ZENITH PURE SOLUTIONS

OWNER'S MANUAL

Zenith AIO Iron Shield

Well water iron filter · air injection



Chemical-free · automatic backwash
10″ × 54″ · 12″ × 52″ · 13″ × 54″

Zenith Pure Solutions

6951 E 30th St, Suite B, Indianapolis, IN 46219
(317) 690-4172 · info@zenithpuresolutions.com

KEEP THIS MANUAL
NEAR YOUR SYSTEM

01 Welcome

Thank you for choosing Zenith Pure Solutions. Your Zenith AIO® Iron Shield reduces the dissolved iron in your well water that causes orange and brown staining, using nothing but air. There are no chemicals to add.

Keep this manual near the system. Your installer records your system details on the last page. It explains what your system does, routine care, and what to do if something seems wrong.

Need help? Call us before you open the system.

Most questions are answered in one phone call, and work done by others can affect your warranty.

Zenith Pure Solutions

Phone	(317) 690-4172
Email	info@zenithpuresolutions.com
Website	zenithpuresolutions.com
Address	6951 E 30th St, Suite B Indianapolis, IN 46219
Hours	Monday to Friday, 9 am to 6 pm

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02 Important safety information

Your system works best, and stays under warranty, when it runs inside the limits below.

- **Private well water.** The Iron Shield is designed for private well water. It is not designed for or recommended on city water.
- **Cold water only.** The system is installed on the cold water supply, after your well pressure tank. Never connect it to a hot water line.
- **Protect from freezing.** Keep the system indoors. The valve, drain line and pipes must never freeze.
- **Power.** The valve runs on a low-voltage power adapter. Plug it into an always-on outlet, not one controlled by a light switch.
- **Drain.** Backwash water goes to a drain through an air gap. Keep the drain line clear and do not raise or extend it.
- **Unplug before opening.** Unplug the power adapter before removing the valve cover.
- **Bacteria.** The Iron Shield does not disinfect water. If your well has bacteria, ask us about adding a UV sterilization system.
- **Leave service to us.** Call Zenith for repairs, setting changes, media changes or moves.

Operating conditions

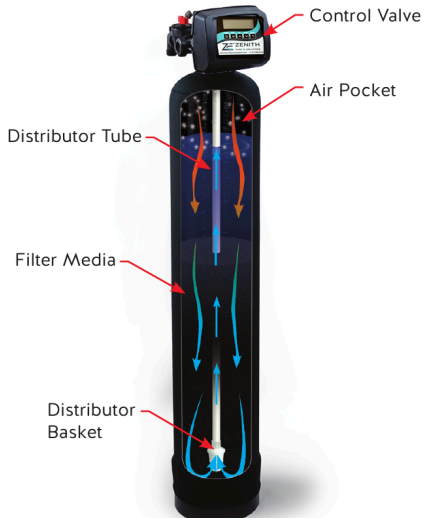
Condition	Limit
Water source	Private well water
Iron	Up to 8 ppm
Water pressure	20 to 125 psi
Water temperature	40 °F to 110 °F, cold water only
Power	Always-on outlet; low-voltage power adapter

This system is not intended to be used to treat water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Iron bacteria, tannins, very high iron or low pH may need additional equipment. Zenith sizes every system from a water test of your well.

03 How your system works

The Iron Shield keeps a pocket of air at the top of its tank. As water passes through the air, dissolved iron is oxidized into tiny particles that the media bed below can catch.



Water passes through the air pocket, then down through the filter media.

In service

1. **Air pocket.** Water entering the tank passes through the air pocket. Oxygen turns dissolved (clear-water) iron into particles. Dissolved oxygen is also added to the water.
2. **Filtration.** The media bed catches the oxidized iron.
3. **Clean water out.** Filtered water rises up the center tube and flows to your home.

Regeneration

On a schedule set by Zenith, normally every night, the valve cleans the media and renews the air:

Step	Default	What happens
Air release	4 minutes	The old air pocket is let out slowly and quietly to the drain.
Backwash	14 minutes	Flow reverses to flush the caught iron to the drain and loosen the bed.
Air recharge	40 minutes	A fresh pocket of air is drawn into the tank.

If water is being used when regeneration is due, the valve waits, and the air release only counts down while no water is flowing. A full regeneration takes about an hour. During regeneration your home still has water, but it is not filtered. No chemicals or salt are used.

The Iron Shield is for iron. If your well also has a rotten-egg smell or manganese, ask us about the AIO Sulfur Guard or our Katalox Light multi-contaminant system.

04 Your system at a glance

Your Iron Shield is a single tank with an electronic air-injection valve, a bypass, a drain line and a power adapter.



Zenith AIO Iron Shield

Part	What it does
Control valve	Electronic air-injection valve with a back-lit display. It schedules regeneration, releases the old air slowly and draws in fresh air.
Air pocket	The air at the top of the tank that oxidizes the iron.
Mineral tank	Holds the iron filter media.
Iron filter media	A custom media blend that catches oxidized iron, on a support bed.
Distributor tube and basket	Carry water evenly through the media bed.
Bypass valve	Turns the system off while keeping water to the house.
Drain line	Carries backwash water and released air to the drain through an air gap.
Power adapter	Supplies safe low-voltage power to the valve.

05 Specifications

Three sizes. Zenith picks the size from your well water test, household size and peak water use.

	10" × 54"	12" × 52"	13" × 54"
Iron filter media	1.5 cu ft	2.0 cu ft	2.5 cu ft
Service flow rate (iron)	2.5 gpm	3.0 gpm	4.0 gpm
Approximate size (W × H × D)	11″ × 62″ × 17″	13″ × 60″ × 17″	14″ × 62″ × 17″
Iron reduction	Up to 8 ppm	Up to 8 ppm	Up to 8 ppm

Service flow rates are a guide only. Actual flow depends on your water, water pressure and plumbing.

Control valve

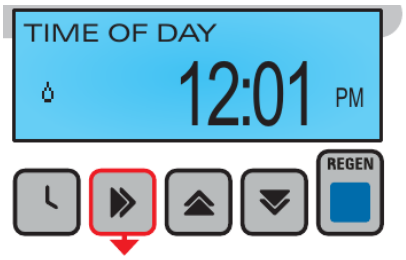
Electronic air-injection valve with Control Flow Technology: a slow, quiet air release, a delay while water is in use, a back-lit display, settings kept during power outages, and a days override of 1 to 28 days.

Requirements

A drain with an air gap for backwash water, and an always-on electrical outlet. Installed on the cold water line after the well pressure tank.

06 Using the control panel

The control panel has a back-lit display and five buttons: **CLOCK**, **NEXT**, **UP (▲)**, **DOWN (▼)** and **REGEN**. Press any button to light up the display.



Display and buttons

What the display shows

Press **NEXT** to step through the screens: time of day (a water-drop symbol shows water is flowing), gallons or days until the next regeneration, current flow rate, and Zenith's name and phone number. During regeneration the display shows the step it is on and the minutes left.

What the buttons do

Action	Result
Press REGEN once	Schedules a regeneration for the set time tonight. Press again to cancel.
Hold REGEN for 3 seconds	Starts a regeneration right away.
Hold CLOCK	Opens the time-of-day setting. Set the hour with ▲/▼, press NEXT, set the minutes, press NEXT.
Hold NEXT + REGEN for 3 seconds	Resets the control. Your settings are kept.

Set the clock after a power outage longer than 8 hours, when the time flashes, or when daylight saving time changes, so regeneration happens at night. Other button combinations open the installer settings; please leave those to Zenith.

07 Routine care and service

The valve cleans the media and renews the air automatically. Zenith services the system once a year.

Task	How often	Who
Yearly Zenith service: valve, air inlet and check valves, injector, media and backwash check; iron test of your water	12 months after installation, then every year	Zenith
Iron filter media replacement	When the yearly check shows it is needed (a separate visit)	Zenith
Check the clock	After long power outages and at daylight saving time changes	You
Watch for returning stains	Ongoing	You

We send you a service reminder 14 days before each visit. The yearly Zenith service is required to keep your parts warranty. Well water can change over time, so the yearly iron test helps keep your system set correctly.

Power loss

Settings are kept in memory during a power outage. After a long outage, set the time of day so regeneration runs at night.

If you need to turn the system off

For a leak at the valve or tank, turn the bypass to bypass or close the main shut-off, unplug the valve, and call Zenith.

08 Troubleshooting

Anything marked **Call Zenith** needs a technician.

What you notice	Likely cause	What to do
Orange or brown staining is coming back	Regeneration not running, media worn, or iron level in the well has risen	Check the display is on and the clock is set. **Call Zenith.**
	Bypass not fully in the service position	Turn the bypass fully to service.
Rotten-egg smell	Hydrogen sulfide, which the Iron Shield is not designed for	**Call Zenith.** A water test will show if you need a Sulfur Guard.
Spurts of air at faucets	Air pocket not releasing or recharging correctly	**Call Zenith.**
Display is blank	Adapter unplugged, outlet on a switch, tripped breaker or GFI	Plug into an always-on outlet; reset the breaker or GFI.
Time flashing or regeneration at the wrong time	Power outage, or clock not set	Set the time of day.
Water running to the drain all the time	Valve stuck in regeneration, or worn seals	Note any error code, put the system in bypass. **Call Zenith.**
Low water pressure	Media bed clogged with iron, or well pump or pressure tank problem	**Call Zenith.**
Leak at the valve or tank	O-ring or fitting	Put the system in bypass or close the main shut-off. **Call Zenith.**

Error codes

If the display shows ERROR and a code, write the code down, check the power adapter, and reset once (hold NEXT and REGEN for 3 seconds). If the code returns, call Zenith.

Code	Meaning	What to do
101, 102, 103, 104	Valve motor or position fault	Reset once (hold NEXT and REGEN for 3 seconds). If it returns, call us.
109	Invalid motor state	The control has stopped for safety. Call us.
201	Invalid backwash step	Internal software error. Reset once, then call us.
202	Unexpected stall	The motor stalled briefly but recovered. Mention it at your next service.
402, 403, 404, 406	Memory error	The control cannot run properly. Call us.
405, 407, 408	Memory error (logged)	The filter keeps working normally. Mention it at your next service.
410	Configuration download	A settings file was loaded incorrectly. Call us.

09 Zenith limited warranty

10 yr **10 years parts · 5 years labor**
Limited lifetime on the tank.

What is covered

If a part of your system fails because of a defect in materials or workmanship during the warranty period, Zenith will repair or replace it.

Keeping your warranty

Cover applies when Zenith installs the system and it is serviced to schedule. Ongoing maintenance and a yearly Zenith service are required to keep the parts warranty.

If you sell your home

The warranty transfers at the original address only, for the remaining term, with written notice to Zenith within 30 days of the sale. Labor coverage transfers only if the new owner takes a Zenith maintenance plan. The warranty does not follow a system that is moved to another address.

What is not covered

- Damage from freezing, fire, flood, lightning or other acts of nature.
- Misuse, neglect, accidents, or operating outside the limits in this manual.
- Repairs, moves, changes or parts by anyone other than Zenith.
- Commercial or other non-residential use.
- Routine maintenance and media replacement.
- Problems caused by changes in your well water beyond the limits in this manual.

Making a claim

Call Zenith at (317) 690-4172 or email info@zenithpuresolutions.com as soon as you notice a problem. Have your name, address, installation date and system details ready (see *Your system record*).

This is a plain-language summary. The full Limited Warranty terms are in your quote and invoice.

10 Your system and service record

Your system record

Your installer fills this in on installation day. Have it ready when you call us.

Item	Your system
Model	Zenith AIO Iron Shield ☐ 10″ × 54″ ☐ 12″ × 52″ ☐ 13″ × 54″
Installation date	
Installed by	
Iron level at installation (ppm)	
Regeneration schedule	
Regeneration time	

Service log

Keep a record of every service visit and media or cartridge change. It helps our technicians and supports any warranty claim.

Date	Service performed	Iron level (ppm)	Technician
	Installation and start-up		

ZENITH
PURE SOLUTIONS

We are here when you need us.

Service, salt delivery, care plans and free in-home water testing across the Indianapolis area.

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