

WHOLE HOUSE

iSpring WCFM400K Central Whole House Water Filtration System



Model: WCFM400K

Installation Instructions & User Manual

Ver. 08/2021



iSpring Water Systems



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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 33.8°F – 100°F. If the water temperature or ambient temperature falls below 33.8°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 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: AC120V, 60Hz Output: AC12V, 650mA
Pressure Tank Thread	2 1/2" NPSM
Inlet/Outlet Connector	1" NPT
<ul style="list-style-type: none">• 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.	

*Independent 3rd party laboratory test data.

Before You Start



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.



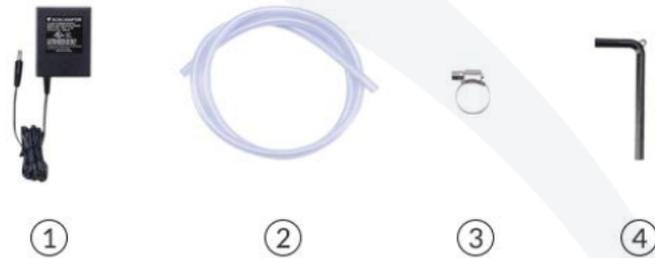
Note

- 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.
- Do not use water that is microbiologically unsafe or of unknown quality without disinfection before or after use with this system.
- 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.
- Failure to operate the product in accordance with this manual may result in product damage, water leakage, water seepage, and other losses.

For questions or concerns, call **1-678-261-7611** or email Support@123filter.com, or visit www.ispringfilter.com/support.

Material Details

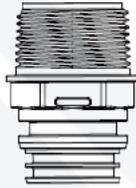
1. Inspect Shipment:



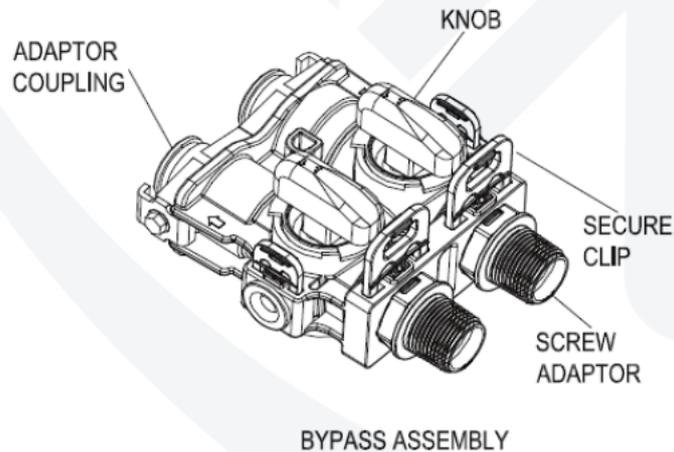
One machine and its accessories are included: ① power adapter (white box, 1 pcs.) (adhered to the base), ② sewage pipe (translucent pipe, 1 pcs.), ③ stainless steel clamps (in the PE bag, 1 pcs.), ④ hex key (in the PE bag, 1 pcs.).

2. Inlet/Outlet Screw Adaptor:

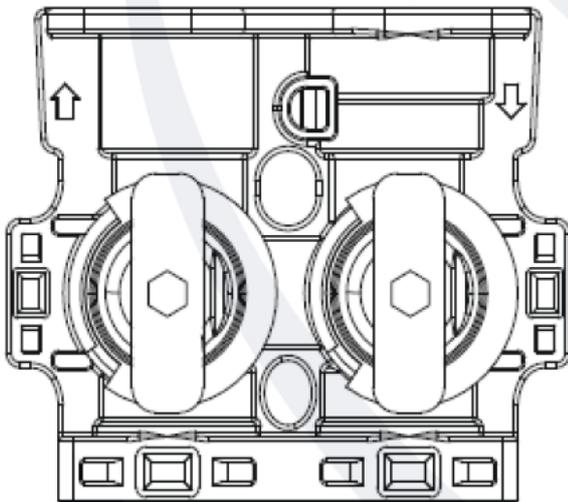
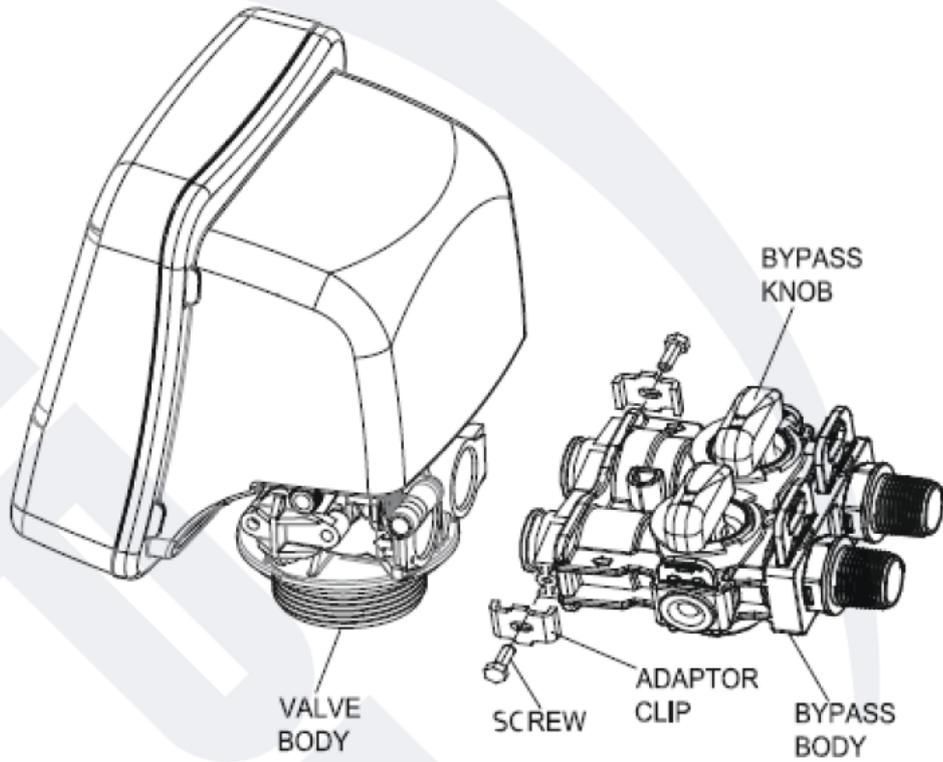
Connect Screw NPT1M



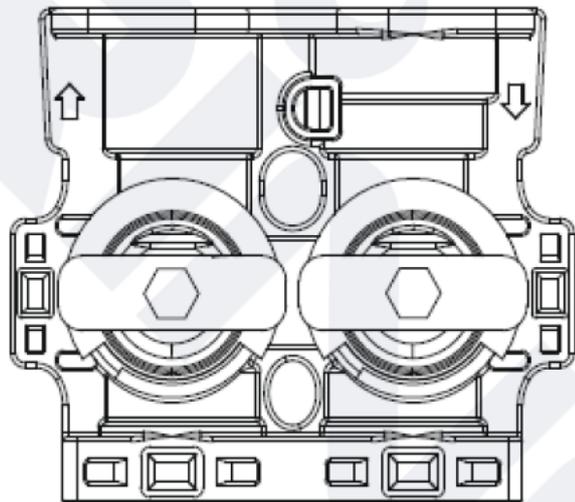
3. Inlet/Outlet Connections Types:



4. Bypass Assembly



SERVICE POSITION



BYPASS POSITION

Installation Requirements

(1) Equipment Installation Conditions

- The installation location should be well-ventilated and protected against wind and rain. Avoid direct sunlight and radiation from any heat sources.
- This equipment is required to be installed indoors. 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.
- This sewage pipe should remain open at all times.
- If the equipment is installed indoors, the installation equipment must be equipped with water leakage protection.
- The product'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.

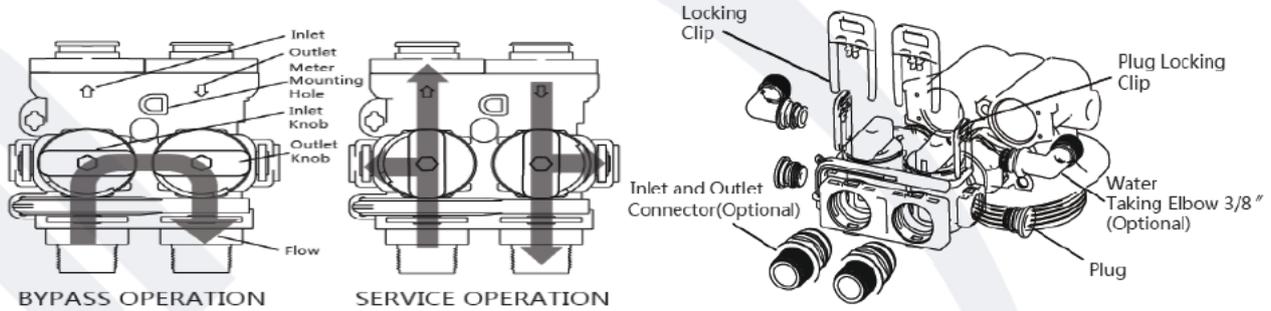
(2) Installation Precautions

- This equipment should never be tilted or placed horizontally during transportation, installation, or use.
- Ensure that there is proper space around the device and do not apply any external force to the device or its connecting pipes.
- Do not install this product near corrosive substances or gases, as this may cause the product to corrode.
- Do not place flammable items on or near the product.
- 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.
- Pay attention to the height and placement angle of the pipeline when it is connected. After the pipeline is appropriately connected, there should be no evidence of stress, so as to avoid damage to the water pipe or the product due to long-term use.
- There must be sufficient space (about 10 cm) between the outlet of the sewage pipe and the sewage to prevent sewage from flowing back to the product; the underground sewage pipe should be 30 cm higher than the ground, and the sewage pipe should be fixed on the sewage pipe (do not insert the sewage pipe directly into the sewage).
- 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.

- Before connecting the water inlet pipe, remove any remaining impurities and dust in the pipe and close the main water supply before connecting it.
- 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.
- 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.
- During installation, pay attention to the direction of water flow, connect the inlet and outlet pipes according to the inlet and outlet signs, and ensure there is no water leakage after installation.
- The installation and commissioning of all machines can be conducted by yourself or a professional technician.

Installation Instructions

(1) General Bypass Installation



- i. 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 is in **service** when knobs are oriented **vertically**. When the bypass 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.
- ii. Mount the meter sensor into the meter sensor mounting hole. This device handles meter and control functions after connecting to the appropriate controller.
- iii. 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

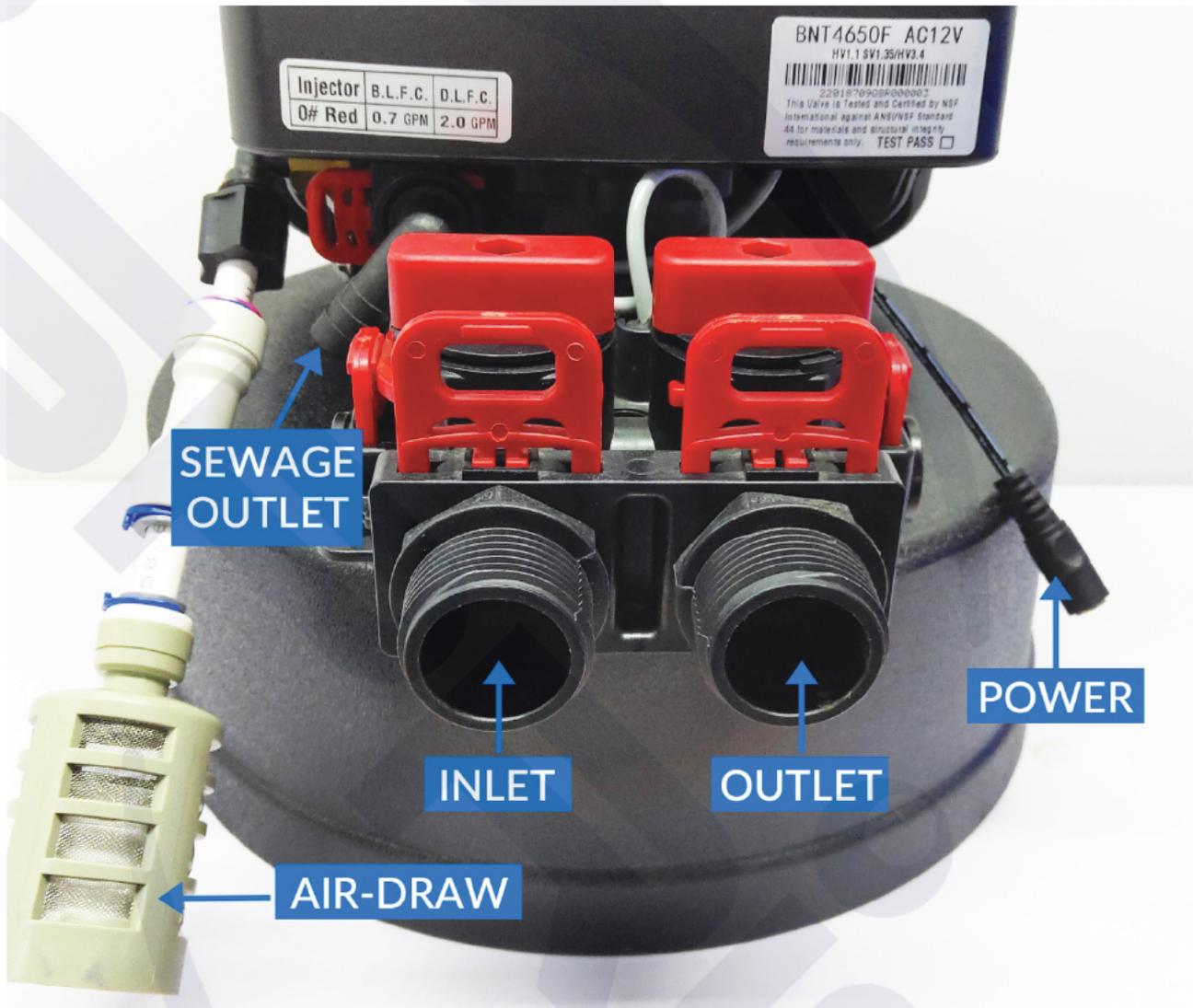
(2) Precautions Before Commissioning

- Verify the water inlet pipe and sewage pipe are connected as required. All piping connections must comply with relevant national standards.
- Fix the sewage hose onto the sewer pipe, but do not insert it directly into the sewer pipe. A gap of 100 mm shall be maintained with the bottom of the sewer pipe.
- Check whether the pressure of the water source is within the range of 35 psi - 100 psi.

(3) Notes

- i. The water pressure requirement is 35~100 psi. If the pressure is higher or lower than this, it is recommended to install a pressure stabilizer.
- ii. The operating ambient temperature requirement is 33.8°F ~100°F. If the temperature is higher or lower than this, heat preservation measures should be executed.
- iii. Do not remove the clips when the system is in operation; relieve the pressure before removing the clips.
- iv. This product should be installed out of reach of children.

(4) Equipment Installation



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

Step 2. Close the indoor water inlet valve completely, then open any faucets in the room to remove the remaining water in the indoor water pipe.

Step 3. Connect the water inlet and outlet pipes. Pay attention to the direction of the water inlet and outlet and prevent the connection pipes from bearing stress. The water inlet is connected to the stainless steel braided hose. The other end is connected to the water inlet channel. The water outlet is connected to the stainless steel braided hose. The other end is connected to the water outlet channel.

Step 4. Connect the equipment drain hose and clamp to ensure a secure connection.

Step 5. The sewage outlet is inserted into the sewage pipe and the stainless steel clamp is locked and clamped tightly outside to prevent high water pressure during sewage discharge, which will cause the sewage hose to break loose and leak sewage.

Step 6. Plug in the power adapter and connect the other end of the socket to supply power.

Step 7. Place the bypass in the **bypass position**.

Step 8. Slowly **turn on the main water supply**.

Step 9. **Open a cold water tap** nearby and let the water run a few minutes till the water runs clean or until the system is free of foreign material caused by plumbing work.

Step 10. Then, slowly **open the water inlet valve** (the valve should be opened at an angle of about 45°), fully **open the water outlet valve**, and 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 11. Operate the bypass to the **service position** and observe whether there is water leakage or any other leakage at each connection. After ensuring safety, **close the water inlet valve** and **soak the filter material for 10 minutes**.

Step 12. Fully **open the water inlet valve**. **Close the water outlet**. Next, **regenerating immediately once or twice, Regeneration Cycle (80 minutes)**.

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

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

Step 12. b. Backwash (20 minutes)

Step 12. c. Air-Draw (60 minutes)

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

✦ **Regeneration Cycle: backwash (20 minutes) and air-draw (60 minutes)**.

Step 13. Return the bypass to the **service position**.

Step 14. **Open a cold water tap** nearby and let the water run. Then **close the tap**. Verify the water is completely clear before use.

Step 15. Check again for any water seepage in the laying pipeline and whether the fittings at the connection parts with the original pipeline cause loosening or water seepage from construction.

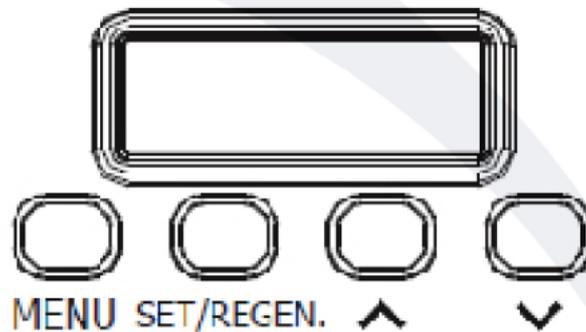
Step 16. Set up the system parameters of the equipment (see **Programming the Central Water Filtration System** for details, p.14 ~ p.16).

✦ **Default regeneration process: backwash (20 minutes) and air-draw (60 minutes)**.

Step 17. Clean the installation site.

Programming the Central Water Filtration System

(1) Button Configuration



- **MENU**
This function is used to enter the basic setup information required at the time of installation.
- **SET/REGEN**
This function is used to initiate an immediate or delayed manual regeneration.
- **DOWN/UP**
These buttons are used to increase or decrease the value of the settings while in programming mode.

(2) Function Key Description

(a) "MENU"

- Press and hold the key for 3 seconds to unlock the device while in standby mode.
- Press and hold the key for 3 seconds in the unlocked state to enter the user menu settings, such as regeneration mode, time, date, etc.
- In the user menu display, press this button to immediately exit the menu display.

(b) "SET/REGEN"

- While in the unlocked state, press and hold the button for 3 seconds to enter the manual regeneration mode. You can choose either vacation mode or immediate regeneration. Choose vacation mode and input estimated holiday days, the valve will regenerate in smart clean mode (see p.16) when no water is used during the days; if there's water used during the days, the vacation mode will be auto-off.
- Delayed regeneration means that the system will start a regeneration at the next regeneration time regardless of the remaining regeneration days or water consumption. Press and release the button to set a delayed regeneration that will occur at the regeneration time.
- Immediate regeneration means that the system immediately starts a regeneration.
- In the user menu display, press this button once to delay regeneration.
- In the user menu setting, press this to confirm the parameter setting and switch to the next option.

(c) "↑" / "↓"

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

(3) Notes

(a) Combination key

- Press and hold "↑" and "↓" at the same time for 3 seconds in the unlocked state to regeneration cycle setting (backwash, rinse, lock/unlock value).
- Press and hold "MENU" and "SET/REGEN" at the same time for 3 seconds in the unlocked state to enter the user menu settings, such as language, units, smart clean, etc.

(b) During the menu setting process, if there is no activity within 1 minute, the system will automatically return to the standby state.

(c) While in the standby state, if there is no activity within 3 minutes, the system will automatically lock and the display can be processed after unlocking.

(d) For the calendar setting, current time and regeneration time, the "MENU" button is used to switching options and "SET/REGEN" is used to enter setting. After adjustment, press "MENU" to confirm and "SET/REGEN" to return to the standby state.

(4) Press and hold "MENU" for 3 seconds to enter the following user menu settings:

TIME OF DAY 12:01 PM
YEAR 2012
MONTH AUGUST
DAY 21
REGEN DAYS 3 DAYS
GALLONS OFF
REGEN. TIME 2:00 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.

GALLONS:

Default value is "2100 GAL". Adjust the GALLONS 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.

(5) Press and hold "MENU" and "SET/REGEN" at the same time for 3 seconds to enter the following user menu settings:

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 nowater flow detected after 7 (adjustable)days. Theregeneration will occur at the scheduled REGEN TIME.

(6) Press and hold " ↑ " and " ↓ " at the same time for 3 seconds to enter the following user menu settings:

VALVE MODE
CHEMFREE-AIR

BACKWASH
15 MINUTES

AIR-DRAW
30 MINUTES

LOCK VALUE
UNLOCK

PROGRAMMING
COMPLETE

BA. WA. DURATION (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.

Operation of WCFM400K Central Whole House Filtration System

(1) Product Functions and Features

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. The whole house central water filtration series carries excellent effluent water quality and abundant water purification flow, making the facility's water safe for use. The resulting purified water meets the drinking and bathing requirements of users, including families, enterprises, and institutions. The product's main functions are as follows:

- Fully Automatic Control
- A built-in time controller, twenty-four-hour time control. Based on the set number of interval days or the amount of treated water, the filter material is cleaned at the set regeneration time (usually in the early morning before any use).
- 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

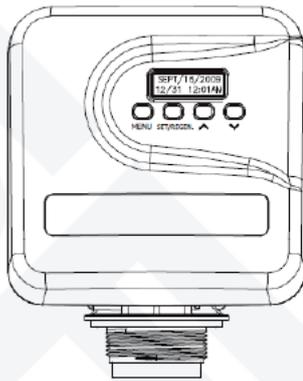
Service: After the machine filters the pipeline water, it can provide drinking water per specifications.

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.

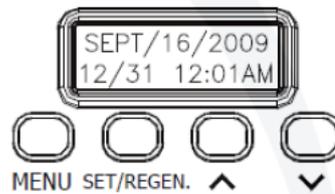
Purge/Rinse: Rinse the filter material, drain the dirty water, and fill the machine with filtered, purified water, compact the filter material, keep the filter material always operating in high quality to best prepare for the next water purification cycle.

(2) Valve

This valve is controlled using a simple, user friendly electronic display on a large LCD screen. The main page displays the current date and time while also showing key valve information such as the current capacity setting, volume remaining (meter mode); regeneration days, regeneration days remaining (timer mode).



Key Pad



Main Functions

- Daily Reserve
- Forced Regeneration
- Smart Cleaning
- Display Format:

Metric format and US format are available to meet the different customers' requirements.

- Multi-Language Function:

English, Spanish, French and other languages are available.

- Continuous water monitoring/Continuous no water monitoring

Auto-locking:

All keys will lock after 3 minutes during the standby status. **Press and hold the “MENU” key for 3 seconds to unlock.**

Please refer to the programming manual for additional details.

Care of Your Central Water Filtration System

- The product can be used frequently after installation and commissioning have been completed. With an uninterrupted power supply, the user does not need to perform other operations on the machine.
- If the equipment fails or experiences other exceptional circumstances, the inlet and outlet valves can be closed (bypass valve is open), and the municipal water supply can be used directly. After removal, open the water inlet and outlet valves of the device.
- The automatic regeneration start time default is to start late at night. During this time, the water is not purified and should not be used.
- During the use of the water purifier, do not cut off the power to avoid errors in the clock on the water purifier, which will affect the original regeneration start time and lead to the potential use of unpurified water.
- During the process of water purifier regeneration, if the system experiences a power loss, more than one discharge may occur, resulting in the waste of water resources.
- If there is no one in the home for more than three days, close the product's main water purification valve. Once the water purifier has been stopped for a while, a regeneration operation should be added to ensure the quality of the purified water before reuse.
- If water consumption increases significantly (relative to normal usage) or the quality of raw water decreases, the number of regenerations should be increased accordingly.
- Do not apply external force to the device and avoid direct sunlight and radiation from other heat sources.
- 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 to the household pipeline and damage the equipment.
- When the water supply is shut down, the bypass valve of the water purifier should be opened. When the water supply is restored, the faucet in the home should be opened first. The contaminated water should be released, and the bypass valve should be closed after running clear. When the water supply is restored after the water supply shut down, pollutants in the water pipe may enter the water purifier and damage the machine, leading to filter failure.
- Water purifiers 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 something goes wrong.

Troubleshooting

ISSUE	POSSIBLE CAUSE	POSSIBLE SOLUTION
<i>Unit fails to initiate aregeneration 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 back wash flow rate is too large or too small	Verify the water pressure is 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.

Need help with troubleshooting? If you have any questions or find there are missing parts or damage, please call **1-678-261-7611** or visit **www.ispringfilter.com**
When calling, please be prepared to provide the model of your product.
(The model of this product is "WCFM400K".)

Warranty Registration

To register your product for the warranty, visit our website at 123filter.com and go to the “Warranty” tab.

We provide a 30-day money back guarantee, a 1-year manufacturer warranty, and lifetime tech support for all of our products. However, we do not have the order information from websites other than 123Filter.com (Amazon, Home Depot, etc.), so please be sure to fill in that information upon registration of your system. If you have any questions or concerns about your product, please do not hesitate to call or email us, or put it in the notes/comments upon your warranty registration. Your satisfaction is our business!

If you are happy with our products and service, please show your support by writing a product review on Amazon, even just a single line. It takes you just a minute but means a lot to us. Thank you!



Atlanta, GA USA

iSpringFilter.com

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

support@123Filter.com

(678) 261-7611

Monday-Friday 8:30 a.m. - 5:30 p.m. EST