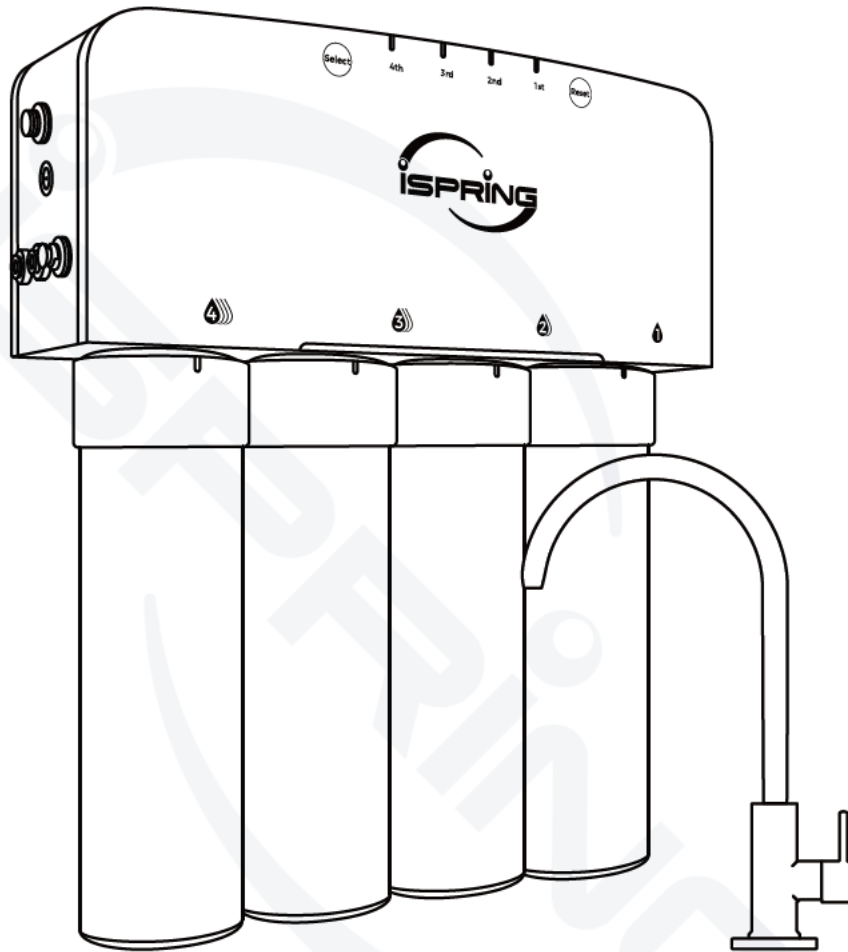


UNDER SINK

iSpring RO5004F Series Reverse Osmosis Water Filtration System



Installation Instructions & User Manual

Ver. 12/2024



Any questions?
Scan the QR code
for support.



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We stand behind our products

Since 2007, iSpring has been committed to delivering safe and clean water solutions to families and businesses worldwide. We provide a wide range of residential and commercial water filtration systems designed to purify your water, ensuring that you and your family enjoy pure, healthy, and great-tasting water every day.

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 fantastic 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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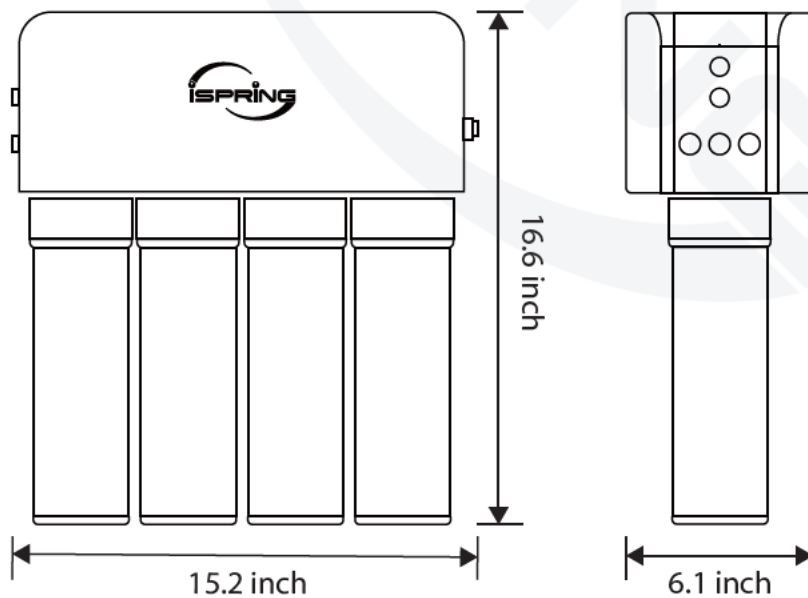
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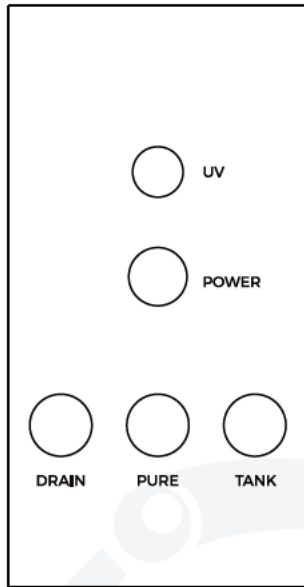
User Information

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

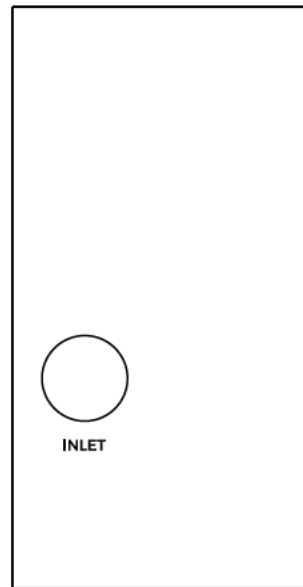
- This product is designed for residential use only. Contact iSpring customer service to inquire about usage in non-residential settings.
- Use only authorized iSpring parts and filters. Using unauthorized or aftermarket components will void the product warranty.
- Unauthorized modification and disassembly 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.
- Never put the RO system next to corrosive components and fire, as it may cause damage.
- The operating temperature is 41°F - 100°F. Avoid direct sunlight and freezing weather. If the water temperature or ambient temperature falls below 41°F, immediately shut off the inline water adapter, and drain the remaining water.
- Do not use the RO system if the drainpipe or sink is clogged, as this may contaminate it.

Product Overview





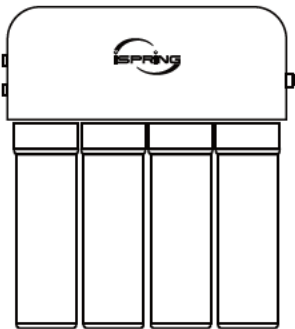
Left Side View



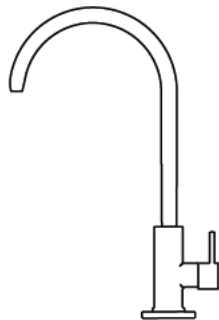
Right Side View

Technical Specifications		
Model	RO5004F	RO5004FAK
Source Water	Municipal Water	
Incoming Water Temperature	41 – 100°F	
Incoming Water Pressure	30 – 70 psi	
Rated Power	110 – 240 V, 50/60 Hz	
Rated Voltage	DC 24 V	
Rated Current	0.6 A	
Max. Power Input	73 W	
Max. Current	2.4 A	
Purified Water Flow	Up to 500 GPD (0.35 GPM)	

Components Identification



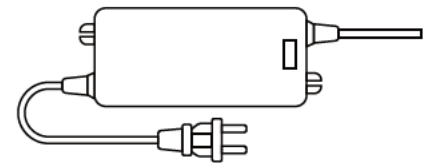
RO System



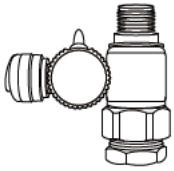
RO Faucet & Installation Kit



Faucet Bracket



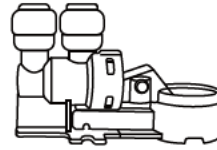
Power Adapter
(Model #ATRF5004F)



Feed Water Adapter
(Model #AFW43)



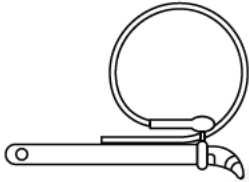
Drain Saddle 1/4"
(Model #ADS1K)



Leak Stop Valve
(Model #ALS1)



UV Light



Housing Wrench



PE Tube



Quick Connect Removal Tool
(Model #AQR23)

Installation

1 Preparation

We recommend watching our video "**How to Install the iSpring RO5004F Reverse Osmosis System: Step-by-Step Guide**" on YouTube for your reference.

- Ensure the system is installed indoors only to a cold-water supply. Do not mount the system on a wall or connect it to a hot water supply.

Tools Needed for Installation:



Plumber's
Tape



Screw
Driver



Spanner
Wrench



Utility
Knife



Flash
Light



Towels



Electric
Drill

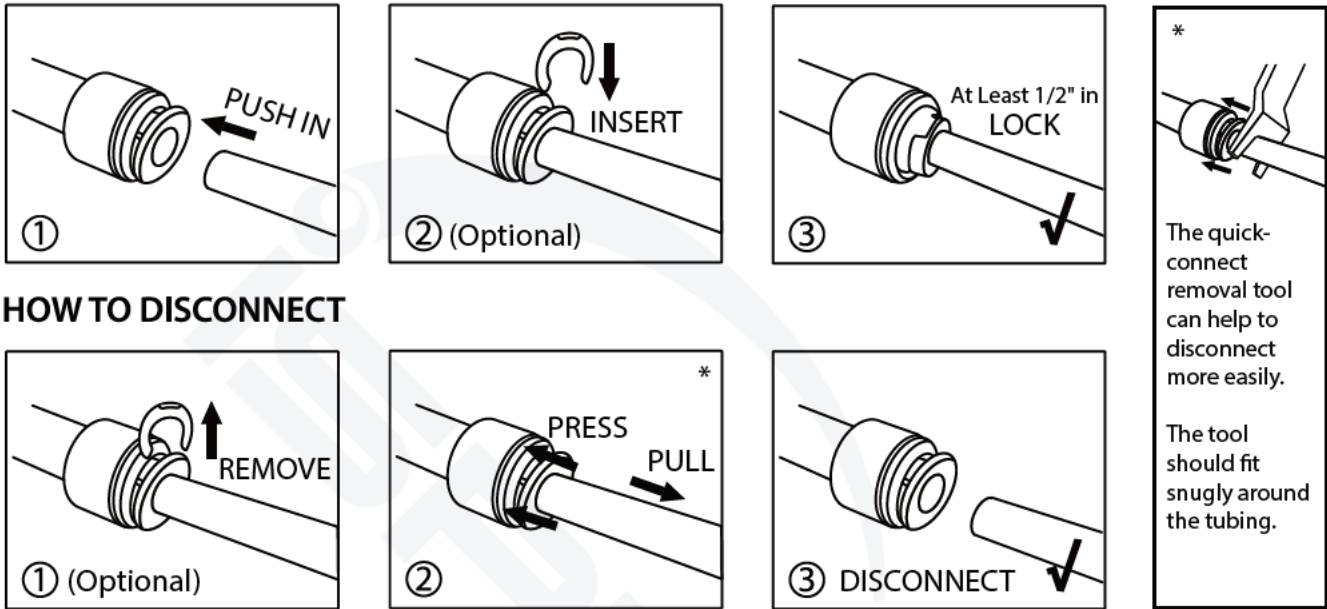
Additional tools:

- For users who need to drill a hole in their countertop, prepare a multi-speed drill with two

bits: 1/4" (for drilling on PVC drainpipe) and hollow diamond (for drilling on the counter-top for drinking faucet if needed).

- For more effortless operation and installation, prepare a 5/8", 9/16" open-end wrench or adjustable wrench and pliers.

HOW TO CONNECT



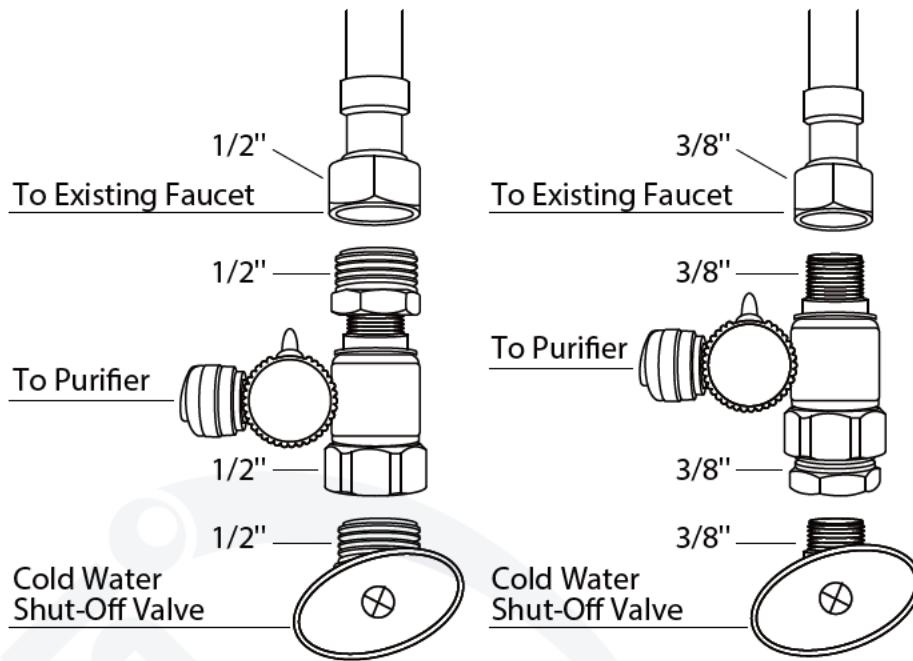
We recommend watching our video **"How to Connect and Disconnect Quick Connect Fittings | DIY Installation"** on YouTube for your reference.

- Cut the tube end evenly with a utility knife or scissors. Insert the tube into the quick-connect fitting for at least 1/2". Twist the tube slightly and apply pressure to create a seal.

2 Install Feed Water Adapter (Model #AFW38)

We recommend watching our video **"How to Install iSpring AFW38 Feed Water Adapter for Reverse Osmosis Systems | Step-by-Step Guide"** on YouTube for your reference.

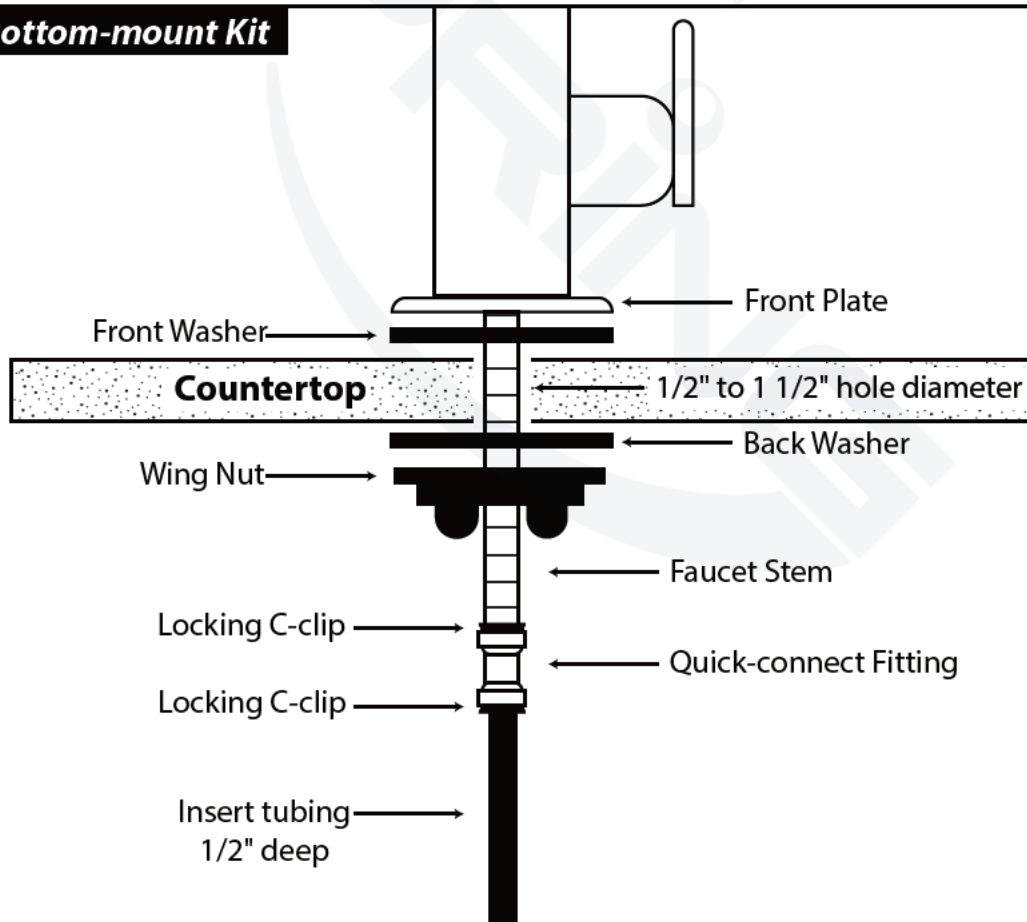
- Turn off the Cold Water Shut-off Valve under the sink and open the kitchen faucet to release pressure. Grab a towel or bucket to catch any water drips. Disconnect the kitchen faucet connector pipe from the Cold Water Shut-off Valve.
- Install the AFW38 onto the Cold Water Shut Off Valve and tighten it using a wrench or plier. Ensure the O-ring is seated inside the adaptor.
- Reinstall the kitchen faucet connector pipe onto the male end of the AFW38. Turn the handle of the AFW38 to the perpendicular OFF position. Slowly turn on the Cold Water Shut-off Valve to ensure a proper seal.
- Connect the 3/8" **RED** tube to the AFW38.

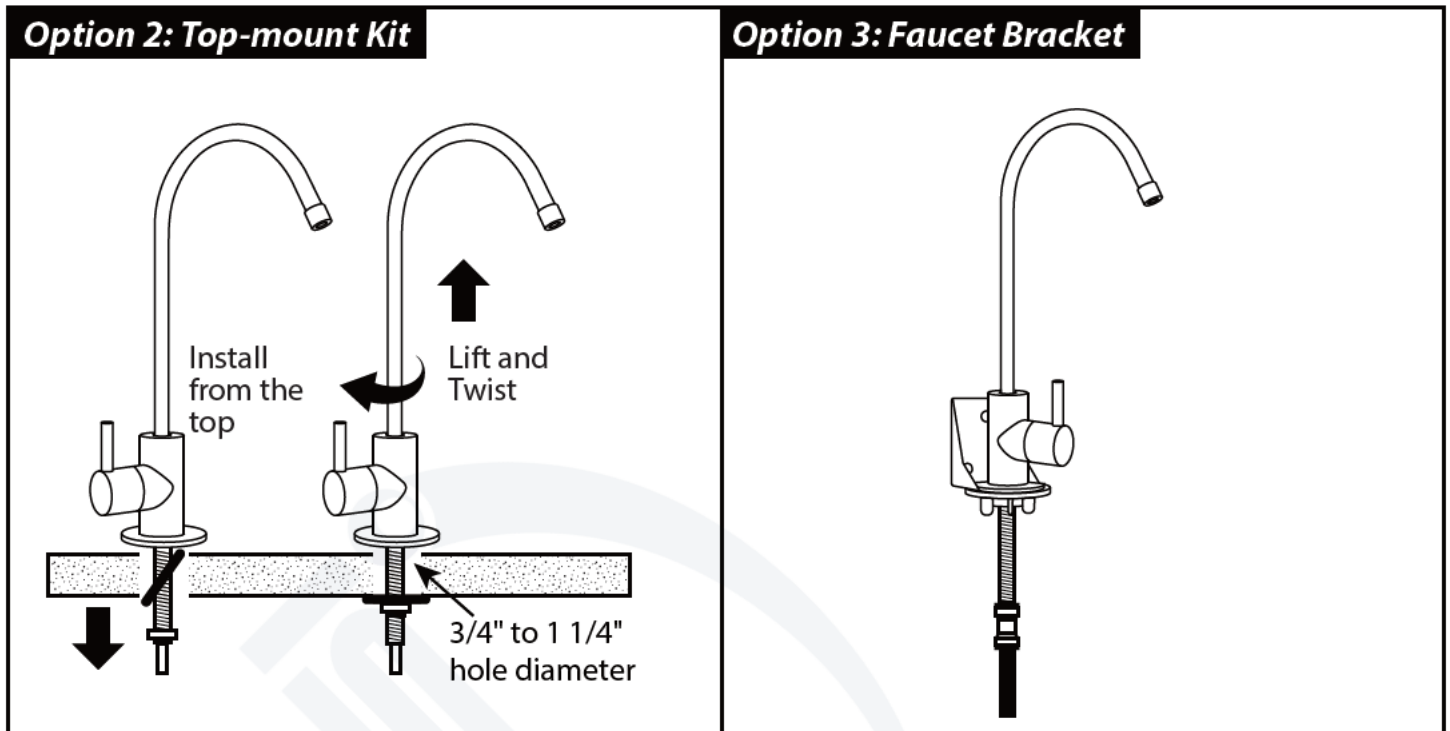


The included bushing can be threaded on either side of the AFW38 to fit the 3/8" COMP and 1/2" NPT configuration.

3 Install Drinking Water Faucet

Option 1: Bottom-mount Kit





This drinking faucet installation kit includes a Top-mount Kit, a Bottom-mount Kit, and a Faucet Bracket. Choose a suitable location on the sink or countertop and install the drinking faucet on a flat surface. If your kitchen sink does not have a faucet hole for the drinking faucet, you can drill one (Refer to [How to Drill a Hole on Sink or Countertop](#)) to proceed with Option 1 or 2. If you do not wish to drill a hole, use the enclosed Faucet Bracket (Refer to Option 3).

The bottom-mount kit requires a 1/2" to 1-1/2" faucet hole, and the top-mount kit requires a 3/4" to 1-1/4" faucet hole.

How to Drill a Hole in Sink or Counter-top

We recommend watching our video ["How to Drill a Hole in a Countertop | Under Sink Water Filter & Reverse Osmosis Installation"](#) and ["Drilling Granite Countertop for Under-Sink Filters: A DIY Guide"](#) on YouTube for your reference.

- a** Use a diamond core bit of the correct size for granite and a titanium drill bit for steel.
- b** Punch an indent before drilling to help guide the bit. Do not hammer drill on natural stone, glass, or ceramic materials.
- c** Set the drill speed to the lowest and press the bit vertically to the countertop until it breaks through the surface. You may secure the bit by drilling through a piece of wood firmly pressed on the surface. Be careful when drilling on a Porcelain sink, as it can easily chip.
- d** Use coolant to disperse heat: water for granite and oil for steel. Use a Water Cup to hold the coolant inside and prevent the drill bit from slipping.
- e** Once you break through the smooth surface, swirl the drill slightly to apply pressure evenly. Drilling one inch can take 20 to 40 minutes.

Option 1: Bottom-mount Kit

We recommend watching our video **"How to Install Drinking Water Faucet & Drill Countertop Hole | DIY Guide"** on YouTube for your reference. Slip the front plate on the faucet stem, followed by the front rubber washer. Insert the faucet stem into the hole on the countertop. Under the sink, slip on the back rubber washer and tighten the nut with the plastic wing.

Option 2: Top-mount Kit

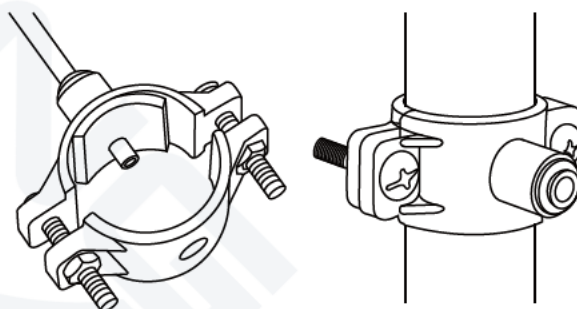
We recommend watching our video **"How to install a drinking water faucet WITHOUT reaching under sink | iSpring AIG1 Installation Kit"** on YouTube for your reference. Insert the plate with the rubber side up to the faucet stem. Install the metal nut on the faucet stem below the plate. It will keep the plate from falling. Lift and tilt the plate. Insert the faucet stem and the kit into the faucet hole while tilting the plate. Let go of the plate. It will drop and latch onto the metal nut via the triangular grooves on both sides. Thereby, it will change from the tilted position to the horizontal position. Lift the faucet body to secure the plate and nut. While lifting, tighten the faucet by turning it clockwise.

Option 3: Faucet Bracket

We recommend watching our video **"How to Install a RO Faucet Bracket | DIY Installation"** on YouTube for your reference. Mount the bracket to the sidewall of the cabinet. Insert the faucet stem into the bracket's hole. Slip on the back rubber washer. Tighten the nut with the plastic wing.

4 Install Drain Saddle (Model #ADS1K)

We recommend watching our video **"How to Install iSpring Drain Saddle (ADS1K) for Reverse Osmosis (RO) System | DIY Installation"** on YouTube for your reference.

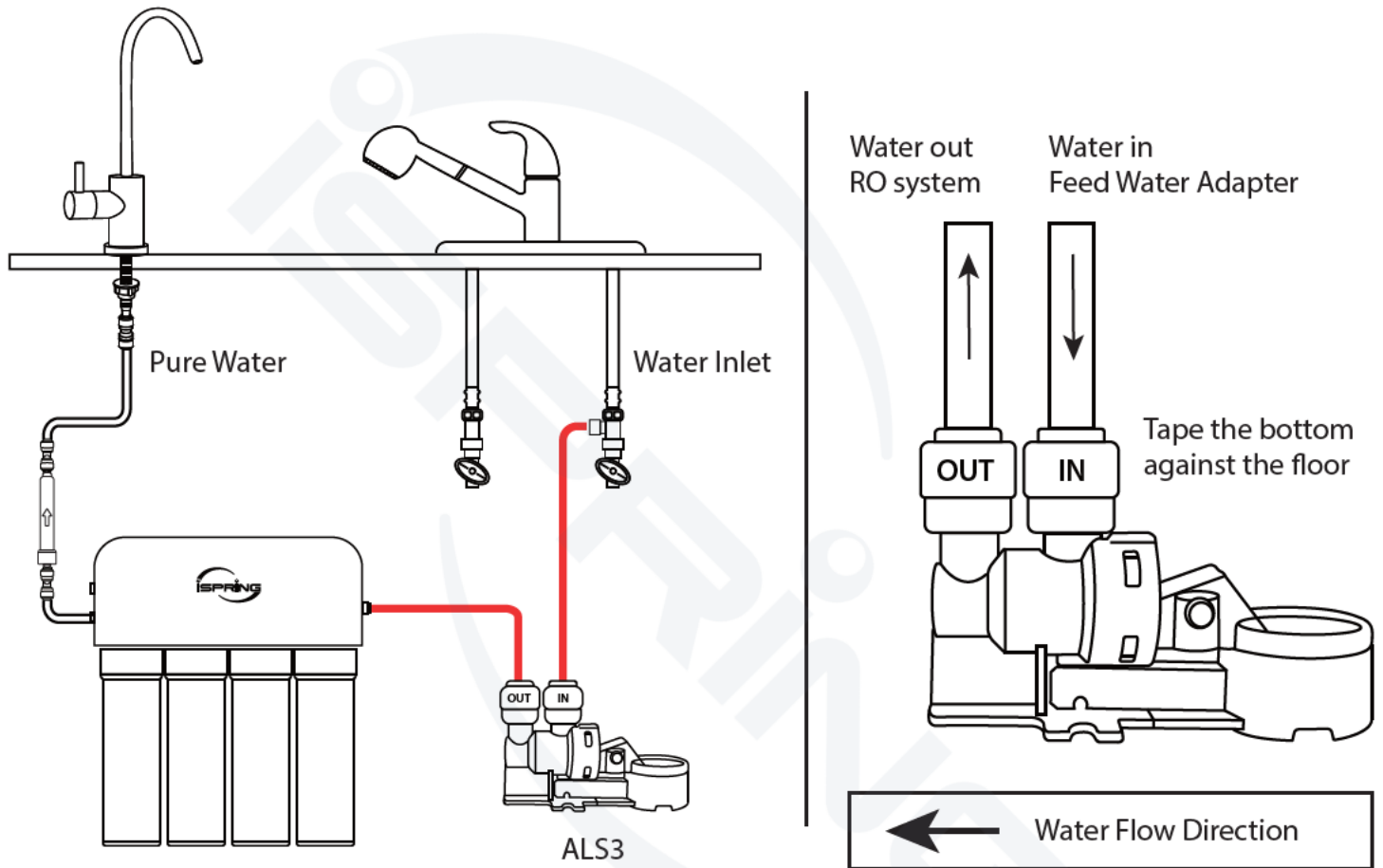


- a** Choose a proper spot before the P-trap on the drainpipe to install the drain saddle and tube. Remember that the drain saddle should NOT be installed after the P-trap to prevent potential microorganism growth.
- b** Drill a 1/4" hole in the drainpipe and paste the black sticky pad around the hole.
- c** Cut the BLACK tube end to make a 45° angle. Insert the tube into the 1/4" hole in the drainpipe, install the back plate, and tighten the two screws with hex nuts while the tube remains in the hole.
- d** Insert the Locking C-clip. Pull the tube lightly to ensure it is secure.

5 Leak Stop Valve Installation (Optional)

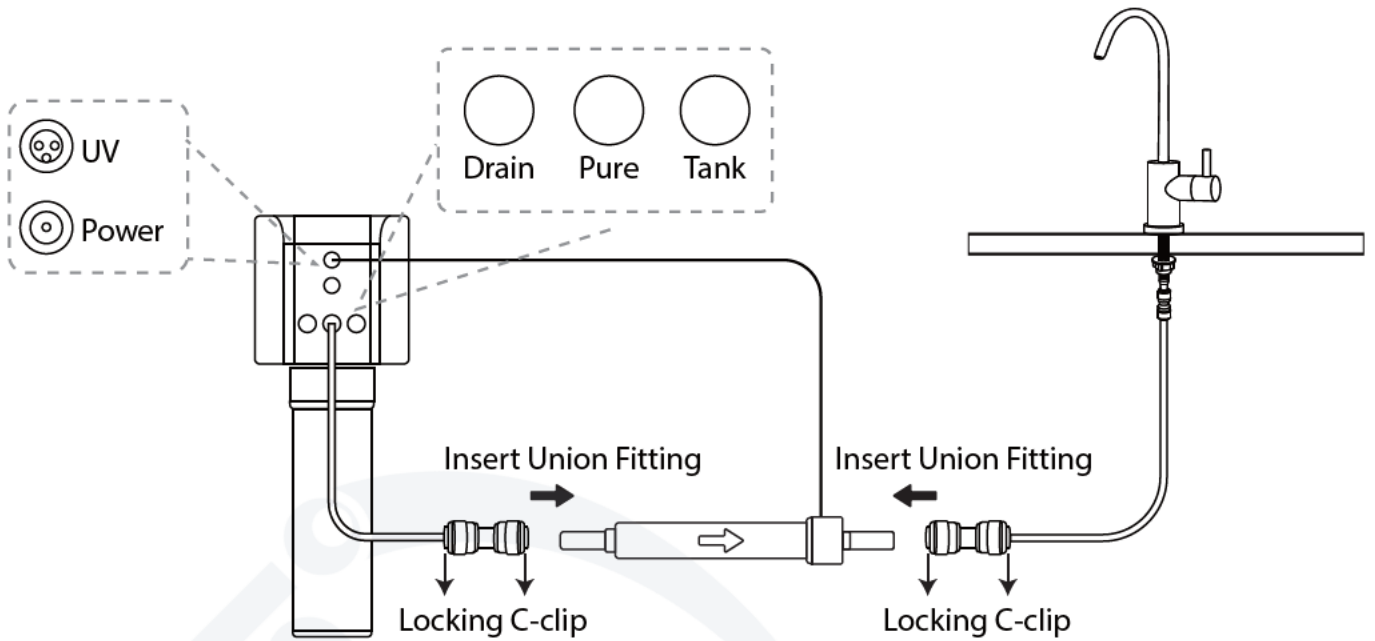
The Leak Stop Valve is a reusable mechanical leakage protector. Whenever a water leakage is detected, it will automatically shut down the feed water.

- a** Ensure the tube is cut evenly before connecting it to the fitting.
- b** Follow the water flow direction indicated on the Leak Stop Valve to connect it to the water inlet pipeline.
- c** Tape the bottom of the Leak Stop Valve to the floor.



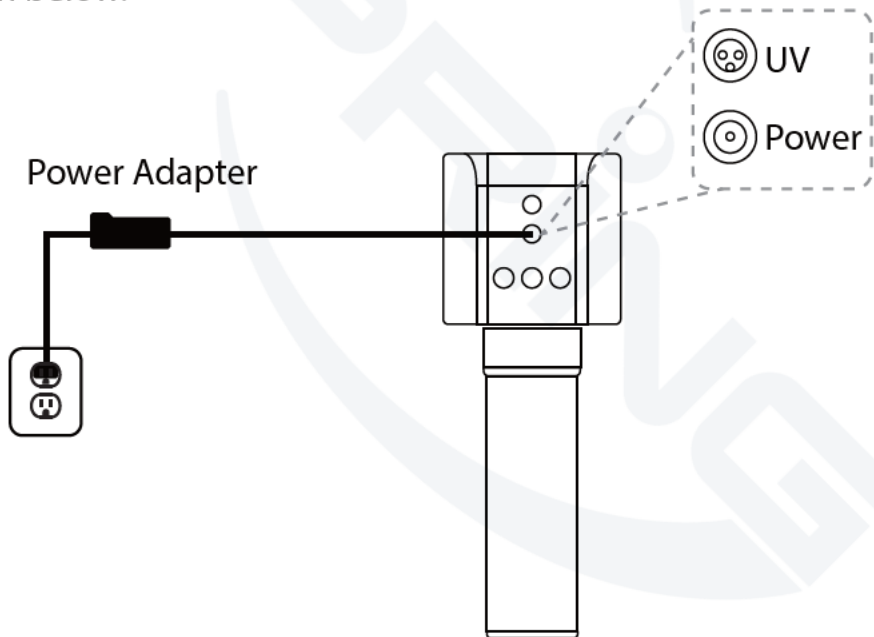
6 UV Light Installation

- a** Install the union connector at both ends of the UV light and insert locking C-clips.
- b** Connect the water inlet and outlet of the UV light to the white PE tube and insert a clip.
- c** Connect the PE tube at the UV light inlet to the "Pure" water outlet and insert a clip.
- d** Connect the PE tube at the UV light outlet to the faucet and insert a clip.
- e** Plug in the UV light to the UV outlet.
- f** Use the cable tie and cable tie mount to fix the UV light in a suitable position.



7 Power Adapter Installation

Pair the power adapter with the "Power" inlet on the RO system and plug the adapter into an outlet, as shown below.

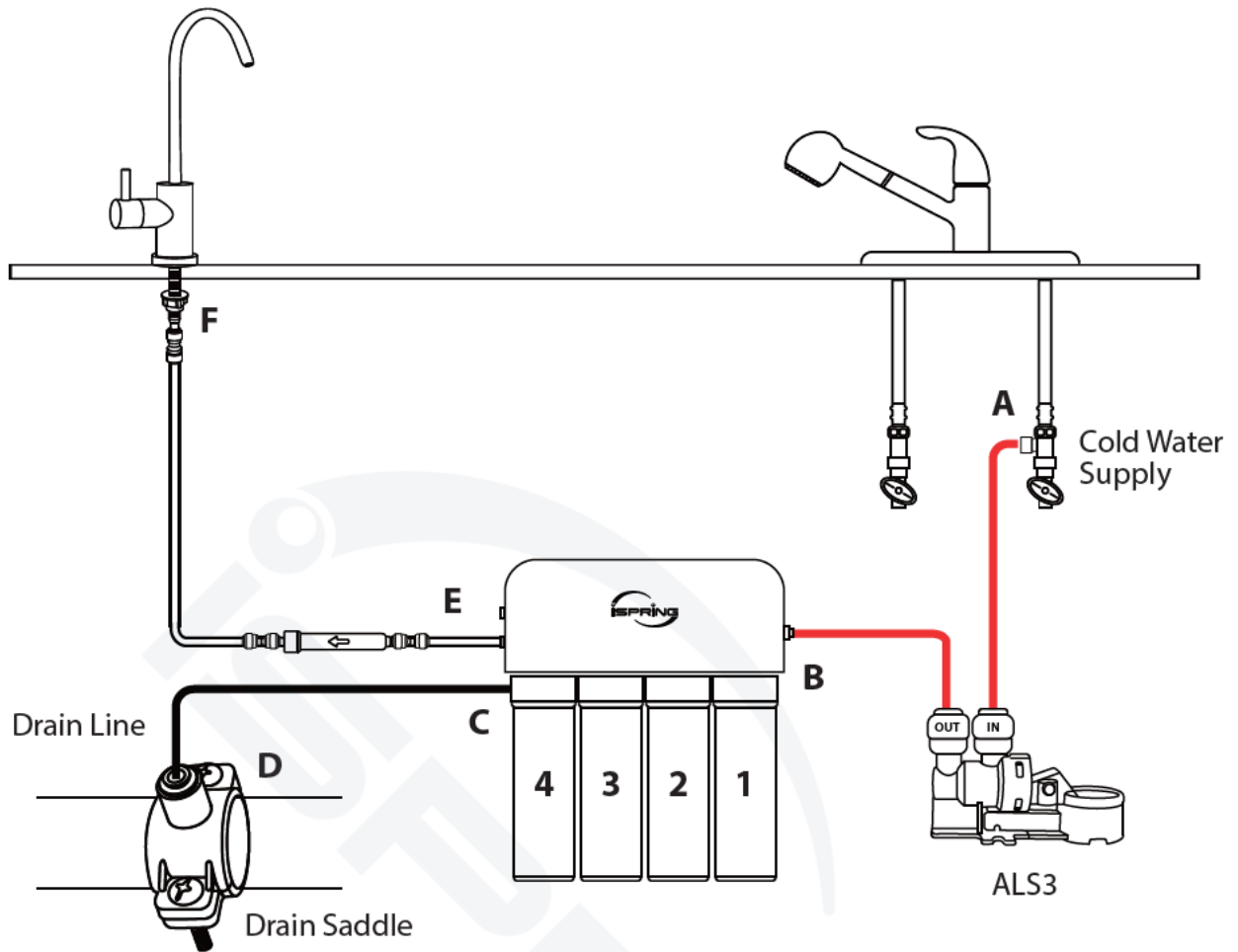


8 Tubing Connection

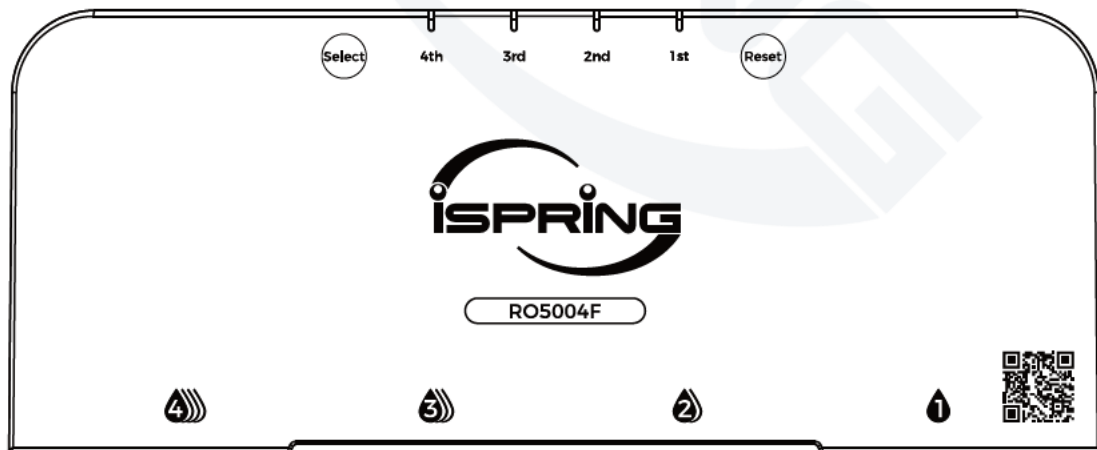
a **RED** tube connects the feed water adapter (A) to the water inlet on the system (B).

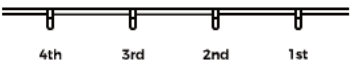
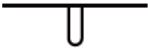
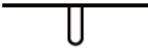



b **BLACK** tube connects the drain on the system (C) to the drainpipe (D).

c **WHITE** tube connects pure water (E) to the faucet (F).



Touch Button Instructions



Touch Button / Light	Function
	<ol style="list-style-type: none"> In standby mode, all four blue lights remain on. When the filter reaches 5% of its lifespan remaining, the purple light flashes. When the filter reaches the end of its lifespan (0% remaining), the red light stays on.
 <p>1st</p>	Flashes blue when pure water is being dispensed.
 <p>3rd</p>	Flashes blue when the system is performing an auto-flush.
 <p>4th</p>	If the system works for over 30 minutes, it initiates timeout protection. The 4th light flashes red, and the buzzer beeps twice every 6 seconds.
	Press and hold for 3 seconds to initiate an auto-flush for 30 seconds. The 3rd light flashes blue, and the buzzer beeps for one second.
	Press to select the corresponding filter for resetting the lifespan, then press and hold the "Reset" button until you hear two long beeps. The reset is successful.

UV Unit Operation Instruction

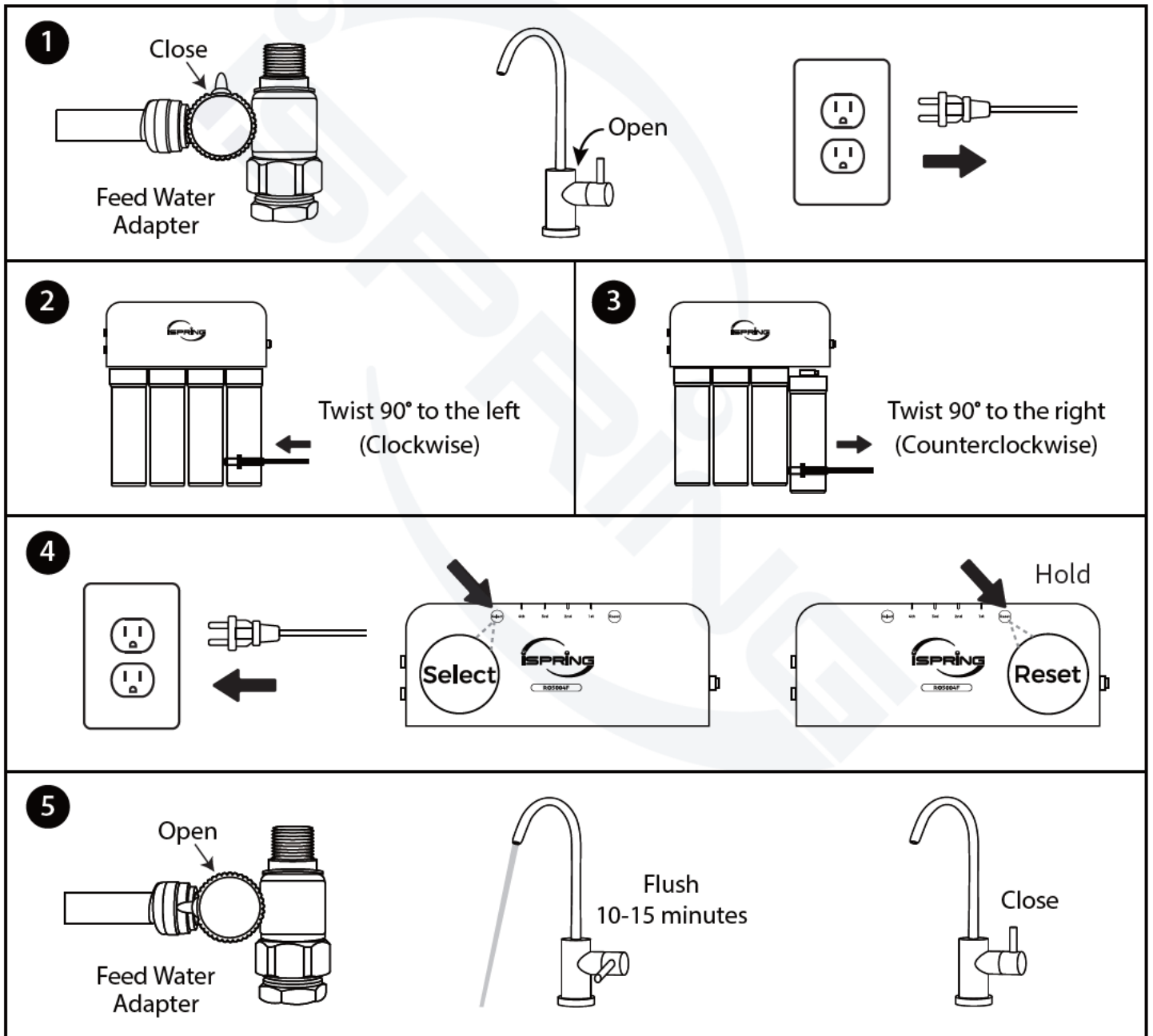
The LED UV unit is controlled by a flow sensor. When installed correctly, the green LED indicator on the UV unit will light up when water is flowing through, showing that the UV unit is operating properly.

The LED UV unit is designed to have a service life of up to 8,000 hours. If the green LED indicator stops lighting up while the rest of the system is operating normally, this may suggest a malfunction of the LED UV unit. If this occurs, please contact iSpring customer service for support.

Filter Replacement

- 1 Close the Cold Water Shut-off Valve or the feed water adapter. Open the RO faucet. Let the water run until no water comes out and unplug the system power.

- 2** Use the wrench over the filter housing and twist it 90 degrees clockwise to the left of the system.
- 3** Remove the old filter and unwrap the new filter. Use the silicone grease that came with the filter package on the O-ring. Align the filter with the dent mark on the system and rotate it 90 degrees counterclockwise to secure the filter.
- 4** Plug the system power back. Press the "Select" button to choose the filter you replaced, then press and hold the "Reset" button. When you hear two long beeps, the reset is successful.
- 5** Turn the Cold Water Shut-off Valve or the feed water adapter back on. Open the pure water faucet, let the machine run for 10-15 minutes, and then close the faucet.



System Maintenance

1 RO Membrane Flushing

When water passes through the reverse osmosis (RO) membrane, impurities, and bacteria are trapped on the membrane surface. Regular flushing is required to ensure the RO membrane functions optimally.

a) Auto Flushing

- The system auto-flushes for 18 seconds each time the power is back on.
- After 10 minutes of water production, the system performs three pulse-flushing when the pure water faucet is closed. The pulse-flushing flushes for 2 seconds and stops for 3 seconds. After three pulse-flushes, the system returns to normal.
- The system auto-flushes for 30 seconds after 24 hours on standby mode.

b) Manual Flushing

When the system is producing water, press and hold the "Reset" button for 5 seconds. When you hear a "beep," the machine will flush for 18 seconds.

2 Filter Replacement Schedule

There are two ways to calculate the filter lifespan of the system. One is by the time the water flows, and the other is by the system's power-on time. Both are calculated independently. The filter lifespan indicator will blink, whichever comes first.

Stage	Model	Type	Lifespan by Power-on Duration (month)	Lifespan by Water Flow Duration (hour)
1	FP500	PP Sediment Removal	6	38
2	FC500SL	Anti-scale CTO	12	76
3	MRO5004F	RO Membrane	24	152
4	FC500	Taste-polishing CTO	12	76
	FG500AK	Alkaline CTO		



Note: It is recommended that all filters be replaced according to the local water quality. The lifespans provided below are based on standard conditions; actual usage may differ due to variations in water quality and usage patterns.

- When the filter reaches 5% of its lifespan remaining, the corresponding indicator flashes purple, and the buzzer beeps once whenever pure water dispenses.
- When the filter reaches the end of its lifespan (0% remaining), the corresponding indicator stays red, and the buzzer beeps when pure water is dispensing.



Note: If the TDS value of the purified water increases, it indicates declining water quality. If the water flow rate decreases significantly, check if the filter or membrane is clogged. Ensure that the reduced flow is not due to a drop in water temperature.

3 UV Light Maintenance and Replacement

- When the UV light lifespan ends, the second and third lights on the unit flash red, and a buzzer beeps for 10 seconds.
- When the UV light is replaced, press and hold the reset button and select buttons for 5 seconds. The buzzer will beep twice, and the 2nd and 3rd lights will remain on.



Caution

- 1** If any of the following occurs, immediately shut off the inlet water or the feed water adapter and disconnect the power supply for maintenance:
 - The machine's tubing or components are leaking.
 - Any of the machine's components are malfunctioning.
 - Any conditions that are not considered normal operations.
- 2** If you are away or not using the machine, please shut off the feed water adapter and disconnect the power supply.
- 3** If any components are damaged, contacting iSpring's customer service is recommended to have them replaced. Incorrect handling may cause damage, and iSpring is not responsible for any losses resulting from improper use or failure to follow these instructions.
- 4** Instructions for using the power adapter:

If the power cord is damaged during use, it must be replaced by iSpring, qualified dealers, or similarly qualified personnel to avoid danger.

Malfunction Inspection

Malfunction	Possible Issue and Indicator		Solution
Leakage in Connections	Tubing	<ol style="list-style-type: none"> 1. The PE tube is cracked. 2. The PE tube is not inserted correctly. 3. The tube end tip is not cut evenly. 	<ol style="list-style-type: none"> 1. Replace the tube. 2. Reinsert the tube about 1/2" into the port. 3. Make clean cuts on the tube.
	Aging tube or O-ring.		Check if you need to replace it.
	The filter is not installed correctly.		Correctly reinstall the filter.
	The feed water adapter is not connected correctly.		Check the feed water adapter.
Low Water Flow or No Water Output	The feed water adapter is not open, which prompts a water shortage. The 1st light flashes red, and the buzzer beeps five times.		Turn on the feed water adapter.
	The water supply is not on, which prompts a water shortage. The 1st light flashes red, and the buzzer beeps five times.		Check if the water supply is on.
	Congestion in the tube.		Clear or replace the tube.
	Inlet water pressure is lower than 30 psi.		Add a pump.
	The inlet water temperature is low.		This is a natural phenomenon. Make sure the incoming water temperature is within the 41 - 100°F range.
The System is Not Operating	There is a leakage in the system.		Contact iSpring customer service for assistance.
	The filter lifespan has expired.		Contact iSpring customer service to replace the filters.
	Power adapter failure.		Replace the power adapter.

Malfunction	Possible Issue	Solution
The System is Not Operating	The system has been working continuously for over 30 minutes and initiates timeout protection. The 4th light flashes red, and the buzzer beeps twice every 6 seconds.	Unplug the power supply again to see if the machine resumes regular operation; if not, contact customer service.
	Leakage protection is on.	Check if leakages are present. Contact customer service for assistance.
Water Has an Unusual Odor	Machine unused for an extended period.	Run the machine to produce water for 10 minutes. Do not drink this water.
UV Light Malfunction	2nd and 3rd light flashes red light, and the buzzer beeps for 10 seconds.	Replace the UV light; Contact iSpring customer service for assistance.



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