bypass inlet valve on the Bodyguard tank. Allow the tank to fill with water until all the air is purged. Open a spigot or faucet downstream of the Bodyguard filter. Slowly open the Bodyguard tank bypass outlet valve. Then, flush the carbon tank for 15-20 minutes or until water runs clear. If you see any carbon (other than the “black tinted color”), immediately bypass the system. If pieces of carbon are coming out of the carbon tank there could be an internal problem. Small fines (specs) or tinted water is normal.



**NOTE: A white Styrofoam or plastic cup can be used to observe the water color. This helps determine when the carbon is flushed.**

2. Close the spigot or faucet and check for leaks. Repair as needed.
3. Finish the Disruptor Filter installation and startup.



## US Water Disruptor Installation

1. Remove the sump from the filter housing and install the filter. A very small amount of silicone grease or water can be used to lubricate the O-rings on the filter. The filter housing cap has a coupling that will accept the o-ringed nipple on top of the filter. Install the filter so the nipple on the top is fully seated in the filter housing cap.



2. Lubricate the O-ring on the filter housing sump and install it. Tighten the filter sump hand tight. That should be adequate. Do not use abrasive tools to tighten the housing or damage may occur.



## US Water Filter Startup Instructions

1. Open a faucet or spigot down stream of the filter. Slowly open the water shutoff valve and let the filter fill. Air will be pushed out of the filter through the open spigot or faucet downstream. Once there is no air coming out of the faucet or spigot, turn the water supply on fully and shut the faucet or spigot.
2. Check for leaks. If there are no leaks the filter is installed and ready for service.

## US Water Filter Cartridge Replacement Instructions

1. Shutoff the water supply.
2. Open a faucet or spigot closest to the filter housing and allow all the water to empty from the plumbing system.

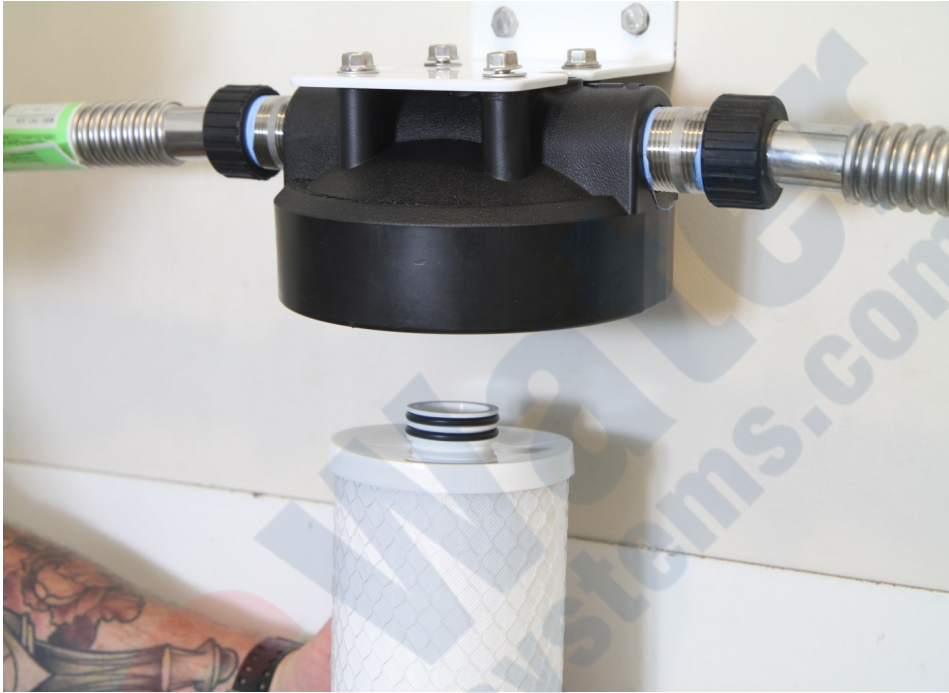
**WARNING!** If the pressure is not released, the filter sump will be very difficult to get loose. It is imperative that the water pressure is released prior to attempting to remove the filter sump.

3. Remove the sump by spinning it counterclockwise until the sump is completely removed.



**US Water Filter Cartridge Replacement Instructions**

6. Remove the old filter and discard.



7. Lubri-  
rings and install the new filter in the filter housing cap.

cate the O-



8. Lubricate the o-ring for the sump and lubricate the sump threads with food grade silicone grease.

## US Water Filter Cartridge Replacement Instructions

9. Install the filter sump in the filter cap by turning it clockwise until it is hand tight.



**NOTE:** The housing should spin tight fairly easily. If not, add more lubrication to the sump threads. This will aid with removing the sump when the filter needs to be replaced again.

10. Turn on the water supply and open a spigot downstream of the filter to release the air.
11. Once the air has been released, fully open the supply valve and close the faucet or spigot.
12. Check the housing for leaks and repair as necessary.

# HOMELAND SECURITY FILTER

## Warranty

For the lifetime of the original purchaser, at the original residential place of installation of this *US Water* Water Conditioning System, *US WATER SYSTEMS, INC.* warrants the following:

### LIFETIME COVERAGE

#### Tank and Tank Head

We warrant that for the lifetime of the system from the date of purchase, we will replace the tank or tank head assembly at no charge to you except for transportation and standard labor charges. Damages due to environmental issues or improper installation are not covered.

#### Filter Housing

We warrant that for the lifetime of the system from the date of purchase, we will replace the filter housing at no charge to you except for transportation and standard labor charges. Damages due to environmental issues or improper installation are not covered.

### 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.

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.

**US Water**  
systems.com