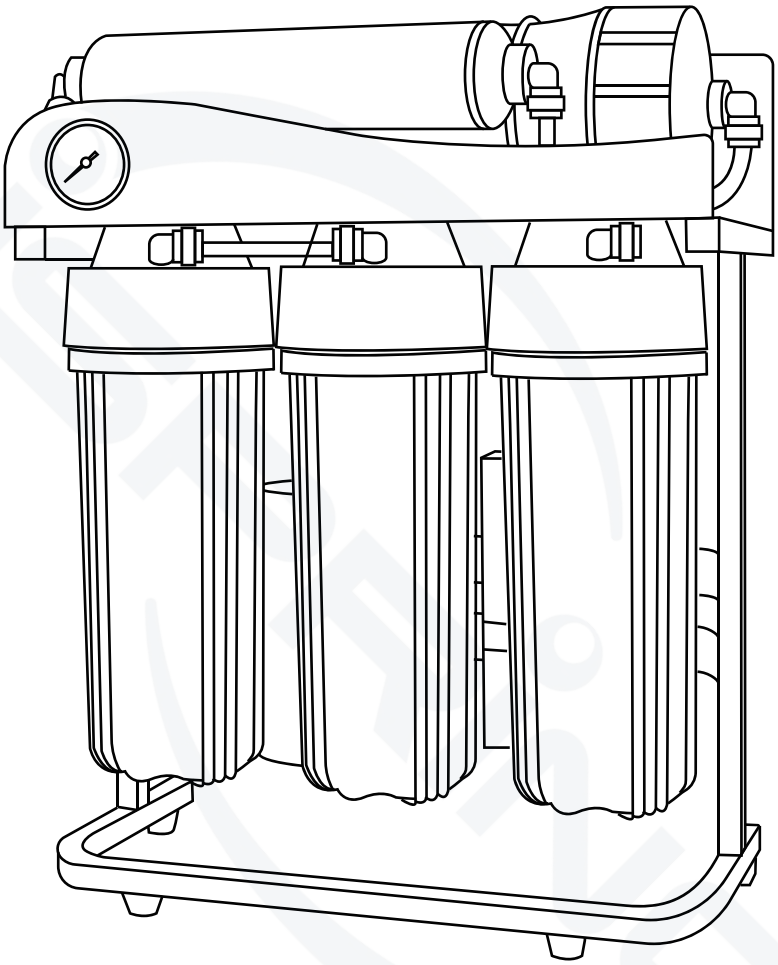
**UNDER SINK**

# iSpring RCST Series RO Water Filtration System with Pressure Gauge



Model: RCS5T/RCS10T

## Installation Instructions & User Manual

Ver. 07/2025

iSpring Water Systems

Support & Warranty

***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 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.

# Table of Contents

# User Information

The user must adhere to the installation specifications described in this Product Installation and Operation 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.
- The operating temperature range is 40°F–100°F (5–38°C). This RO system is NOT designed for HOT water. If the water temperature or ambient temperature falls below 40°F (5°C), immediately shut off the inline water supply and drain the remaining water from the system. Within the range, the warmer the water is, the faster is the RO process.
- In the event of power supply damage or malfunction, immediately unplug the system and contact iSpring Customer Service for assistance.
- If a leak occurs, turn off the inline water supply at the adapter, unplug the system, and contact iSpring Customer Service.
- Use only authorized iSpring parts and filters, as using unauthorized or aftermarket components will void the product warranty.
- Regularly check external fittings and connections to ensure all components are secure and functioning properly.
- Unauthorized modifications or disassembly are strictly prohibited and will void the warranty.
- Avoid touching the power cord connector with wet hands to prevent electric shock.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities or lack of experience and knowledge unless they have been given supervision or instruction concerning its use by a person responsible for their safety. Children should be supervised to ensure they do not play with the appliance.

# Product Features

## 1 Filtration Performance

| Stage | Filter | Purpose |
|---|---|---|
| 1st | Sediment Filter | Removes sediments, dust, dirt, sand, silt, rust, and particles. |
| 2nd | GAC Filter | Removes chlorine, taste, odors, cloudiness and colors. |
| 3rd | CTO Filter | Further enhances the sense and taste of the water. |
| 4th | Reverse Osmosis Membrane | Removes up to 99% of contaminants, such as lead, chlorine, fluoride, arsenic, hormones, asbestos, calcium, sodium, iron, etc. |
| 5th | Post CarbonFilter | Removes any possible residual taste and odors from the tank. |

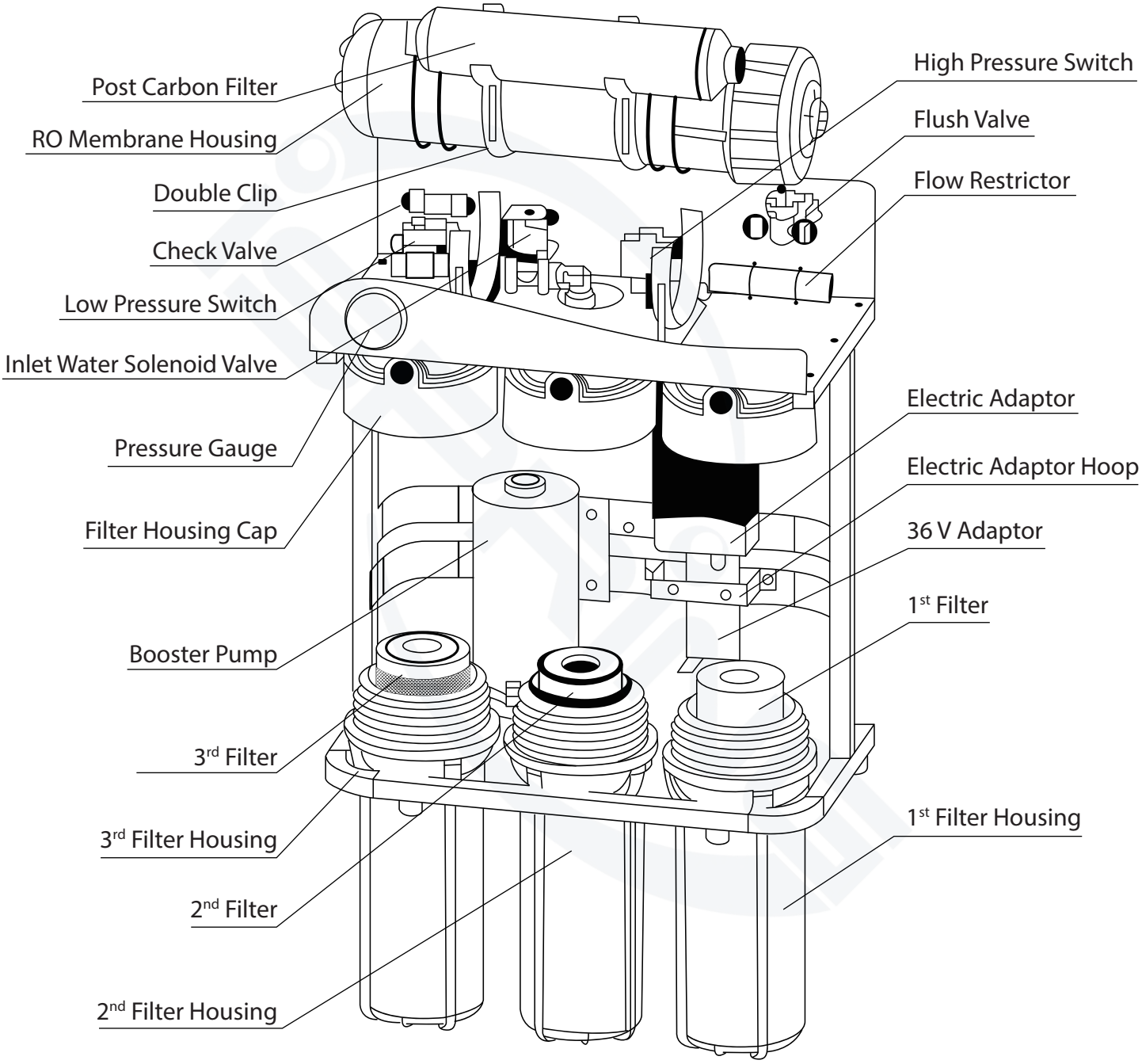
## 2 Filtration Performance

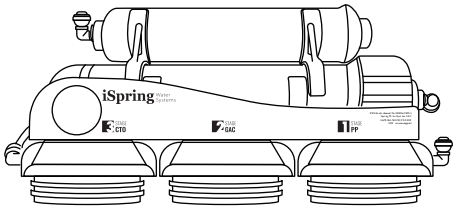
| Parameter | Specification |
|---|---|
| Working Pressure | 30–70 psi |
| Working Temperature | 40–100°F |
| Maximum TDS | 750 ppm |

- Maximum water pressure: 70 psi, or a pressure regulator (Model #APR70) is required if there is high water pressure or water hammer.
- Minimum water pressure: 30 psi, or a booster pump is needed to improve RO efficiency
- Install this RO system where it is protected from extreme hot and cold weather and direct sunlight. Avoid hitting, dropping, or dragging the system as they may cause cracks and leaks.

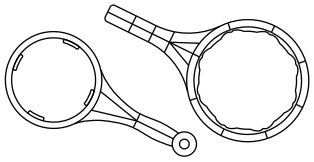
# Component Identification

Open the box and carefully remove all components. Inspect each item for any damage. If you find any cracked or broken parts, please contact iSpring Customer Support for a replacement. Use the diagram below to identify and familiarize yourself with each component.

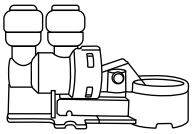




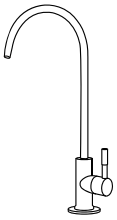

Main Unit



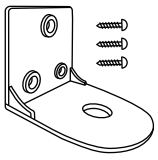
Wrench



Leak Stop Valve
(Model #ALS1)

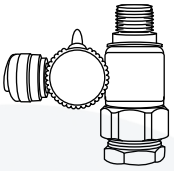


Faucet and
Installation Kit

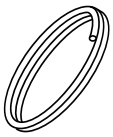


Faucet Bracket

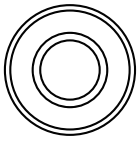
O-rings



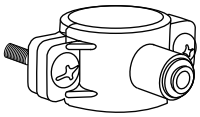
Feed Water Adapter
(Model #AFW38)



Tubing



Plumber's Tape



Drain Saddle
(Model #ADS1K)

# Installation

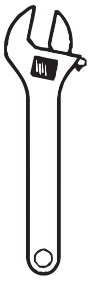
## Installation Preparation

- We recommended watching our video ***"iSpring RCS5T 500 GPD Commercial Grade RO System DIY Installation | Step by Step"*** on YouTube for guidance. Installation video Compatible for RCS10T models.
- Choose a suitable location for the system. Ensure it is placed on a flat surface and connected to an INDOOR cold-water supply ONLY.
- Check the packing list to confirm all accessories are included in the package. Contact iSpring customer service if any components are missing.

**Tools Needed for Installation:**

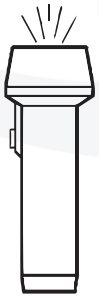
Plumber's
Tape

Screw
Driver



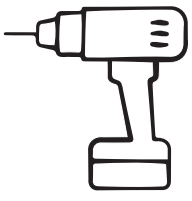
Spanner
Wrench

Utility
Knife



Flash
Light

Towels



Electric
Drill

**Additional Tools:**

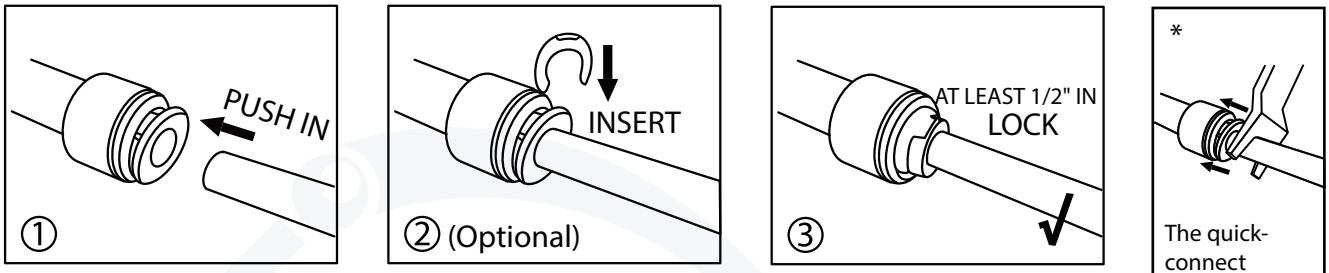
► For users who need to drill a hole in their countertop, prepare a multi-speed drill with two

bits: 1/4" (for drilling on PVC drainpipe) and 3/4" to 1-1/4" hollow diamond (for drilling on the counter-top for drinking faucet if needed).

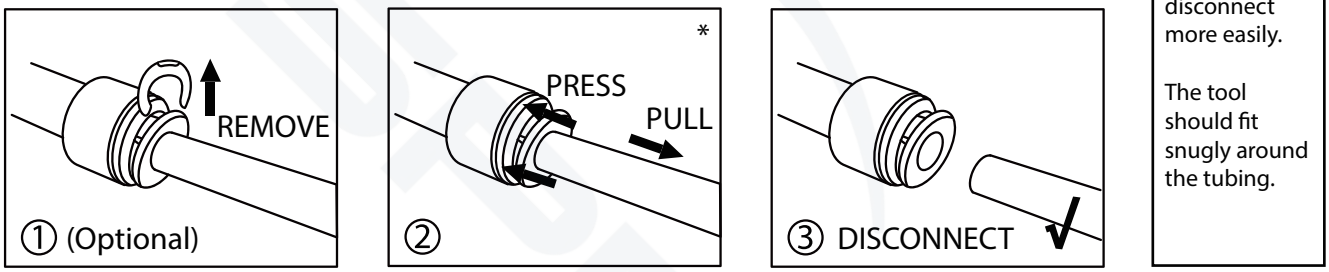
► For more effortless operation and installation, prepare a 5/8", 9/16" open-end wrench or adjustable wrench and pliers.

## Quick-Connect Fitting Instruction:

### HOW TO CONNECT




### HOW TO DISCONNECT



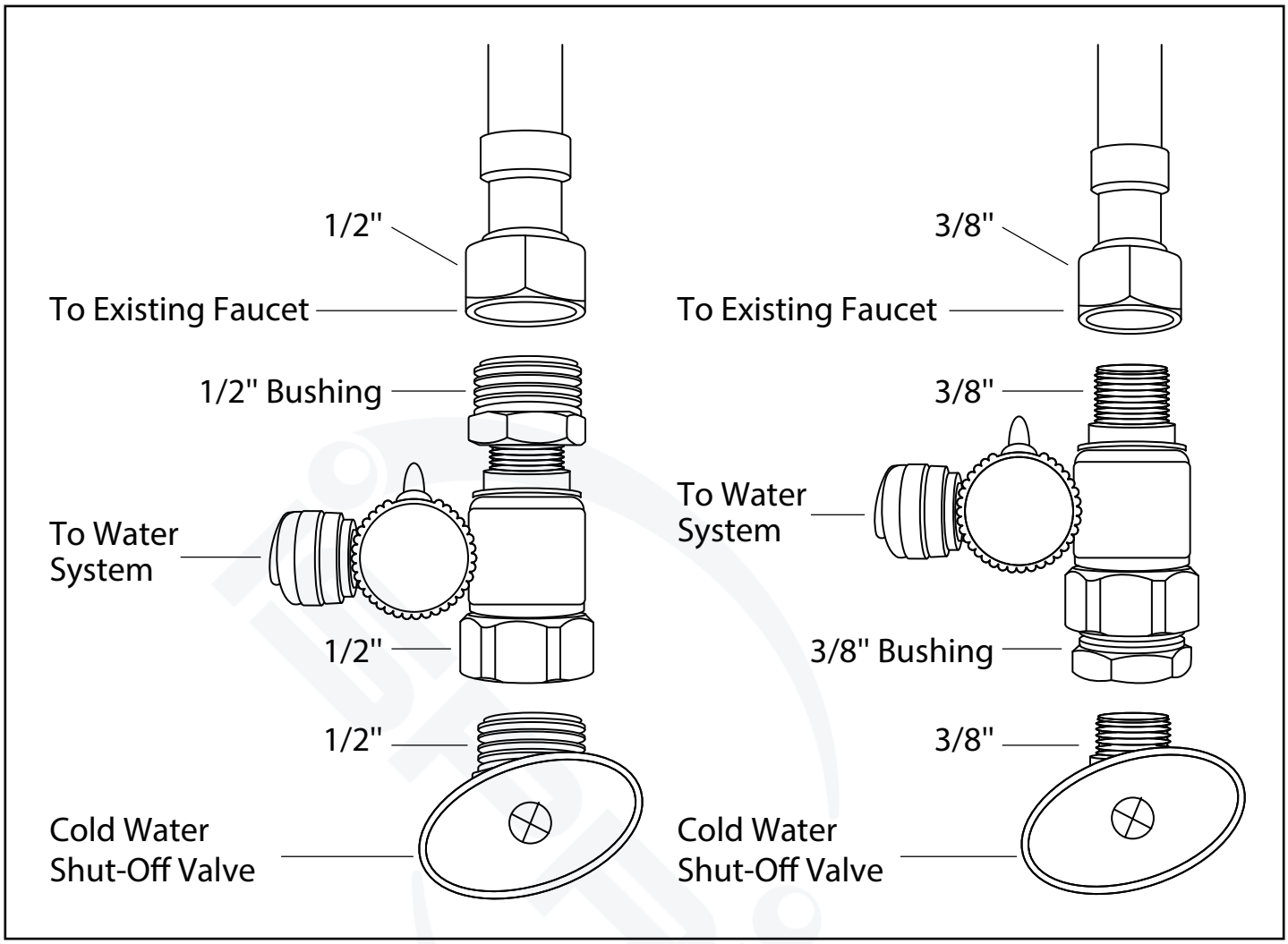

We recommend watching our video ***"How to Connect and Disconnect Quick Connect Fittings | DIY Installation"*** on YouTube for your reference.

- 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.

## Step 1: Install Feed Water Adapter (Model #AFW38)

We recommend watching our video ***"How to Install a Feed Water Adapter for Reverse Osmosis (RO) and Other Applications | iSpring AFW38"*** 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.

## Step 2: Install Drinking Water Faucet

### Option 1: Drilling a Faucet Hole

If your kitchen sink does not have an existing 1/2" faucet hole, you will have to drill one. We recommend watching our video ***"How to Drill a Hole in a Countertop | Under Sink Water Filter & Reverse Osmosis Installation"*** on YouTube for guidance.

1. Prepare a 1/2" diamond core bit for granite and a titanium drill bit for steel. Do not hammer drill on natural stone, glass, or ceramic.
2. If on steel, make an indent before drilling to help guide the bit.
3. Use caution when drilling on a porcelain sink, as it can easily chip. Set the drill speed to slow. Press the bit firmly downward until it breaks through the slippery surface.
4. Use coolant to disperse heat. Choose water for granite and oil for steel. Use a water cup to hold the coolant inside and prevent the drill bit from slipping.

5 Hold the drill and go at the lowest speed to prevent the drill bit from slipping on the counter.

6 Once you break through the smooth surface, swirl the drill a little to apply pressure in a circle evenly. It may take 20 to 40 minutes to drill through 1 inch.

**Option 2: Using an Existing Faucet Hole**

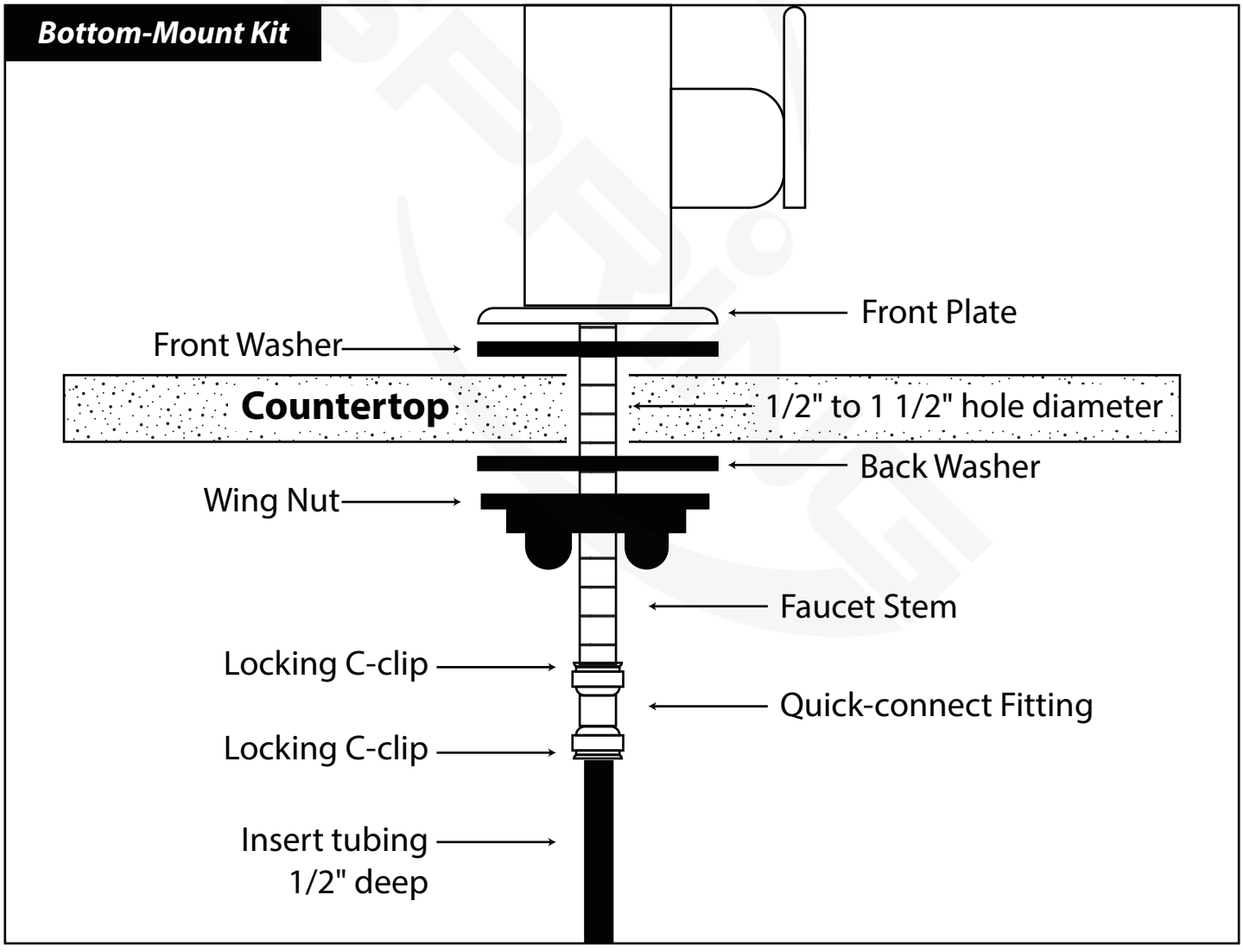
If your kitchen sink has a 1/2" faucet hole, follow the steps below.

1 Wipe clean and dry the area.

2 Slip the front plate on the faucet stem, followed by the 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.

3 Slide the quick connecting up the push-in adapter on the base so that it seats securely into the faucet stem, then lock it in place by sliding the blue clip under the collet.

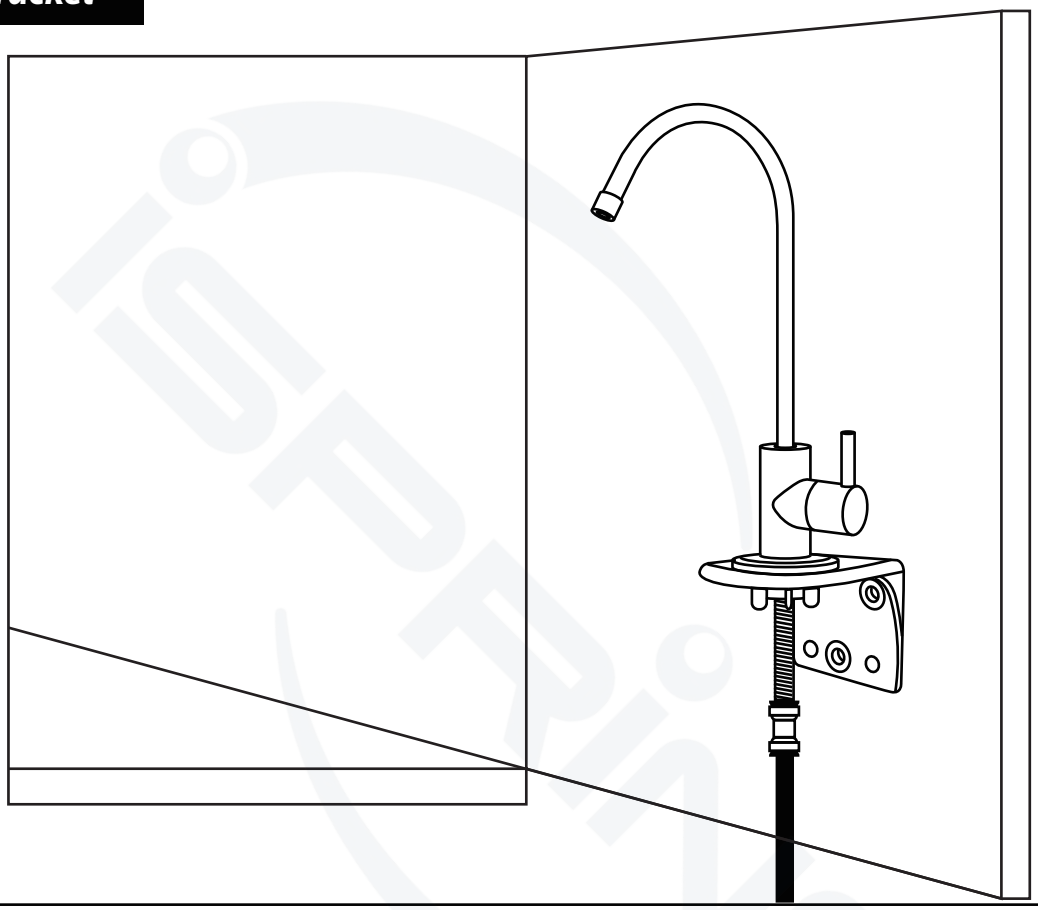
4 Insert the tubing about 1/2" into the push-in fitting, and again, secure it with a locking c-clip.



**Option 3: Install a Faucet Bracket (No Drilling Required)**

Alternatively, you can use a faucet bracket to avoid drilling on your countertop. 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 black rubber washer. Tighten the nut with the plastic wing.

***Faucet Bracket***

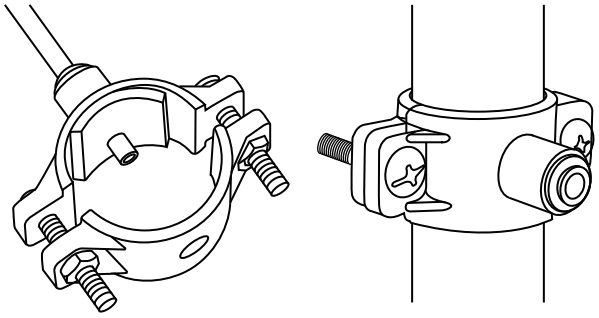


**1** Slide the quick-connect fitting into the faucet stem, ensure it sits securely on the base, and then lock it in place by sliding the blue locking c-clip under the collet.

**2** Insert the tubing about 1/2" into the quick-connect fitting and secure it with a locking c-clip.

## Step 3: Install Drain Saddle

**Step 3. a.** Choose an appropriate location on the drainpipe before the P-trap to install the drain saddle and tubing. Installing the drain saddle before the P-trap is important to avoid potential microorganism growth.



**Step 3. b.** Drill a 1/4" hole in the drainpipe and paste the black sticky pad around the hole.
**Step 3. c.** Cut off the 1/4" tubing end to form a 45-degree angle. Insert the tubing into the 1/4" hole in the drainpipe, install the back plate, and tighten two screws with hex nuts while the tubing remains in the hole.
**Step 3. d.** Insert locking c-clip. Pull the tubing slightly to check if it is secure.

## Step 4: Install Stages 1, 2, and 3 Filters

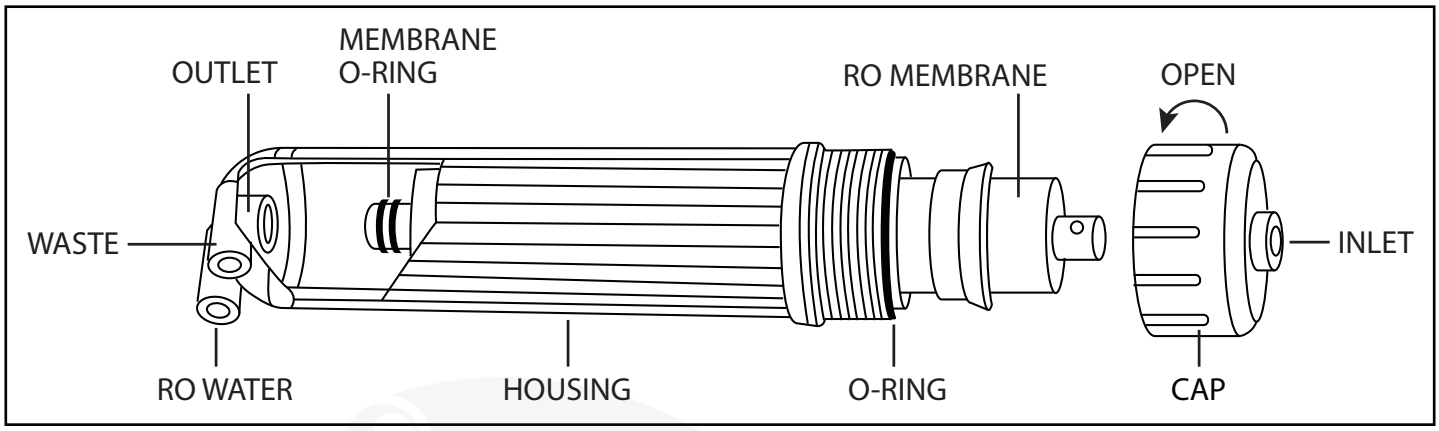
**Step 4. a.** Ensure that the O-ring is seated inside the groove at the top of the filter housing. Food-grade silicone grease may help the O-ring stay in place and seal better.

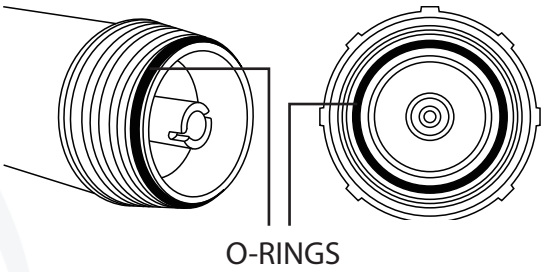
**Double O-ring Clear Housing**

**Step 4. b.** Filter cartridges are preserved in shrink wrap. Note the direction sign on the sticker before removing the wrap (GAC stage).
**Step 4. c.** When placing the filter cartridge into its housing, ensure it is centered. The bottom of the housing should match the dent on the filter.
**Step 4. d.** Screw the housing with filters attached to the housing caps (the caps are pre-assembled on the machine head). The cap should also match the dent on the filter cartridge. Then, twist the housing counterclockwise and use a housing wrench to tighten it up for about 1/4 – 1/2 turn. **Do not overtighten, as this can cause leaks and make it difficult to remove the housing when replacing filters.**

**Note: The second stage GAC filter is the only filter that must go in a specific direction. Make sure that the end with the rubber washer faces up and attaches to the housing cap.**

## Step 5: Install the RO Membrane



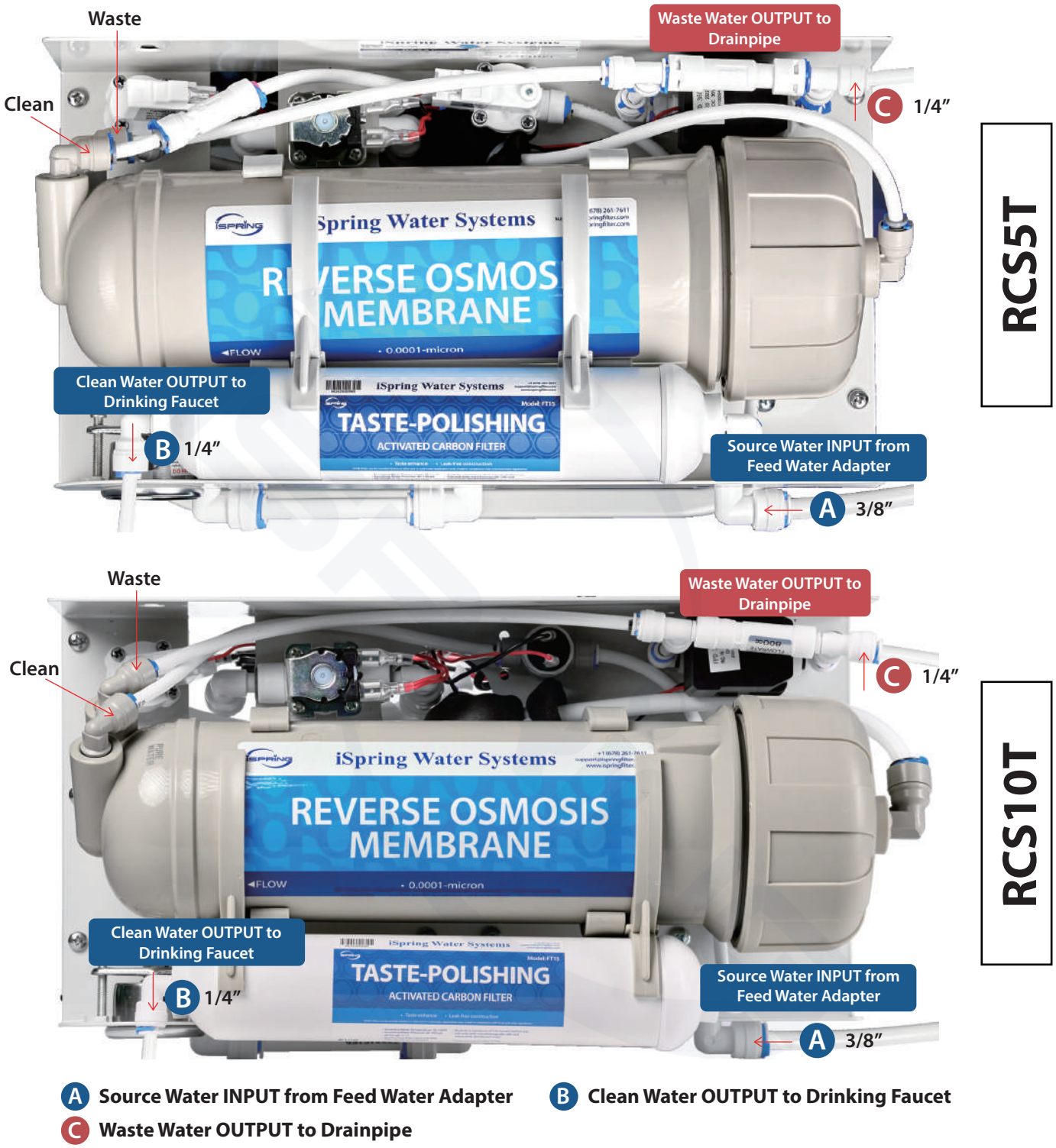

**Step 5. a.** Disconnect the tubing from the quick-connect fitting connection on the membrane cap.

**Step 5. b.** Open the membrane housing cap. Slip a thick rubber band on the housing body to get a better grip.

**Step 5. c.** Locate the inner end of the RO membrane with the two O-rings. Cut open the sealed bag and hold the membrane using the bag to prevent contamination. Firmly insert the membrane into the housing, ensuring the outer end (without O-rings) is fully seated inside the housing. Refer to the figure above for clarification.

**Step 5. d.** Before reattaching the housing cap, confirm the O-ring is seated correctly and evenly positioned on the membrane housing. Tighten the housing cap by hand, using a small plastic housing wrench to turn it an additional 1/4 to 1/2 turn. Be careful not to overtighten, as this may cause damage. ***Do not reconnect the tubing to the inlet on the cap at this stage***—this will be done during the system startup.

## Step 6: Tubing Connection




**A** Source Water INPUT from Feed Water Adapter
**B** Clean Water OUTPUT to Drinking Faucet
**C** Waste Water OUTPUT to Drainpipe

**Step 6. a.** Facing the iSpring logo, locate the pre-filter 1st stage on the right-hand side. Connect the 3/8" tubing between the Feed Water Adapter and point A.

**Step 6. b.** Connect the Auto Flush Solenoid Valve (point C) to the black Drainpipe with 1/4" tubing.

**Step 6. c.** Connect the Post Carbon Filter FT15 5th stage (point B) to the RO faucet with 1/4" tubing.

## Step 7: System Start-up

**Step 7. a.** Check that none of the tubing is kinked. Prepare a towel and bucket to catch any water drips.

**Step 7. b.** To flush out residual carbon dust from the first three stages:

- Disconnect the tubing at the inlet of the RO membrane housing cap.
- Run water through the first three stages into a bucket until the water is clear.
- Reconnect the tubing to the RO membrane housing.
- (Optional: Disconnect the storage tank if you have one during this process.)

**Step 7. c.** Plug in booster pump power. Turn on the Feed Water Adapter valve and slowly turn on the Cold-Water Supply Valve. Finish flushing the first 3 stages until the water turns clear. Then, reconnect the tubing to the membrane housing cap.

**Step 7. d.** ***Check for leaks.*** The top 3 causes of leaks are:

- The tubing was not fully inserted into the quick-connect fitting.
- The O-ring was not in place or kinked.
- The Housing/Cap was not tightened up or off threads.

**Step 7. e.** Turn on the RO faucet. Within 5 minutes, RO water should start dripping. Let it run for at least 10 minutes. This flushes the system. Water could be black due to fine carbon dust from new carbon filters (step 8.2 could be taken to expedite the flush). Following this step, the water will turn clear with some air bubbles. Shut off the RO Faucet.
(Optional: Turn on the Tank Shut-off Valve and wait for the tank to be filled up.)

**Step 7. f.** If you have installed an iSpring UV stage, plug in the UV power and observe if the RO faucet turns the UV on/off through the Flow Sensor Switch.

**Step 7. g.** Check for leaks daily for the first two weeks after installation. If leaks occur, place a tray underneath the system or add a Flood Alarm for better protection.

**Note: The reverse osmosis membrane is the key to effectively reducing total dissolved solids (TDS), and the produced water should be tested periodically to verify that the system is performing correctly. If the TDS of the source water is 100 ppm, the RO water should be less than 10 ppm (Rejection rate >90%).**

**Congratulations! You have successfully installed the iSpring Reverse Osmosis Water Filtration System!**

# Additional Installation Options

## UV Lamp (Model #UVF11A)

The smart flow sensor switch automatically turns the UV unit on and off with water flow. The UV lamp can be added as a final stage for enhanced water purification.

## Ice Maker Connection Kit (Model #ICEK)

The iSpring ICEK, available separately, connects RO water to your refrigerator for crystal-clear ice and fresh water. Easily links the RO system to your fridge's ice maker or dispenser.

## TDS Test Meter (Model #TDS2 or TDS3)

This test meter is ideal for regularly monitoring water quality and determining optimal filter replacement timing.

## 1/4" Tubing (Model #T14B or T14W)

Food-grade tubing in a 50' roll is suitable for replacements and extensions.

## 3/8" Tubing (Model #T38W)

Food-grade tubing in a 10' roll is suitable for replacements and extensions.

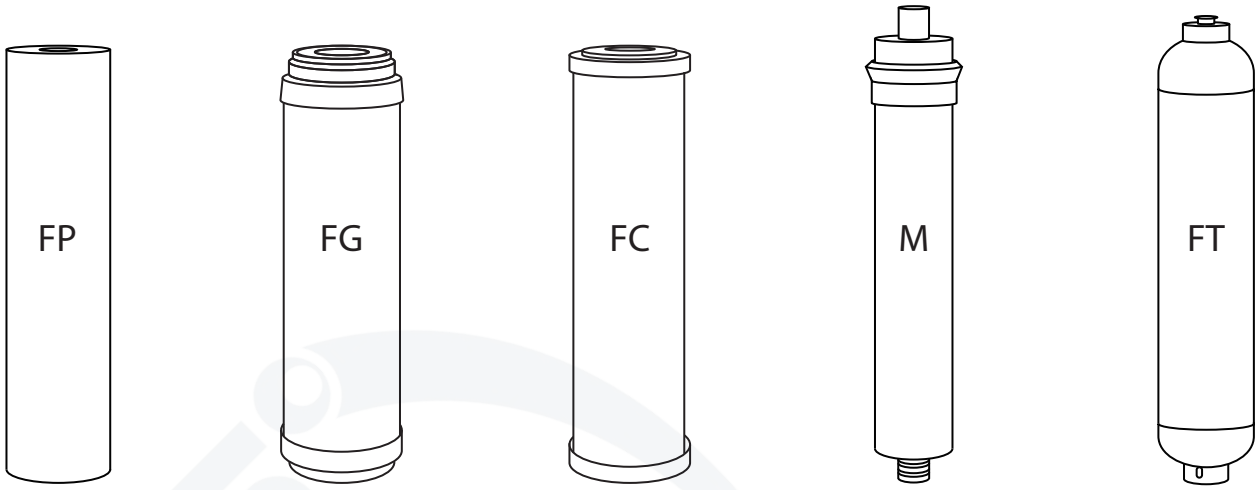
## Top Mount Faucet Installation Kit (Model #AIG1)

This patented, tool-free kit is designed to simplify countertop RO faucet installations. It fits countertops with 1" to 1 1/2" holes and accommodates 7/16" faucet stems to ensure a secure and efficient installation process.

## iSpring Storage Tanks

Compatible with 20 to 200 gallons storage tanks, ideal for high-demand usage or as part of a whole-house RO solution.

# System Maintenance




| STAGE 1 | STAGE 2 | STAGE 3 | STAGE 4 | STAGE 5 |
|---|---|---|---|---|
| PP | GAC | CTO | RO Membrane | Post Carbon |
| #FP15 | #FG15 | #FC15 | #MS5/#MS10 | #FT15 |
| Up to 6 Months | Up to 1 Year | Up to 1 Year | Up to 3 Years | Up to 1 Year |

For filter replacement options, visit ispringfilter.com.

## Filter Replacement Schedule

If the water has an unpleasant smell, taste, or odor, replace filters at their recommended cycle or sooner.

## Replacing Filters

Refer to the instructions provided with your filter package for a seamless replacement process.

## O-rings Replacement (Every 3 Years)

Replace O-rings every three years or sooner if leaks occur. The package includes spare O-rings for the pre-filter housing the membrane housing. Keep them with this manual.

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