

OWNER'S MANUAL

**Premium Series
Iron, Sulfur & Manganese Filters**

(For “air draw” operation.)



Congratulations!

You've selected our Premium Series Iron, Sulfur and Manganese filter for top performance and greater efficiency.

Your Premium Series Iron / Sulfur filter is 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.

Model Number	Tank Size
PS-ISF-150	10x54
PS-ISF-200	12x52

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Routine maintenance recommended

Common with all equipment, routine maintenance is necessary. Maintenance procedures generally include a complete water test to evaluate your system's performance. Your dealer will also check your valve's settings to be sure the system is operating at peak efficiency; tanks, for leaks; salt usage; drain line, to be sure they are clear; seals and spacers, for proper regeneration and resin cleaning.

Specifications

Valve type	Metered (with air draw)
Valve sizes	1" and 1.25"
Pipe fittings available	¾", 1", 1.25" and 1.5"
Riser tube size	1.05" and 1.25"
Drain line fitting	¾" male NPT
Drain line tubing	½", ¾" or 1"
Brine line	3/8" quick connect
Supply voltage	120 V AC
Supply frequency	60 Hz
Output voltage	12 V AC
Output current	500 mA
Media volume (cubic feet)	1.0 and 1.5
Media type	Manganese Dioxide
By-pass valve	Included
Tank color	Light gray

CAUTION

Before any Iron / Sulfur filter is installed, it is essential to determine the following:

1. Can the well pump provide the minimum 7-8 GPM backwash the Iron / Sulfur filter requires?
2. Is bacteria present in the well?

Note:

- A. If signs of bacteria are observed, the well must be chlorinated and / or continuous chemical treatment for disinfection must be provided, prior to the Iron filter.
- B. Scum or slime in toilets is a sign bacteria may be present.

Open Cartons



This carton is inside the mineral tank carton. It includes the valve, by-pass, fittings you ordered, drain line nut, drain line insert, upper basket, installation instructions and warranty.



Mineral tank carton with valve carton inside.

Set-Up Valve & Install Valve On Tank



1. Assemble pipe fittings (Follow directions in package.)



2. Lubricate ALL black o-rings with Silicone.



3. Install upper basket (insert and twist to lock in place).



4. Install valve on mineral tank.



5. Install by-pass.



6. Connect pipe fittings to by-pass.

Hand tight – All connections.

DRAIN LINE INSTALLATION

Proper installation of your drain line is critical for any Iron and Sulfur backwashing filter. 5/8" drain line tubing is typically used. However, PEX and rigid PVC can also be used. A tube insert and 3/4" nut is provided for the drain line installation. (See photos at right.)



Install "insert" inside tubing.



Tighten nut.

RULES!

Proper backwash is essential for any Iron / Sulfur filter. For this reason, follow these "RULES" carefully!

- Never tie together a filter drain line with a softener drain line.
- We recommend use of 3/4" or 1" PVC for drain lines
- If you use 1/2" drain line tubing, limit the length to 20' feet max.
- Be sure any vertical drain lines do not greatly restrict flow
- 7-8 GPM minimum backwash is typically required (Standard 10" filter)

Check Valves

Two check valves are included with our Premium Series Iron & Sulfur filters. Be sure they are installed properly.

Air check

Installed in the brine line fitting on the valve.



Water check

Install on the water line inlet , prior to filter.

Placement Premium Series Iron & Sulfur Filters

- Locate water line and determine where to place the unit. (Install near a power source and available drain.)
- Install system on the main water line before the water heater.
- Install air check and water check.

Notes:

Be sure by-pass is closed.

Install filter before a water softener (if a softener is to be used).

Water Test

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

Check the following parameters:

- Hardness
- pH (range must be within 6.8 to 8.2)
- Iron
- Hydrogen Sulfide (you can smell it!)
- Chlorine (chlorinated well water only)
- TDS (below 500 is ideal)

We also recommend you check for bacteria on well water installations by checking for slime in back of the toilets.

Note: If bacterial is a concern or known to be present, sanitize the well and provide continuous disinfection if required. Additional testing may be necessary.

Valve Programming

Once the valve is powered up, the display will read:
“SALT REMAINING UNKNOWN”

STEPS:

- Push **NEXT** repeatedly until **CAPACITY REMAINING** is displayed with a default of 1500 GAL showing. (Number will change later.)
- Press **SET** to make adjustments.
- Size (select 1” or scroll to 1.25”).
- Press **NEXT** to select type.

Reminder:

To get into the settings always press **NEXT** until **CAPACITY REMAINING** is displayed. Then press **SET** to adjust settings.

Optional types are:

- A. Conditioner
- B. Iron-Sulfur Zapper
- C. Chem-Free filter (two tank)
- D. D. Filter (carbon, sediment, neutralizer)
- E. Conditioner – Filter (1-PLUS-1 two tank system)

Select **IRON-SULFUR ZAPPER** and press **NEXT**.

Valve Programming (Continued)

Use these settings for each cycle:

Regen	-	1 DAY
Backwash	-	20 MINS
Draw (for air)	-	20 MINS
2 ND backwash	-	00 (to eliminate the 2 nd backwash)
Rinse	-	5 MIN

Once the settings are made, press **NEXT**, and the default screen for an

Iron – Sulfur Zapper will read:

“NEXT BW C-F FILTER 1 DAY”.

To make adjustments at this default screen, press **SET**.

Valve Programming (Continued)

TIME OF DAY

At the **NEXT BW C-F FILTER 1 DAY** default screen, follow these instructions:

Press **NEXT** until you see **TIME OF DAY**.

Press **SET** and **TIME HOUR** is displayed at the top with the hour flashing. Arrow to the correct hour and **AM** or **PM** and press **NEXT**.

TIME MINUTES is displayed with minutes flashing, arrow to the correct minutes, then press **NEXT**.

REGEN TIME:

To set "REGEN" time to backwash the filter media, we typically select 12:00 AM. Therefore, this procedure will not interfere with a softener if a softener is also in place. (Softeners are typically set to regen at 2:00 AM.)

To set regen time, follow these directions:

REGEN TIME HOUR will be displayed. Arrow to the desired hour, and press **NEXT**.

REGEN TIME MINUTES will be displayed. Arrow to the desired minutes, and press **NEXT**

Regeneration / Backwash

Three options:

1. Press and hold the REGEN button (5 seconds), regeneration will be immediate.
2. Press and release the REGEN button, regeneration will be tonight.
3. Press and quickly release REGEN, then press and hold REGEN to initiate an immediate regen, followed by a regen that night.

Start Up



By-pass valve in closed position.

Once the installation is complete, initiate an immediate regen to start up system in with inlet and outlet valves closed.



Slowly open valve inlet 1/3 to fill tank.

- Press and hold the **REGEN** button until the valve advances to **BACKWASH**, with time counting down on the display.
- **Open valve's inlet slowly by 1/3 to fill the mineral tank.**
- Allow air to escape (listen until spurting stops).
- Once water flows from drain, **open inlet fully.**
- Continue backwash until clear water runs to drain.

Note:

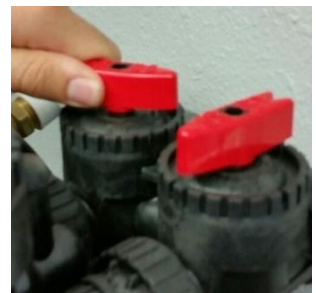
Several backwash cycles may be needed until water runs clear.

Start Up (Continued)

- Press **REGEN** again and the valve will move to the **AIR DRAW** cycle. During this cycle the valve will supply ambient air to the mineral tank for greater oxidation to provide improved performance.
- Press **REGEN** again and the valve will advance to the **RINSE** position.
This cycle rinses the filter media and packs the media bed.
- Press the **REGEN** button again and the valve will advance to **SERVICE**.
- The default screen will read: “**NEXT BW C-F FILTER 1 DAY**”.

Finally:

- **Open the valve's outlet to supply water to the house.**
- Go in the house and open a faucet. See if water runs clear.
- Look for gallons flow in the lower left of the valve's display.
- Go back in the house and shut off faucet.



Open outlet slowly to supply water to the house..

Error Messages

To go back to factory settings follow these directions:

Press **NEXT** and **REGEN** together for 3 to 5 seconds (release when motor starts).

Wait until the screen says: **NEXT BW C-F FILTER 1 DAY.**

Then, press **SET**. Then **PRESS** and **HOLD** the **UP** and **DOWN** arrow buttons together to restore programming to factory settings.

Other messages:

ERROR -MAV TOO LONG

Here, the valve is set up for a second motorized valve, but no motorized valve is installed.

(You are set up in the wrong mode, check your settings.)

Press **NEXT** and **REGEN** and **HOLD**.

IF VALVE APPEARS TO BE LOCKED:

If it appears a valve is locked, press in sequence: **ARROW DOWN**; **NEXT**; **ARROW UP**; **SET CLOCK**. Then, settings may be viewed and adjusted.

Note: Check if vacation mode is “on”. (If it is “on” turn it “off”.)

TROUBLE SHOOTING

Trouble shooting

If you believe your water filter is “not working”, here are factors to investigate:

Iron / Sulfur filters

- Improper backwash is the number one cause of iron filter failure. Check drain line to make sure it is not obstructed and be sure it has no kinks; check backwash duration; check settings. If the water is turbid directly after installation, the initial backwash duration was most likely too short. Do not use 1/2" drain line tubing longer than 20 feet. Also, do not tee a filter and softener drain line together, causing restrictions.
- The amount of water you are using may exceed the capacity of your Iron filter. (Do not fill pools or use water for irrigation with water from your iron filter. This will most likely exceed the capacity of the filter. You may also be using excessive amounts of water due to leaks in your plumbing system.)
- Bacteria will foul an Iron filter. Check for the presence of bacteria (slime in toilets.)

If it appears a valve is locked, press in sequence: ARROW DOWN; NEXT; ARROW UP; SET CLOCK. Then, settings may be viewed and adjusted.

Note: Check if vacation mode is “on”. (If it is “on” turn it “off”.)

Customer Orientation

Once the installation and start-up are completed, we suggest you explain the following to your customer:

- How to use the bypass and when this is recommended
- Explain how to set the clock in the event of a prolonged power outage
- Demonstrate the sound of water coming out of the drain so they will not be alarmed when they hear a backwash cycle
- Explain the warranty (and with Premium Series system fill out the warranty card, which came with the Owner's Manual.
- Recommend a maintenance agreement!