



# Iron & Sulfur Trapper™

## Specifications, Installation & Start-Up Procedures

### Proper Well water treatment

Proper well water treatment is based on what's in your water. Challenges include water hardness, Iron, Hydrogen Sulfide (rotten egg odors), sediment, tannins, Arsenic, Nitrates, Acidic water (low pH), bacteria and other harmful microorganisms.

### Iron Trapper™ for Iron & Hydrogen Sulfide (Sulfur Odors)

This unique system removes Iron, Hydrogen Sulfide and Manganese using our AIR DRAW valve for greater oxidation.



### How it works!

The Iron Trapper™ utilizes oxygen, contained in your water and fresh ambient air injected inside the filter tank to oxidize Iron, Hydrogen Sulfide and Manganese, so they drop out of solution to form particles. These particles are trapped by the filter media, and are periodically removed from the filter during the backwash cycle.

Iron Trapper™ systems do not need chemicals for *oxidation*. However, if your water contains bacteria, water treatment chemicals may be required for *disinfection*.

### Congratulations!

You've selected our best-selling well water treatment system for top performance and economy.

Iron Trapper™ systems reduce Iron, Hydrogen Sulfide and Manganese and are designed to provide years of service with proper care and maintenance.

Hopefully, this manual will be beneficial and provide information you need to install, start-up and maintain your system.

### Specifications

Valve type	Metered
Valve sizes	1", 1.25", 1.5" and 2"
Pipe fittings available	¾", 1", 1.25" and 1.5"
Filtration procedure	"Air Draw" for oxidation
Riser tube size	1.05", 1.25", 1.5" and 2"
Drain line fitting	¾" male NPT
Brine line (for air draw)	3/8" quick connect
Supply voltage	120 V AC
Supply frequency	60 Hz
Output voltage	12 V AC
Filtration media	Iron, Hydrogen Sulfide & Manganese
By-pass valve	Included

To view our valve manuals visit [www.safetyzonewater.com](http://www.safetyzonewater.com)

# Iron Trapper™ Iron, Hydrogen Sulfide & Manganese Filter Installation Overview

**General:** When installing a water softener and a filter together, always install the filter first. Be sure to test the water since you will need this information to properly program the control valve.



## Installation procedures

1. Locate the main water line, and install the unit before the water heater and near a 110 volt power source.
2. Determine where the drain is to be located and install the drain using ¾" or 1" PVC or ½" drain line tubing. If ½" tubing is used do not extend the length past 15 feet, which may restrict the flow.
3. Close inlet and outlet on the valve.
4. Program the valve for your specific application (see below).
5. Put the valve into a manual regeneration to make sure the cycles are functioning correctly. (Press "regen" to advance to each individual cycle.)
6. Start-up in **backwash** (with inlet and outlet closed).
7. Open the inlet slowly. Once water runs to drain, open the inlet fully.
8. Continue backwash until the drain water runs clear. (This may take some time.)
9. Advance to the **draw** cycle (to create an air pocket in the filter tank).
10. The **2<sup>nd</sup> backwash** should be turned "OFF".
11. The **rinse** cycle should be turned "OFF".
12. For the **refill** cycle, set the salt level at "ZERO" to deactivate this cycle.
13. When the valve goes into service, open outlet on the valve to supply water to the house.



## Valve Programming

### Safety Zone Water® Signature Series electronic control valve

The Safety Zone Signature Series valve is highly versatile, and can be programmed for water softeners, Combo softener / Filter systems and "air draw" Iron and Sulfur filters. Valves are available in 1", 1-1/4", 1-1/2" and 2" sizes. Residential tank sizes include 10x54 (1 cube); 12x52 (2 cube) and 14x65 (3 cube). Standard components include air draw valve, by-pass valve; upper basket; riser tube; bottom distributor; drain line flow control button, media and gravel under bedding for even flow distribution.

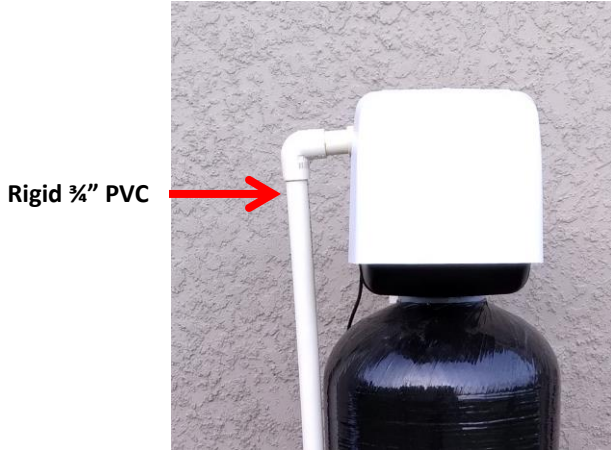
## Valve Settings

System	Media (Cu. Ft.)	Tank Size	Backwash #1	Draw	Backwash #2	Rinse	Refill Salt (lbs.)	Regen Days
ISF-150-AD	1	10x54	20 MINUTES	30 MINUTES	OFF	OFF	ZERO	1 (high Iron) 2 (low Iron)

Note: Settings may be adjusted depending in water source, Iron, Hydrogen Sulfide and Manganese content.

## Air & water check valves

Notice an air check valve is installed on the “air draw” valve. This will prevent air escaping from the tank. A water check is also installed in the inlet of the valve.



**Valve Shown With Weather Cover**  
Required in outdoor installations.)

**3/4" rigid PVC drain is highly recommended.**

### Drain line installation

Proper installation of the drain line is critical to any Iron and Sulfur filter's performance. For best results use rigid 3/4" PVC.

If 1/2" drain line tubing is used, do not extend the tubing more than fifteen feet.

Never restrict a drain line by combining a filter drain with a softener drain.

The backwash requirement for the Iron Trapper is 7.5 GPM.

## Water test

It is essential to complete a water test, prior to start-up and valve programming.

Check the following parameters:

- Hardness
- pH
- Iron (well water)
- Hydrogen Sulfide (well water)
- Manganese (if common in the area)



**Deluxe Field Test Kit**  
Best kit for well water.

## System placement

1. Locate main water line and determine where to place the unit (near power outlet and location for the drain).
2. Install system on main water line before the water heater.

Be sure the by-pass is closed. If a filter is to be installed, install it before the softener.

## To set clock

**SET CLOCK** – Press **SET CLOCK** at any time to set hour and minutes, then press **"NEXT"** to exit. The clock is a 24 hour clock, so AM or PM must be set accordingly. (Make adjustments when "hour" or "minutes" blink.)

## Valve programming

Step	Action	Selections	Next Action
1	Press NEXT ↓	“Softening” will appear. For air draw filters select softener by pressing	Press NEXT
2		Brining direction (keep down flow as the default)	Press NEXT
3		Refill pre or post. (does not apply) – press NEXT	Press NEXT
4		1 <sup>st</sup> backwash. (Set at 20 minutes and press NEXT)	Press NEXT
5		Brine draw. (Set at 30 minutes and press NEXT )	Press NEXT
6		2 <sup>nd</sup> backwash. (Scroll to “OFF”)	Press NEXT
7		Downward rinse. (Scroll to “OFF”)	Press NEXT
8		Salt (lbs.) (Scroll to ZERO).	Press NEXT
9		Capacity. (does not apply) – press NEXT	Press NEXT
10		For the next fields press NEXT until the clock appears	Press NEXT
1	Press NEXT ↑	Hardness (does not apply) – press NEXT	Press NEXT
2		Regen days. (Set days at 1 for heavy Iron and Sulfur or 2 for normal	Press NEXT
3		Regen time. Generally set filters for 12 AM regen. May adjust.	Press NEXT

Note clock is a 24 hour clock. Make sure AM and PM are correct.

## Start-Up

With the valve’s inlet and outlet closed, initiate a manual regeneration and follow these directions:

1. Press REGEN button and hold button for 3-5 seconds for immediate regen.
2. Let the valve advance to BACKWASH.
3. Open valve’s inlet slowly 1/3 to fill mineral tank.
4. Allow air to escape (listen until spurting stops).
5. When water flows from drain, open inlet valve fully.
6. Make sure drain line is not restricted. (Note: Do not “tee” drain line with a softener.)
- 7. Continue backwash until water runs clear.**
8. Press and release REGEN to advance to the DRAW cycle (to create an air pocket in the filter tank).
9. Press and release REGEN to advance to the 2<sup>nd</sup> backwash. (It should be turned “OFF”.)
10. Press and release REGEN to advance to RINSE. (It should be turned “OFF”.)
11. Press and release REGEN to advance to Refill. (Salt should be set at “ZERO”).

### Finally . . .

1. Open the valve’s outlet to supply water to the house.
2. Go in the house and open a faucet. See if water runs clear.
3. Look for “gallons flow” (blinking)
4. Go back in the house and shut off faucet.

## Customer orientation

It is important to provide customers with an initial orientation. This should include how to reset the clock and how the backwashing process works.

## Caution

Do not fill swimming pools with water from an Iron / sulfur filter. This will exceed the capacity of the system.

## Warranty

Safety Zone Water Systems come with a limited warranty. Five years for valves, and ten years for tanks. Resin, activated carbon and filter media come with a quality guarantee only. See warranty card or go to [www.safetyzonewater.com](http://www.safetyzonewater.com) for full details.