

**USWater**<sup>™</sup>  
systems.com

# US Water Non-Electric Arsenic Filter

090-ARS-XXX



## Table of Contents

Unpacking and Inspection .....	3
Safety Guide .....	3
Before Starting Installation .....	4
Proper Installation .....	4
US Water Arsenic Removal Filter .....	5
Benefits .....	5
Specifications .....	6
System Dimensions .....	7
Plumbing View .....	8
Installation .....	9
Warranty .....	15

## Unpacking and Inspection

Be sure to check the entire unit for any shipping damage or lost parts. 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 unit, will be in a parts bag. 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 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.

## Before Starting Installation

### Proper Installation

*This water 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
- **Do not** install in direct sunlight. Excessive sun or heat may cause distortion or other damage to non-metallic parts.
- Maximum allowable inlet water pressure is 100 psi. If daytime pressure is over 80 psi, night time pressure may exceed the maximum. Use a pressure reducing valve to reduce the pressure.
- System must be operated in a vertical position. Do not lay it down during operation.
- A bypass valve should be installed on every system to facilitate installation and service.
- Observe all local plumbing and building codes when installing the system.

## US Water Arsenic Removal Filter

This arsenic removal system is for applications where there is no iron, sulfur or manganese present. It utilizes ResinTech's ASM-10-HP arsenic selective resin which does not need electricity, does not need to be backwashed and has a defined capacity. When it is exhausted, it simply needs to be replaced. The spent resin can be disposed of in a common landfill. It is generally utilized when there is no iron or manganese or when the iron and manganese has been oxidized and removed.

### Benefits

- **High Arsenic Removal** - ResinTech's ASM-10-HP Arsenic Selective Media is extremely selective for arsenic to below the minimum contaminate limit of 10 ppb.
- **High Affinity For Arsenic Over Other Anions** - Highest arsenic removal capacity of any organic based arsenic removal media.
- **Fast Operation & Minimal Pressure Loss** - Arsenic removal media has fast kinetics and minimal pressure loss.
- **No Arsenic Dumping** - Effluent arsenic levels will not exceed influent levels if resin is operated past exhaustion point.
- **Complies With US FDA Regulations** - Conforms to paragraph 21CFR173.25 of the Food Additives Regulations of the US FDA.
- **Other Uses** - It can also be used as an ion exchanged for removal of Uranium, Vanadium, Chromium, Nitrate, Sulfide, Silica, and other trace level contaminants.

## Specifications

Please review operating pressures, temperatures and water chemistry limitations to ensure compatibility.

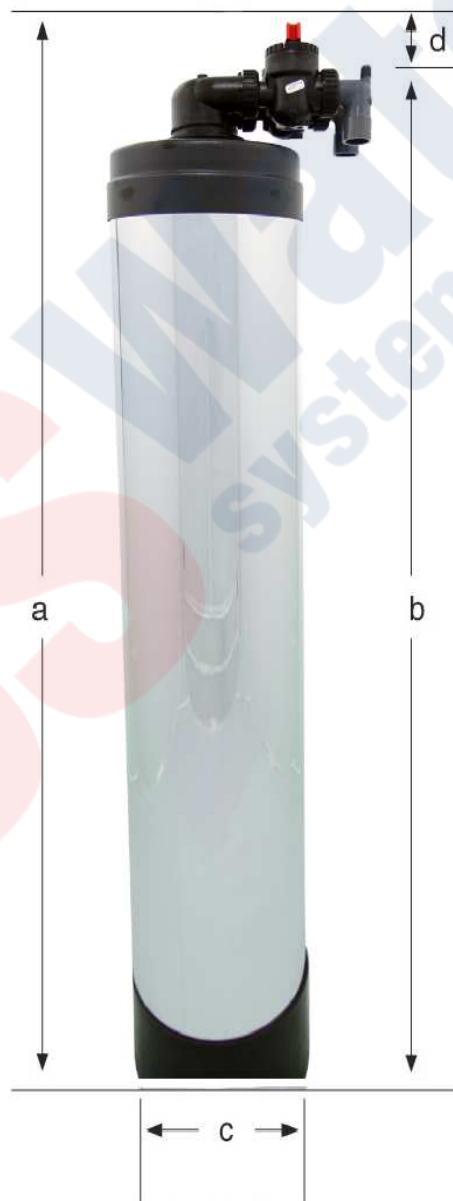
Specifications	ARS-100	ARS-150	ARS-200
Inlet / Outlet Connection	1" MPT or 3/4" - 1" Glue		
Temperature	40°F - 110°F		
Water Pressure	15 min, 100 max (psi)		
Hardness	< 2 GPG		
TDS	< 500 PPM		
pH	5 - 7		
Manganese	< 0.05 PPM		
Iron	< 0.3 PPM		
Sulfate	< 50 PPM		
Silica	< 8 PPM		

Due to the unique properties of the Arsenic media, there are some requirements for using the Arsenic Removal Filter in conjunction with other filtration or forms of water treatment.

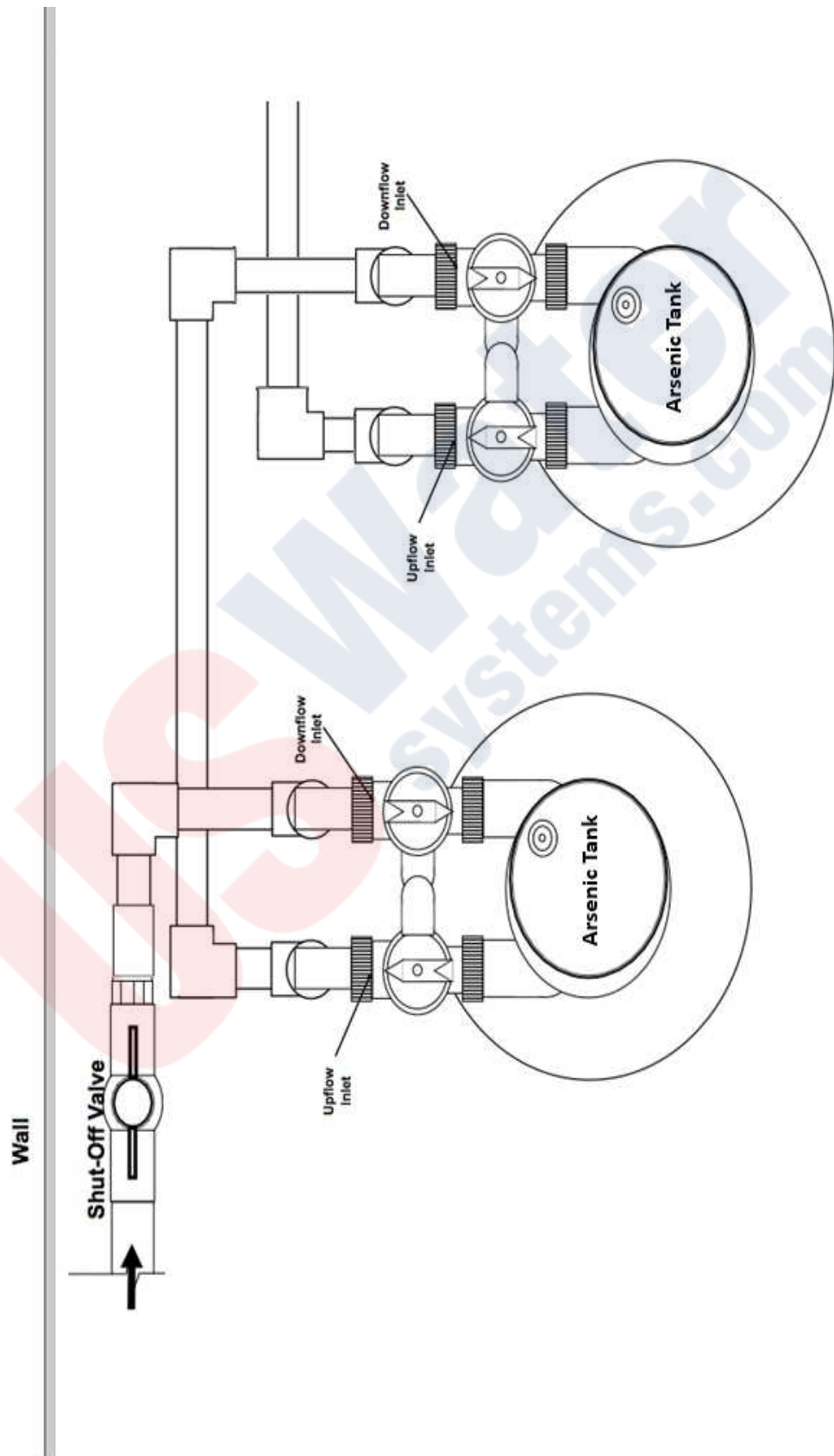
- Do not apply phosphate or any other anti-scalant before the Arsenic filter.
- Iron or other "blinding" contaminants should be removed prior to the Arsenic filter.
- If water tests indicate the presence of Arsenic III, it will first need to be oxidized and converted to Arsenic V for proper treatment. Contact US Water Systems for oxidation equipment.

## System Dimensions

Dimensions	ARS-100	ARS-150	ARS-200
A	52.5"	58.5"	56.5"
B	50"	56"	54"
C	9"	10"	12"
D	2.5"	2.5"	2.5"



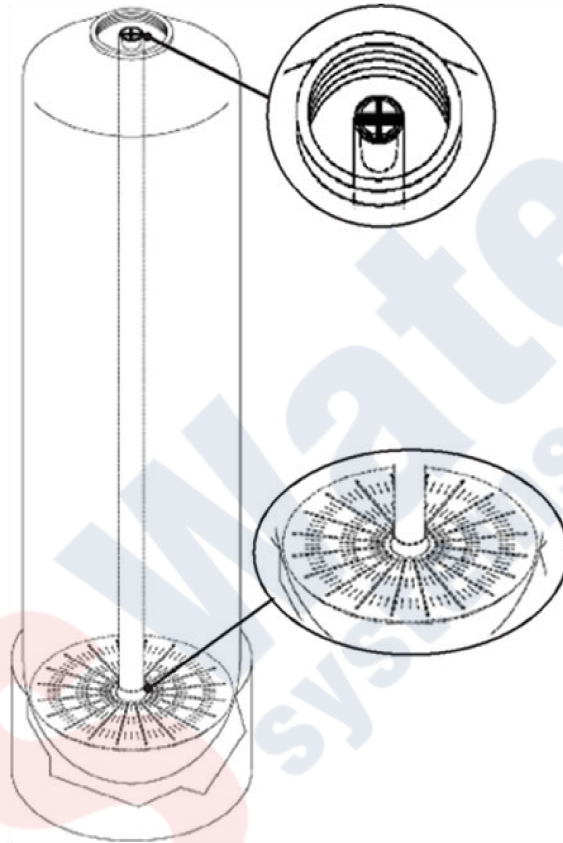
## Plumbing View





## Installation

1. Remove the tanks from the shipping cartons.
2. Verify the riser tube is secured in the bottom of the tanks. The tube should not pull out of the tanks.



3. Ensure that the supplied clear, plastic cap is installed on the distributor tube.

4. Use the Blue Funnel provided to pour the arsenic resin into both tanks. Pour it evenly around the hole to ensure it is well distributed in the tank and pour slow enough to keep from plugging the hole. A helper may be needed to hold the funnel during the filling process. Equally divide the arsenic resin between both tanks. Pour all the arsenic resin sent with the system equally in each tank.

**NOTE:** It is recommended that a dust mask and safety goggles be worn to prevent possible injury.



5. When media is installed, move the tank side to side to settle the media. Remove the funnel and cap from the distributor tube.
6. If possible, pour enough water to cover the media inside the tank and allow it to soak for 30 minutes. This will ensure a better flush cycle. After 30 minutes, proceed to the next step.

7. Install the upper basket on the bottom of the head by lining up the tabs then turning the basket clockwise to lock it in place. Place the upper basket over the distributor tube and push the head on the tank. Thread the head on the tank by turning it clockwise. Be sure not to cross-thread the head on the tank. Repeat this for the second tank.



8. Place the Arsenic Removal Filter tanks in the desired location in the treatment system.

9. Prepare the tank connections by installing the nut on the elbow connector. Push the split white ring down over the elbow fitting to the second groove. Use the supplied silicone grease to lubricate the O-ring. Slide the O-ring over the elbow fitting and put it in the first groove. Make sure the O-ring is not twisted. Repeat this for the second set of connectors.





10. Lubricate the O-rings on the supplied bypass with the silicone grease. Install the bypass on the tank and fully tighten the retaining nuts. The bypass will move slightly once tight. It is made to flex and move and will not be rigid. Be sure the O-rings are lubricated on the elbow connectors previously assembled. Install the elbows in the bypass valve and tighten the retaining nuts. These will move when tight. They are made to flex just like the bypass valve connections. Repeat this for the second tank.

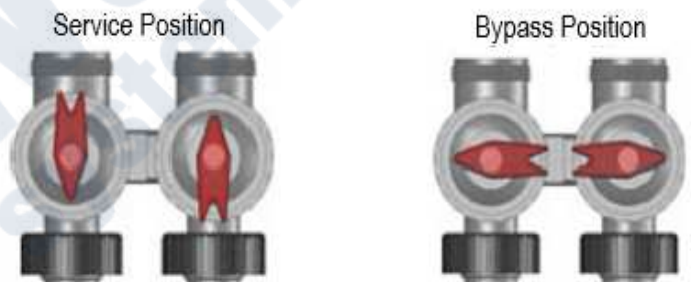


11. Connect the first tank in sequence to the second by running a line from the "Up Flow" inlet of the first tank to the "Down Flow" inlet of the second tank.

12. Connect the inlet piping to the "Down Flow" inlet of the first Arsenic Removal Filter tank in sequence.



13. Place a bucket under the outlet port (Upflow Inlet) of the second tank in sequence or run a line from the outlet port of the tank to a drain. Place both tank bypasses in the service position.
14. Slowly open the main supply valve (user supplied) to the Arsenic Removal Filter. Allow both tanks to fill with water. Close the supply valve when a steady stream of water comes out of the second tank outlet port and the water is running clear.



15. Once the Arsenic Removal Filter system is flushed, connect the Outlet (marked UpflowInlet) of the second Arsenic Removal Filter tank to the CTS or PEX cold water supply feeding the rest of the home.
16. Open faucets downstream from the Arsenic Removal Filter system to relieve any trapped air.
17. Check for leaks. Repair as needed.
18. The system is now ready for service.

## Warranty

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

### **LIFETIME COVERAGE: Media Tank -**

Free of all costs to you except transportation and labor charges, we warrant that we will replace or repair the fiberglass media tank, if for any reason it is found to be defective, because of faulty materials or workmanship.

**5 Year Warranty on Head Assembly** - We warrant that, for five (5) years from the date of purchase, we will replace the head assembly 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 filter 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 filter. 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.