

WHOLE HOUSE

iSpring WCFM400K Central Whole House Water Filtration System



Model: WCFM400K

Installation Instructions & User Manual

Ver. 07/2023



Any questions?
Scan the QR code
for support.



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We stand behind our products

Since 2005, iSpring has been dedicated to providing high-quality drinking water to families across the United States. We provide various residential faucets and water filtration systems that purify your water in everyday life and deliver pure, healthy, and tasty water to you and your family.

At iSpring, we strive to develop products to the highest of standards and aim to make excellent drinking water accessible for all households. With affordable pricing, reliable quality, prompt delivery, and top-notch customer service, we hope to assist in bringing you great water for years to come.

Prior to Installation

Read this instruction manual carefully prior to installation.

Keep this manual readily available for future reference.

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User Information & Guidelines

The user must adhere to the installation specifications described in this Product Installation and Operation Manual (hereinafter referred to as the “instruction manual”). iSpring is not responsible for damage, loss, or injury resulting from neglect, improper maintenance, or unauthorized modification of the unit.

- The unit should be placed only on flat surfaces. Do not mount on a wall.
- This product is designed for residential use only. Contact iSpring customer service to inquire about using in non-residential settings.
- The operating temperature range is 39°F – 100°F. If the water temperature or ambient temperature falls below 39°F, immediately shut off the inline water supply, turn off the inline water adapter, and drain the remaining water from the system. Failure of the water supply line or water purifier may result in malfunction, damage, and possible injury to the enclosure or water supply line.
- In case of malfunction due to damage or failure of the power supply system, unplug the system immediately and contact iSpring customer service.
- If leaking occurs, shut off the inline water supply by turning off the adapter. Then unplug the system and contact iSpring customer service.
- Use only authorized iSpring parts. Using unauthorized or aftermarket components will void the product warranty.
- This product is equipped with built-in systems to prevent internal leaks and minimize the risk of water damage. However, it is recommended that users check external fittings and connections regularly to ensure all components are secure.
- Unauthorized modification and disassembly are strictly prohibited and will void the warranty.
- Never touch the power cord connector when your hands are wet as this may result in electric shock.
- Product installation and use must strictly comply with the requirements of this manual. Do not perform any operation on the product without reading and understanding the contents of this manual.
- Activation of this product indicates that the owner has carefully read, understood, and accepted the contents of this manual, including the safety notices and instructions.

Product Operation & Specifications

Though testing was performed under standard laboratory conditions, the actual performance of the system may vary based on local water conditions and quality.

SPECIFICATIONS	
	Model WCFM400K
Hydrostatic Test Pressure	350 psi (24.15 bar)
Working Pressure Limits (minimum/maximum)	35~100 psi
Water Temperature Limits (minimum/maximum)	39~100 °F (4~38 °C)
Water pH Range	6.8~9.0
Electrical Adapter	Input: AC 120 V, 60 Hz Output: AC 12 V, 650 mA
Pressure Tank Thread	2 1/2" NPSM
Inlet/Outlet Connector	1" NPT or 3/4" NPT
- Alkalinity should be greater than two times the combined sulfate and chloride concentration. - Free chlorine concentration should be less than 0.5 ppm. - Hydrogen sulfide, oil, and polyphosphates should be removed. - Organic matter should not exceed 4-5 ppm.	

- Performance data was tested under standard laboratory conditions; actual performance may vary.

- This system is designed to be used on a cold supply ONLY and kept away from freezing environments.

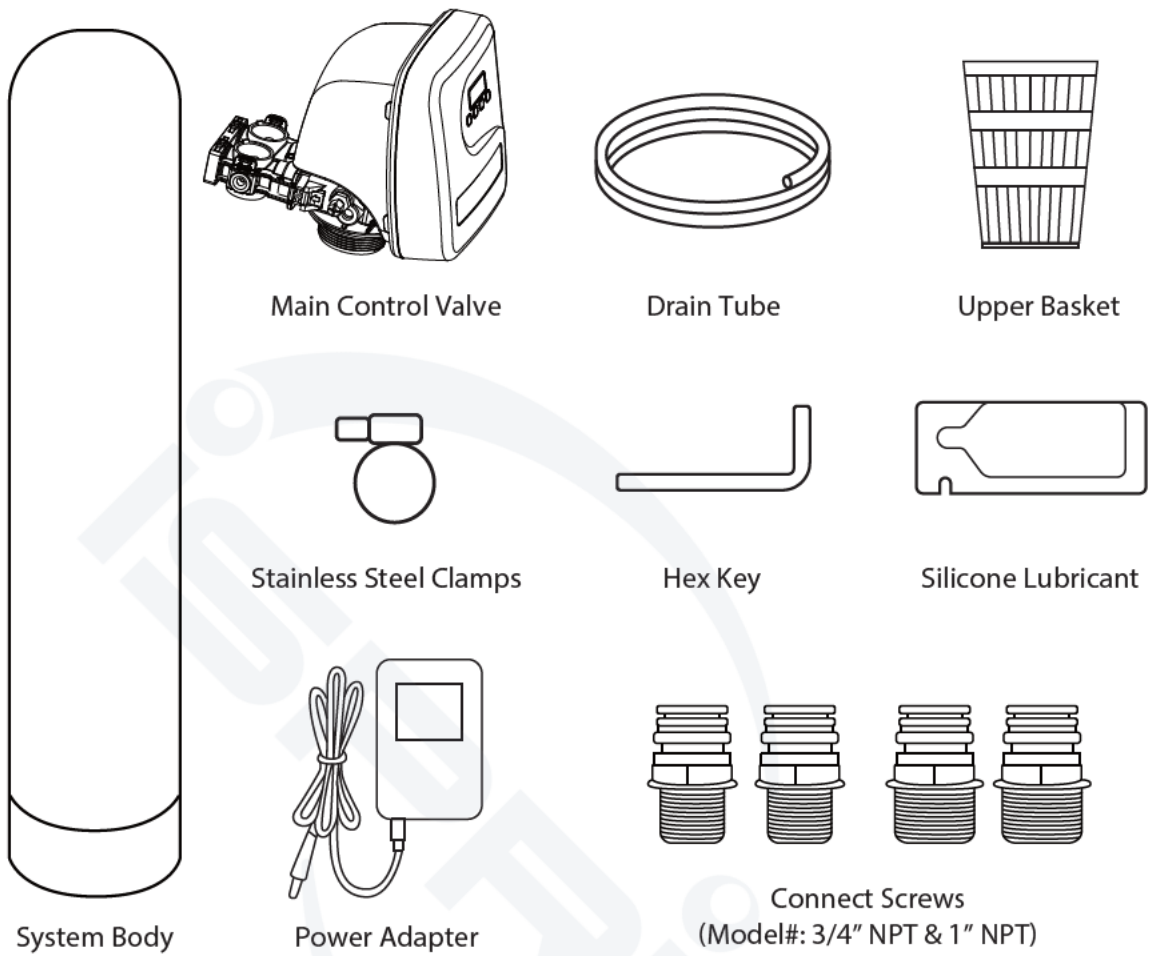
- All inlet and outlet pipes are recommended to use water pipes and fittings that meet the appropriate standards of domestic drinking water. The connection of water pipes and circuits should comply with national or industry standards, and the pipe connections should comply with relevant federal installation regulations.

- If the water inlet pressure is higher than 100 psi, a pressure reducing valve must be installed at the water inlet pipe of the water purifier. If the water inlet pressure is lower than 35 psi, a booster pump must be installed at the water inlet pipe of the water purifier to ensure the working pressure meets technical requirements. In addition, a pressure reducing valve or booster pump should be installed between the water inlet pipe and the water supply pipe of this product.

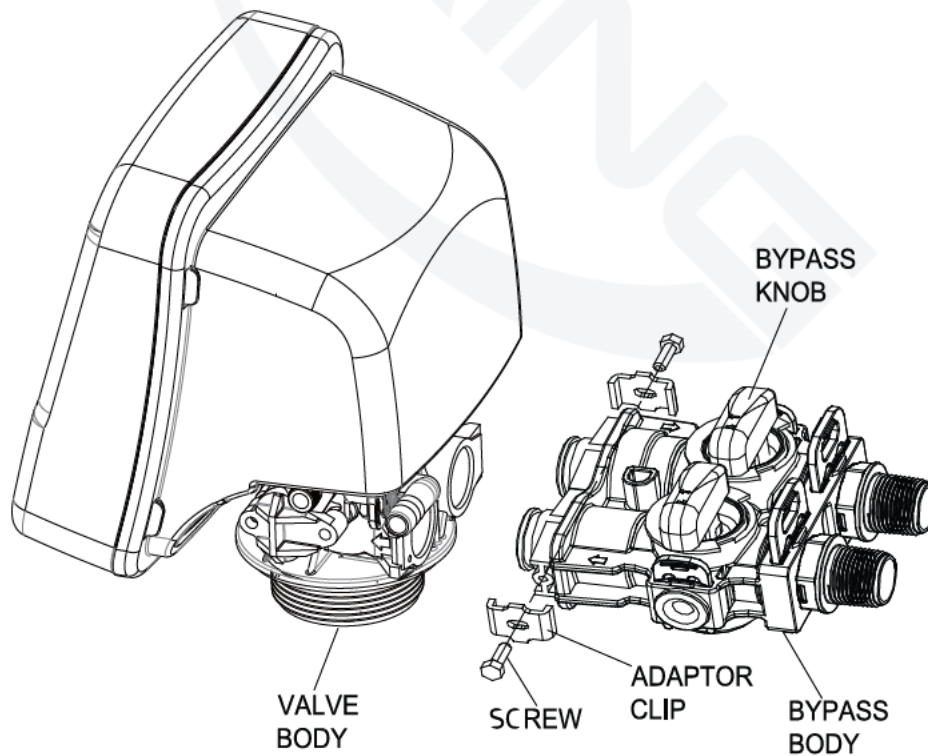
- If the temperature of the inlet water is higher or lower than the requirement, heat preservation measures should be executed.

Material Details

1. Inspect Shipment:



2. Bypass Assembly



General Product Information

The Central Whole House Water Filtration System is designed for use whenever iron is problematic in the water supply. When water enters the Central Whole House Water Filtration System, it passes through a pocket of compressed air that incorporates oxygen. The water then passes through a filter bed, creating a reaction that separates the iron particles from the water. The Central Whole House Water Filtration System catches the iron particles, leaving iron-free water for use in all water applications. The automatic back flush system is designed to flush and wash the filter media and move pollutants to the drain.

There are three main working stage for this system as shown below.

- 1) Service: After the machine filters the pipeline water, it can provide drinking water per specifications.
- 2) Backwash: Backwash can remove the impurities remaining in the upper layer of the filter material and the toxic and harmful substances adsorbed in the filter material, restore the performance of the filter material, extend the life of the filter material, and prevent filter media from re-entering the water and compromising the water quality.
- 3) Air-Draw: Provide oxygen for iron oxidation and help with the iron and manganese precipitation process.

The main functions of this system are listed below.

- Fully Automatic Control
- Smart Cleaning
- Metric format and US format are available to meet the different customers' requirements
- Multi-Language Function
- Continuous water monitoring
- The regeneration cycle can be set according to time or treated water volume.
- Arbitrarily set the start time of the regeneration process.
- Cycle function programming

Notice

⚠Warning

- This system can only be used with 120V/60Hz unidirectional AC power.
- Do not place objects on top of the power cord and set the unit in an area where the power cord will not be stepped on or tripped over.
- Electric shock hazard: Do not overload sockets or extension cords.
- If there is smoke, abnormal odor, or abnormal noise coming from the machine, immediately unplug the system's power to avoid fire or electric shock.
- Do not touch the plug with wet hands to prevent electric shock.

(1) Location

- This system is required to be installed indoors. The installation location should be well-ventilated and protected against wind and rain. Avoid direct sunlight and radiation from any heat sources. A water leakage protection is highly recommended to be installed together with the system. If it needs to be installed outdoors, heat preservation measures must be taken for the body and pipes, including frost-proof, sun-proof, and waterproofing measures and insulation.
- The system's power supply and plug must be installed in a wall position higher than 500 mm above the ground and equipped with proper grounding, leakage protection, and waterproof devices.
- The installation location should be level, and the ground bearing capacity should be greater than 300 kg/m².
- Ensure that there is proper space around the system and do not apply any external force to the system or its connecting pipes.
- Do not install this system near corrosive substances or gases, as this may cause the system to corrode.
- This system should be installed out of reach of children.
- Install this system after any sediment filters or neutralizing filters, if applicable.
- This system should be installed before a water softener or any taste/odor removal filters (if applicable).

(2) Media

- Do NOT exchange pressure vessel media from one pressure vessel to another. Reason for inadequate sanitation during media exchange. Wet media absorb nitrogen and oxygen in the air, which immediately promotes bacterial growth. Biofouling on the surface of the media and other contaminants are present during the exchange. The media is only designed for iron manganese, hydrogen sulfide, and other heavy metals. Media containing biofouling cannot be reused because it harms drinking water.
- The energy of the media is very aggressive at system startup and calms down by continuously backwashing the system for 1 to 2 hours. It retains enough buffering capacity when it reaches a stable pH of 8 to 10.

(3) Others

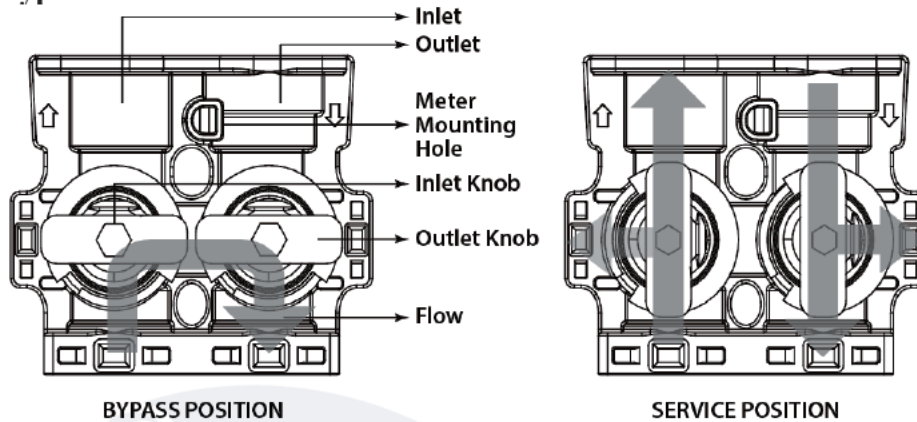
- This equipment should never be tilted or placed horizontally during transportation, installation, or use.
- This sewage pipe should remain open at all times.
- Do not place flammable items on or near the product.
- The installation and commissioning of all machines can be conducted by yourself or a professional technician.

Installation Precautions

- The sewer drainage must be unobstructed, and there must be an air gap between the drain tube and sewage to prevent the sewage from flowing back into the system due to negative pressure.
- Before connecting the water inlet pipe, please remove any remaining impurities and dust in the pipe and close the main water supply before connecting it.
- When connecting screw parts, seal rings are generally installed. Please be aware that excessive force may cause the threads to slip and the screw to crack.

Installation Instructions

(1) General Bypass Installation

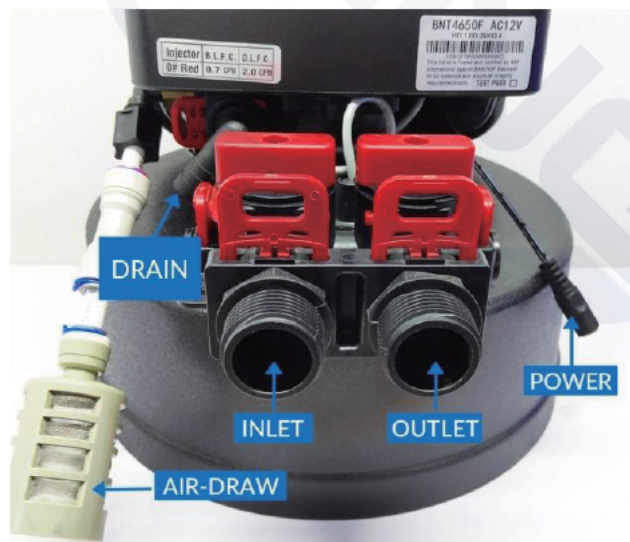


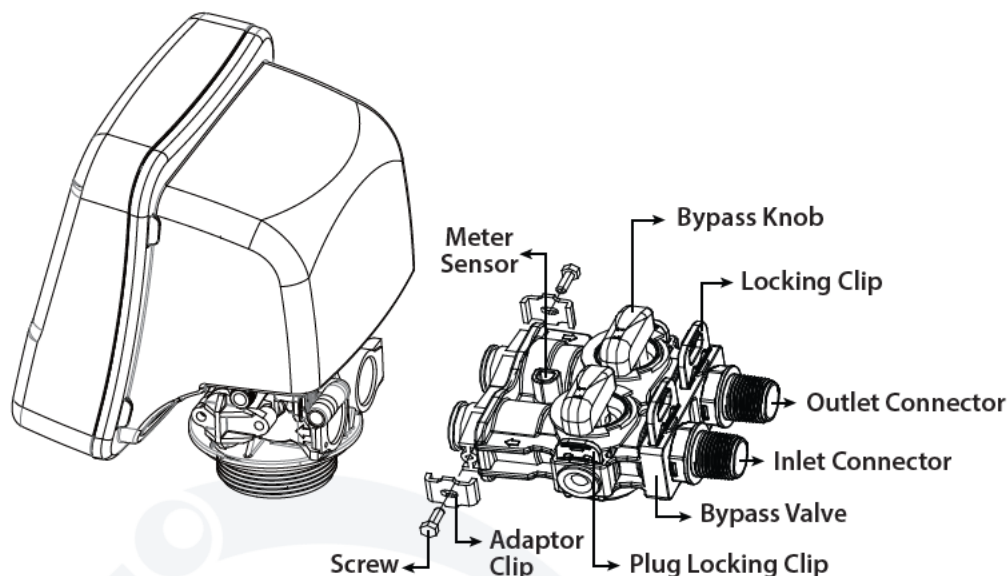
- Hold the knob or use a bypass tool to rotate the knobs. The water supply will be **bypassed** when the knobs are **horizontal**. The bypass valve is in **service** when knobs are oriented **vertically**. When the bypass valve is in service, users can take raw water and filter water samples for testing at the water taking port on either side of the bypass.
- In case of equipment failure or other exceptional circumstances, the bypass can be adjusted to the bypass position, allowing users to directly use tap water temporarily. After the failure or problem is resolved, adjust the bypass to the vertical service position.

(2) Before Installation

- Ensure the installation environment meets all the requirements in Product Specifications section (see page 4).
- When connecting screw parts, seal rings are generally installed. Please be aware that excessive force may cause the threads to slip and the screw to crack.
- Do not remove the clips when the system is in operation; relieve the pressure before removing the clips.

(3) Installation Steps





It is highly recommended that you watch the video *DIY installation and Operation Guide | iSpring WCFM400K Whole House Water Filtration System* on YouTube.

Step 1. Confirm proper installation conditions, unpack the equipment and verify that all accessories are present. Prepare the installation tools and confirm that the installation site's water inlet and outlet pipes, power supplies, drain tube, and floor drain meet the appropriate requirements.

Step 2. Install the **upper basket** on to the **main control valve**.

Step 3. **Lubricate** the inlet/outlet connect screw **o-ring** and tank **o-ring** seal.

Install the **main control valve** on to the **system body**. Use only **food grade/included silicone lubricant**.

Step 4. **Mount the meter sensor** into the meter sensor mounting hole. This device handles meter and control functions after connecting to the appropriate controller.

Step 5. **Close the main water supply** completely, then **open any faucets** in the room to remove the remaining water in the indoor water pipe.

Step 6. **Connect** the water **inlet** and **outlet** pipes of the system to the pipeline.

Double check the direction of the water flow matches the sign on the system. Pay attention to the pipeline's height and placement angle when connected to prevent the connection pipes from bearing stress. While connecting pipes, keep the pipes as close to the wall as possible. The routing of the pipes should be straight, and the corners should be clear. The pipes should be fixed on the wall after installation.

Step 7. **Connect** the **drain** hose and **clamp** to the system tightly to ensure a secure connection. The other end of the drain hose goes to the **sewage** pipe.

There must be sufficient space (~10 cm) between the outlet of the drain hose and the sewage level to prevent sewage from flowing back to the product. The sewage pipe should be 30 cm higher than the ground, and the drain hose should be fixed on the sewage pipe.

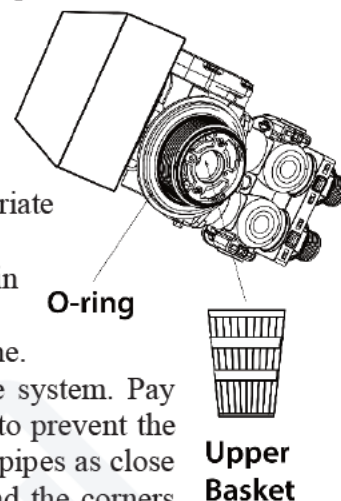
Step 8. Plug in the **power adapter** and connect the other end of the socket to supply power to the system.

Step 9. Rotate the bypass valve knobs to the **bypass position**.

Step 10. Slowly **turn on the main water supply**.

Step 11. **Open a cold water tap** nearby and let the water run for a few minutes till the water runs clean or until the system is free of foreign material caused by plumbing work.

Step 12. Then, slowly **open the water inlet knob** on the bypass valve (the valve should be opened at an angle of about 45°), and fully **open the water outlet knob**. Let the water run until the air is purged from the unit. Then **close the tap**. The air in the tank is then exhausted until it is full.



Step 13. Rotate the bypass valve knobs to the **service position** and observe whether there is water leakage or any other leakage at each connection. After ensuring safety, rotate the knobs to the **bypass position** and soak the filter material for **35 minutes**.

Step 14. Fully **open the water inlet knob** on the bypass valve. Next, **perform Default Regeneration Cycle (45 minutes) immediately once or twice.**

🔑 All keys will lock after 3 minutes during the standby status. Press and hold the "SETTING" key for 3 seconds to unlock.

Step 12. a. To perform the **Regeneration Cycle**, press and hold the "SELECT" button for 3 seconds to enter the manual regeneration mode and choose **IMMEDIATELY** regeneration.

Step 12. b. Backwash (15 minutes)

Step 12. c. Air-Draw (30 minutes)

Step 12. d. Unit Returns to the In-Service Position

Step 15. Rotate the bypass valve knobs to the **service position**.

Step 16. **Open a cold water tap** nearby and let the water run for at least 5 minutes or until the water is clear. Then **close the tap**. Verify the water is completely clear before use.

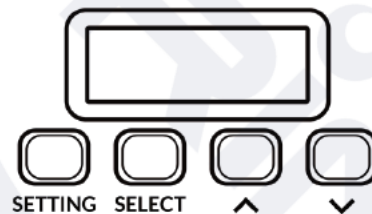
Step 17. Check again for any water leakage in the pipeline and whether the fittings at the connection parts with the original pipeline cause loosening or water seepage from construction.

Step 18. Set up the system parameters of the equipment (see Programming the Central Water Filtration System for details, page 10-12).

Step 19. Clean the installation site.

Programming the Central Water Filtration System

(1) Button Configuration



a. "SETTING"

This function is used to enter the basic setup information required during installation.

- Press and hold the key for 3 seconds to unlock the device while in standby mode.
- In the user menu setting, press this button to immediately exit the menu.

b. "SELECT"

This function is used to initiate an immediate or delayed manual regeneration.

- In the user menu setting, press this button once to confirm the parameter setting and switch to the next option.

c. "↑" / "↓"

These buttons are used to increase or decrease the value of the settings while in programming mode.

- When the display is in a menu option, these keys can be used to adjust the value or option.

(2) Notes

- a. During the menu setting process, if there is no activity within 1 minute, the system will automatically return to the standby state.
- b. All keys will lock after 3 minutes during the standby status. Press and hold the "SETTING" key for 3 seconds to unlock.

(3) Programming Levels

There are four levels of the valve program:

a. Settings

Press and hold "SETTING" for 3 seconds to enter.

Use the "↑" and "↓" button to modify the value. Press the "SETTING" button once to confirm and switch to the following parameter setting, the entire menu shown below. Press "SELECT" to immediately return to the standby state.

TIME OF DAY
12:01 PM
YEAR
2012
MONTH
AUGUST
DAY
21
REGEN DAYS
3 DAYS
METERS
OFF
REGEN. TIME
02:00 AM
LOAD DEFAULT
NO
PROGRAMMING
COMPLETE

TIME OF DAY, YEAR, MONTH, DAY:

Time of day is for normal operation of system and the scheduling of the regeneration time. The date is used in a diagnostic function to track the last time the system regenerated.

REGEN. DAYS:

The number of days between regenerations or back washes to clean the filters. The user can set the number of days in the regeneration cycle according to the water situation.

METERS:

Default value is "OFF". Adjust the METERS to set the capacity. This will cause the unit to regenerate either when the gallons remaining goes to zero or the days between regeneration is zero. Which ever occurs first.

REGEN. TIME:

Determines the time of day to perform a scheduled regeneration. You can set the system's regeneration time according to your routine. It is recommended to set it in a period when water is not in use. The system defaults to 02:00 a.m.

LOAD DEFAULT:

If the selection is made, the processing time of each regeneration cycle will be reset to the default value setting. The rinse time will return to the default value.

b. Advanced Options

Press and hold "↑" and "↓" at the same time for 3 seconds to enter.

Press "SELECT" to confirm and switch to the following parameter setting, the entire menu shown below. Use the "↑" and "↓" button to modify the value. Press the "SETTING" button to immediately return to the standby state.

VALVE MODE
CHEMFREE-AIR
BACKWASH
15 MINUTES
AIR-DRAW
30 MINUTES
LOCK VALUE
UNLOCK
PROGRAMMING
COMPLETE

BACK WASH DURATION / AIR-DRAW DURATION:

Users can adjust these parameters at any time with the help of an application engineer based on the water environment.

LOCK VALUE:

This setting locks the value set in this previous page, and the end user will not be able to modify it before this setting is changed to UNLOCK.

c. Factory Options

Press and hold "SETTING" and "SELECT" at the same time for 3 seconds to enter.

Press "SELECT" to confirm and switch to the following parameter setting, the entire menu shown below. Use the "↑" and "↓" button to modify the value. Press the "SETTING" button to immediately return to the standby state.

LANGUAGE
ENGLISH
FRENCH
UNITS
GALLONS
METRIC
SMART CLEAN
OFF
PROGRAMMING
COMPLETE

SYSTEM LANGUAGE:

Choose the system language.

UNITS:

Choose the system unit of measurement: metric or gallons.

SMART CLEAN:

When set to ON, the system will perform a 10 (adjustable) minute backwash and rinse if there is no water flow detected after 7 (adjustable) days. The regeneration will occur at the scheduled REGEN TIME.

d. Regeneration Mode Options

Press "SELECT" button once to enter "DELAYED REGEN." function. Use the "↑" and "↓" button to change the mode. Press "SELECT" to confirm the setting. Press the "SETTING" button to immediately return to the standby state.

DELAYED REGEN.
OFF

DELAYED REGENERATION

In this mode, the system will start a regeneration at the next regeneration time regardless of the remaining regeneration days or water consumption.

Press and hold the "SELECT" button for 3 seconds to enter the "REGENERATION" setting. Use the "↑" and "↓" button to switch the modes. Press "SELECT" to confirm the setting. Press the "SETTING" button to immediately return to the standby state.

REGENERATION
IMMEDIATELY
REGENERATION
VACATION MODE

IMMEDIATE REGENERATION

Under this mode, the system immediately starts a regeneration.

VACATION MODE

Choose vacation mode and input estimated holiday days; the valve will regenerate in a SMART CLEAN mode. The system will remain in vacation mode when no water is used during the input estimated holiday days; if there's water used, the vacation mode will be auto-off, and the system will return to the normal working mode.

Operation Tips

- The product can be generally used after installation and commissioning have been completed. With an uninterrupted power supply, the user does not need to perform other operations on the machine.
- The automatic regeneration start time default is to start late at night. The water is not treated and should not be used during this time.
- During the use of the system, do not cut off the power to avoid errors in the clock on the system, which will affect the original regeneration start time and lead to the potential use of untreated water.
- When the water supply is shut down, the system should be in the bypass position. When the water supply is restored, the faucet in the home should be opened first. When the water supply is restored after the water supply is shut down, pollutants in the water pipe may enter the system and damage the machine, leading to filter failure. The contaminated water should be released, and the system should return to the service position after the water runs clear.
- DO NOT regenerate any other softeners/filters at the same time as this system since this will interfere with the regeneration process and cause damage.
- For high water usage and/or high iron levels conditions, the system may need to increase the regeneration frequency compared to the regular setting. The regeneration frequency can be increased to once per day or every two days, depending on the users' situation. The system needs to be regenerated at least once per three days as the filter medium can become fouled with iron, rendering the unit ineffective.

Maintenance

- Regularly get your water tested to ensure the system is working properly.
- Media needs to be refilled only when the system reaches capacity or accidentally gets contaminated. The media replacement process needs to be conducted with a professional or under professional guidance. For related questions, contact the iSpring Customer service team.
- Systems installed outdoors without regular maintenance will fail sooner than those installed indoors. It is recommended that you check the product and maintain it regularly. Call us immediately if anything goes wrong.

Emergency Response

- If the equipment fails or experiences other exceptional circumstances, the inlet and outlet valves can be closed (bypass position), and the municipal water supply can be used directly. Re-open the system's water inlet and outlet valves once the emergency is fixed.
- If water consumption increases significantly (compared to normal usage) or the quality of raw water decreases, the number of regenerations should be increased accordingly.
- During the process of system regeneration, if the system experiences a power loss, more than one discharge may occur, resulting in the waste of water resources.
- In case of power failure, readjust the current time and regeneration start time according to the manual after the power supply is restored.
- When the water supply in a residential area is shut down, the main water main valve should be closed immediately. The municipal water supply may cause negative pressure on the household pipeline and damage the equipment.

If you have any questions or concerns during the installation, please contact us at **support@123filter.com** or visit our help page at **123filter.com/support**

Troubleshooting

ISSUE	POSSIBLE CAUSE	POSSIBLE SOLUTION
<i>Unit fails to initiate a regeneration cycle</i>	No power supply	Check electrical service, fuse, etc.
	Power failure	Reset time.
<i>Low water pressure</i>	Scale builds up in line feeding unit	Clean pipes or add WDS series or ED2000 before the system.
	Inlet of control plugged due to foreign material	Remove the piston and clean the control valve.
<i>Control valve without display</i>	Power failure, the power adapter is not plugged in	Check the power supply to ensure regular or restored power supply.
	Power off while regeneration	Turn the bypass valve to the bypass position or close the control valve.
	Control valve failure	Contact us.
<i>Poor water quality</i>	The Control valve clock is inaccurate due to a power failure, causing the regeneration start time to be changed	Adjust the control valve's current time. For operating procedures, refer to the current time in the control valve manual.
	Poor source water quality	Add an additional regeneration process. Refer to the setting of the regeneration cycle in the control valve manual for the operating procedure.
	Filter failure	Contact us.
	Regenerate too often or too little	The regeneration cycle setting is not optimal. Adjust the regeneration cycle of the control valve and refer to the setting of the regeneration cycle in the control valve manual for the operating procedure.
	Incoming water quality does not meet national municipal tap water standards	Contact the relevant local water supply department or add WSP series, WGB series before the system.
	Water system pressure is too low or too high	Install pressure stabilization equipment.
	Control valve failure	Contact us.
<i>Filter material performance reduce</i>	The backwash flow rate is too large or too small	Verify the water pressure is in the range of 35-100 psi.
<i>Regeneration start time is incorrect</i>	The control valve is inaccurate due to power failure	Adjust the current time of the control valve.
	The regeneration start time is set incorrectly	Adjust regeneration start time. For operating procedures, refer to the current time in the control valve manual.
<i>Iron in conditioned water.</i>	Fouled mineral bed.	Check backwash. Increase frequency of regeneration. Increase backwash time.

iSpring Standard Limited Warranty (End-Users Only)

In order to be eligible for this warranty, the end-user must register at www.123filter.com.

For all water filtration systems, and upon registration by the end-user, iSpring Water Systems, LLC (iSpring) warrants for a one year from the date of purchase that the product is free of defects in materials and workmanship and that it will function for the duration of the warranty according to its specifications (the "Limited Warranty"). EXCEPT FOR THIS LIMITED WARRANTY, ISPRING EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ANY WARRANTIES OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. iSpring has no liability for any defect or deterioration which results from the improper installation, service, repair or use of the product. End-user's sole and exclusive remedy for any breach of the Limited Warranty shall be repair or replacement, at iSpring's option and expense. This warranty is only provided to end-users and only applies to products purchased directly from an authorized iSpring dealer or reseller.

Warranty Registration

iSpring does not have access to order information from 3rd party selling channels, and it is strongly recommended to manually fill in the order information upon registering for warranty. Please contact our support team at support@123filter.com if there are any questions or concerns about the product and its installation. Your satisfaction is our business!

Please consider supporting us by leaving an honest product review on the channel where the product was purchased. It means a lot to us. Thank you for being an iSpring customer.

Warranty Registration Form

Name _____

Order# _____

Email _____

Phone _____

Address _____

City _____

State _____

Zip Code _____

Model #/ Serial Number

Purchased at (e.g. Amazon, Home Depot)

Send to:

iSpring Water Systems, LLC
2480 Industrial Park Blvd, Cumming, GA 30041
+1 (678) 261-7611

Plumber's information (Optional)

To best serve our customers, we'd like to recommend good plumbers throughout the USA. If you are happy with your installer, please provide their information so that we can pass it on as a courtesy.

Thank you!

Name of the plumbing company used to install your system:

Phone #: (____) - _____ or email : _____
of the technician.



Like our products?

Please show your support by writing a product review on the marketplace where you make your purchase. Even just a quick statement means a lot to us.

Thank you!

iSpringFilter.com



Scan to get your FREE warranty

For questions, comments, or technical support, please contact us at:

✉ support@123filter.com

☎ +1 (678) 261-7611

💬 +1 (470) 560-0012

Monday-Friday 9:00 a.m. - 5:00 p.m. EST

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