

iSpring Reverse Osmosis Water Filter Systems

USER'S MANUAL

(Under-sink 5-stage, 6-stage, 7-stage RO systems)

Version 2014-3



Warranty Registration

We provide **30-day money back guarantee, 1 year Manufacture Warranty** and **lifetime tech support** to all products. However, we do not have the order information from the vendors other than 123Filter.com. The easiest way to activate the warranty is to forward your order confirmation email to sales@123filter.com, along with your comment; or if you prefer, please fill out and mail the form below. Please remember, we love to help customers. If you have any question or concern about our products, please don't hesitate to call or email us. We will do all we can to make your purchase a 5-star experience.

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

iSpring Warranty Registration Form	
Your Name:	
Your E-Mail:	
Your Phone:	
Order#:	
Model#:	
Order Date:	
Reviewer ID:	
Notes:	

How to reach us

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Limited Warranty

This Limited Warranty extends to the original purchaser of the system only. This warranty covers all Manufacturer-supplied items only that prove to be defective in material, workmanship or factory preparation. This warranty covers parts only; all labor is excluded from this warranty, including, but not limited to, services related to the removal, replacement, installation, adjustment, maintenance and/or repair of the unit or its components items. excludes all non-Manufacturer labor required for any servicing of the unit, including, but not limited to, servicing related to installation, adjustment, maintenance and repair of the unit. This warranty applies only for the first full calendar year from date of purchase. The following items are excluded from this warranty: membranes, filters, O-rings, and all other parts or components that require regular replacement as a result of ordinary usage.

Disclaimers: This Limited Warranty applies only if the system is installed, used and maintained in compliance with all instructions and requirements enclosed with the system. This warranty will be void for failure to observe the following conditions:

1. The system is to be used with potable water supply only.
2. Feed water pressure to the unit is no less than 45 PSI (30 PSI for systems with built-in booster pump) and no greater than 80 PSI.
3. The system is to be used on water supplies with chlorine concentrations of 1.0 mg/L (ppm) or less.
4. Feed water temperature to the unit must be no less than 40°F and no more than 100°F.
5. Total dissolved solids (TDS) in feed water must be less than 750 mg/L (ppm).
6. Feed water must have a pH between 4 and 8.
7. Turbidity must be less than 1.0 NTU.
8. SDI must be less than 5.
9. Feed water must be completely free of iron, manganese or hydrogen sulfide.

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

The Manufacturer does not know the characteristics of your water supply. The quality of water supplies may vary seasonably or over a period of time. Your water usage may vary as well. Water characteristics can also change if the drinking water appliance is moved to a new location. The Manufacturer assumes no liability for the determination of the proper equipment necessary to meet your requirements, and we do not authorize others to assume such obligation on our behalf.

This Limited Warranty does not cover any Manufacturer-supplied items that are defective as a result of the use of improper parts, equipment or materials. This warranty does not cover alterations or modifications of the unit, or failure of a unit caused by such alterations and modifications.

This Limited Warranty does not cover malfunctions of the unit due to tampering, misuse, alteration, lack of regular maintenance, misapplication, fouling due to hydrogen sulfide, manganese or iron, scaling from excessive hardness, turbidity greater than 1.0 NTU, Silt Density Index (SDI) greater than 5.0 SDI, or excessive membrane hydrolysis due to chlorine levels in excess of 1.0 mg/L (ppm). In addition, damage to the unit due to fire, accident, negligence, act of God, or events beyond the control of the Manufacturer are not covered by this warranty.

Incidental and Consequential Damages Limitation: The Manufacturer will not be responsible for any incidental or consequential damages as a result of the failure of this unit to comply with express or implied warranties or any defect in the unit, including but not limited to, lost time, inconvenience, damage to personal property, loss of revenue, commercial losses, postage, travel, telephone expenditures, or other losses of this nature. In case some states do not allow the exclusion or limitation of incidental or consequential damages, you may choose to return the system. If you choose to keep it, you insist this exclusion STILL apply to you.

Owner's Warranty Responsibilities: As a condition of this Limited Warranty, the owner must ensure periodic maintenance of the system is performed as described in the literature enclosed with the system. Neglect, improper maintenance, abuse, modification or alteration of the unit will invalidate this Warranty. Should your unit develop a defect or otherwise fail to perform in accordance with this warranty, you should contact the retailer from whom the product was originally purchased.

Implied Warranties: The implied at-law warranties of merchantability and fitness for a particular purpose shall terminate on the date one year after the date of purchase. Note: in case some states do not allow limitations on how long an implied warranty lasts, you may choose to return the system. If you choose to keep it, you insist the above limitations STILL apply to you.



Introduction

Congratulations on your purchase of the iSpring RO system. Featuring a multiple-stage filtration process, the Reverse Osmosis technology incorporates polypropylene sediment (PP), granular active carbon (GAC), carbon block (CTO) and optional Calcite mineral alkaline filter and Ultra-Violet filter to produce crisp-tasting, bottled-quality drinking water right at your home.

When properly maintained, this system will provide you with years of trouble-free service. Please keep this manual for future reference. The next sections contain important information on the proper care and maintenance of your system. Please take a few minutes to read through this information.

The cartridges in RO system must be replaced on a regular basis to maintain efficiency and to ensure high water quality. These cartridges work together and must be replaced every 6-12 months. Any significant change in performance of the system should be investigated promptly to avoid secondary damage or deterioration to other parts of the system.

CAUTION: Improperly installed systems could result in water damage due to leaks or flooding. Proper installation of this system requires familiarity with standard sink plumbing and proper use of common hand and power tools. If you are not familiar with standard sink plumbing and proper use of common hand and power tools or have any difficulty with the installation of this system, consult a licensed professional, such as a contractor or plumber.

NOTE: This system has been designed for installation by licensed professionals, such as a contractor or plumber.

Filter Cartridge Replacement Schedule



Note: stage 6 or 7 only exists in certain models

System Operating Conditions

Feed water pressure: 45 – 80psi (or 30 – 80psi for systems with built-in booster pump)

Feed water temperature: 40 – 100 degree F (4 – 37 degree C)

RO system is not designed for hot water source

Feed water TDS: 750 ppm maximum

If feed water has severe iron, rust problem, an iron filter is required prior to the RO system.

Install the system in a sheltered environment; avoid exposure to hot and cold weather or under direct sun light

Once installed, move the system with caution and avoid dragging the tubings.



Before you begin, it is highly recommended to watch the video “ispring reverse osmosis installation” on **YouTube**.

Fig1. System diagram (models without booster pump)

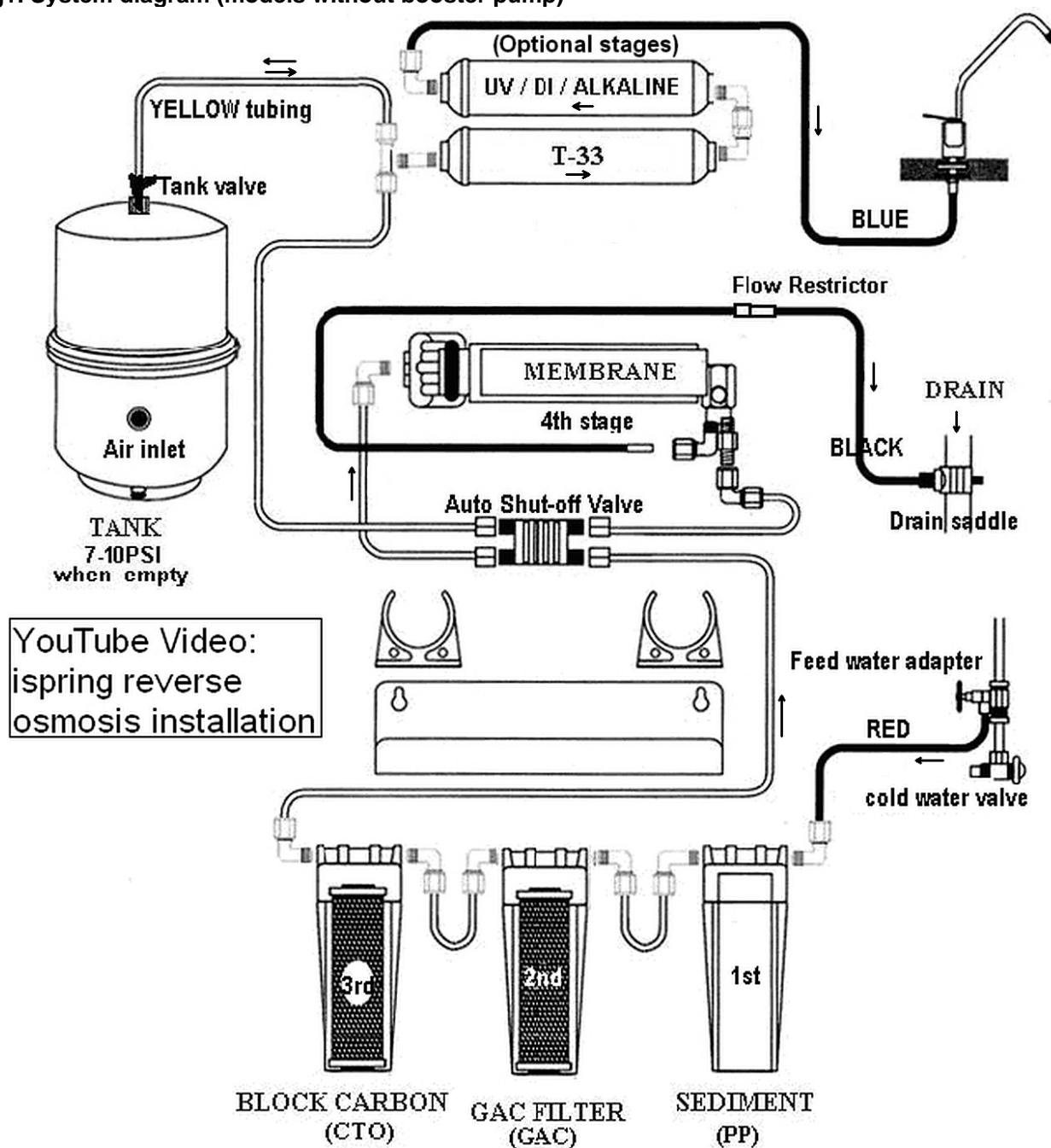


Fig2. System diagram (models with booster pump)

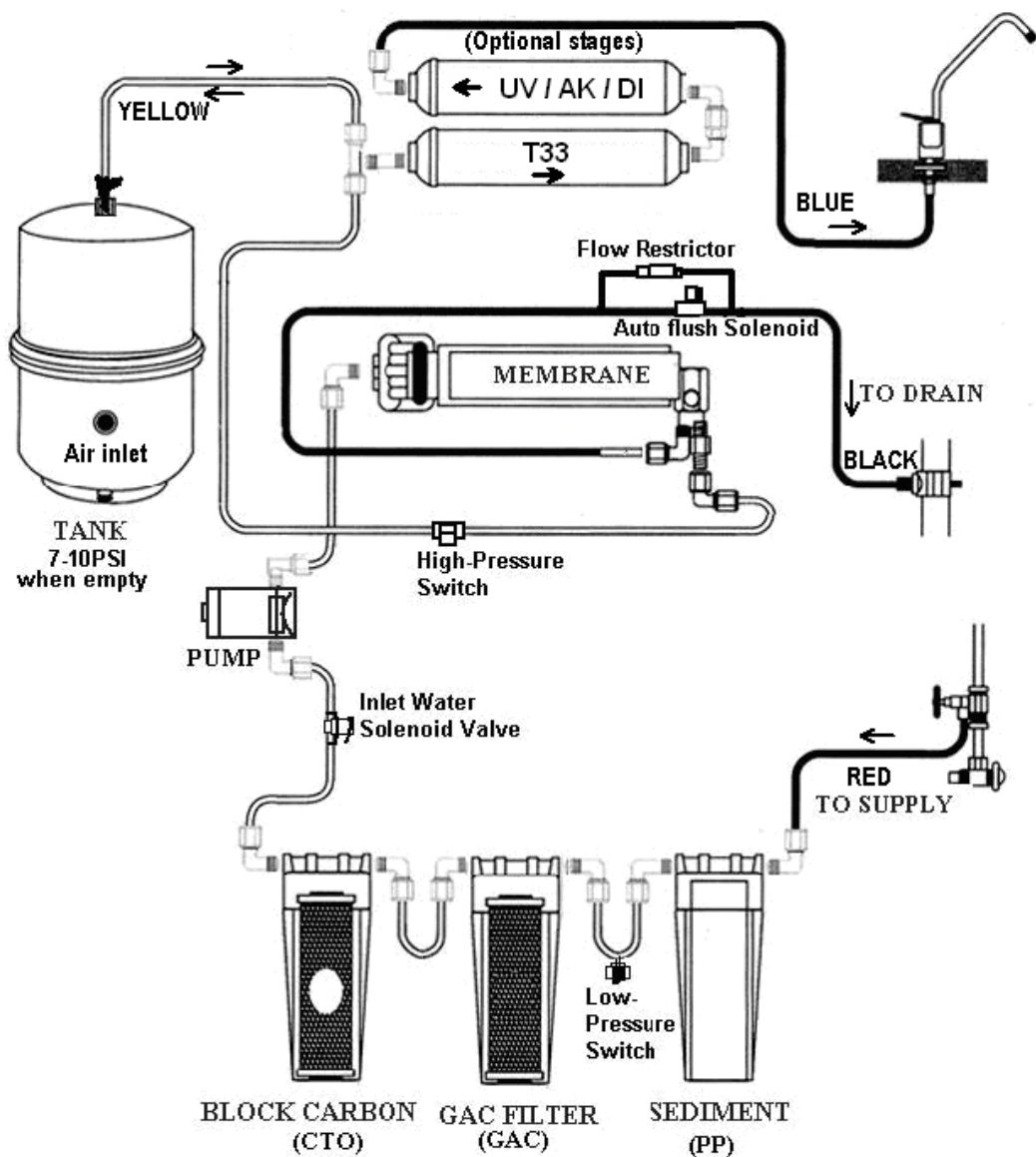
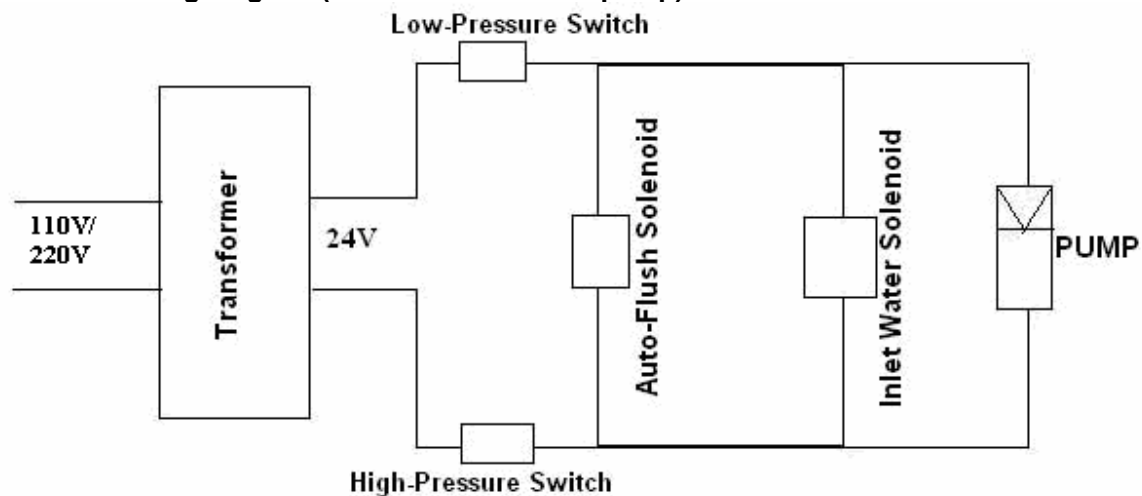


Fig3. Electrical wiring diagram (Models with booster pump)



Parts Index



- | | |
|--|--|
| 0. O-ring seated in the groove | 13-14. Optional ice maker kit |
| 1. 1st stage transparent housing | 15. Housing wrench for stage 1-3 |
| 2. 2nd stage housing | 16. Housing wrench for RO membrane |
| 3. 3rd stage housing | 17. Tank fitting (YELLOW tubing) |
| 4. 1st stage sediment cartridge | 18. Tank air inlet |
| 5. 2nd stage GAC cartridge | 19. Cold water adapter male end |
| 6. 3rd stage CTO cartridge | 20. Cold water adapter female end |
| 7. 4th stage RO membrane housing cap | 21. Drain saddle (sticky pad hidden) |
| 8. 4 th stage RO membrane | 22. RO faucet installation kit (9 pieces) |
| 9. 5th stage Post carbon (T33) | 23. RO faucet (BLUE tubing from final stage) |
| 10. Optional 6th stage Alkaline mineral filter | 24. Cold water inlet (RED tubing in) |
| 11. 5 th stage outlet (to RO Faucet BLUE tubing or optional 6th stage) | 25. RO water outlet to TANK (YELLOW tubing) |
| 12. Tubing in four colors | 26. Spare 3 O-rings, 2 elbow quick-fittings and lock clips |

Recommended tools list:

Variable speed drill and drill bit: 1 /4" (for the drain line), 1/2" (optional, for drilling hole on counter),
Open-end wrench in 5/8" and 9/16", or adjustable wrench, Pliers, Phillips screwdriver, Utility knife, Scissors, Teflon tape,
Bath towel, bucket.

Installation Tips:

How to use Quick-Fitting

- a.1.1 Viewed from the open end, a quick-fitting starts with the lock sleeve, Lock clip (often in blue color), and Fitting body. The steel teeth inside Lock sleeve lock tubing while O-ring creates permanent seal.
- a.1.2 To connect, cut tubing squarely and smoothly, push tubing into Lock sleeve firmly until it reaches the end. Pull tubing to check if it is locked in.
- a.1.3 To disconnect, remove Lock clip, press Lock sleeve against Fitting body. With Lock sleeve pressed, pull the tubing to remove. *note* watch our YouTube video 'iSpring RO Quick Fitting'



To connect, insert tubing all the way into Lock sleeve until it is locked. To pull out, remove Lock clip, push Lock sleeve towards Fitting body to eliminate Gap behind sleeve until tubing is unlocked.

Tips for Drilling a Hole on Sink or Counter-top

- a.2.1 It's recommended to watch YouTube video "how to drill a hole in granite countertop".
- a.2.2 Choose half inch Diamond hole saw for granite, and titanium drill bit for steel.
- a.2.3 Use coolant to disperse heat. Choose water for granite, oil for steel.
- a.2.4 Use 1-1/2" Suction Base Drilling Ring to hold coolant and prevent drill bit slipping on counter.
- a.2.5 Start slowly. Be cautious with slipped power drill that damages counter surface.
- a.2.6 Set variable speed power drill at 100 – 200 RPM. Do NOT use hammer drill on nature stone, glass and ceramic.
- a.2.7 Hold drill bit vertically and swirl a little to apply pressure in circle evenly
- a.2.8 Be patient and deliberate. It can take 20 – 40 minutes to drill through one inch.

Tips for Changing Filter Cartridges

- a.3.1 To ensure system performance and water purity, filter cartridges must be replaced on schedule. Use TDS meter periodically to check water purity
- a.3.2 Shut off water supply valve and tank valve, open the spigot to depressurize
- a.3.3 Place a bucket or towel under the unit for water spills.
- a.3.4 Use housing wrench (part #AWR2) to twist filter housing off in counter-clockwise direction looking from the bottom
- a.3.5 Clean the housing using hot water and optional scent-free dish soap
- a.3.6 Check condition of the O-ring. They should be replaced every 3 years to prevent leak.
- a.3.7 Refer to Step 1.1 to install new vertical filter cartridges
- a.3.8 Due to suction, RO membrane may be hard to pull out from housing, try using tool to apply leverage (photo)
- a.3.9 The 5th and 6th stages have direction. To replace them, remove the tubing, unscrew the fittings, unwrap the new cartridge, replace Teflon tape on fittings if necessary, follow the → sign on label, screw the correct fitting back on each end, and reconnect the tubing.



- Step 1: Install the Vertical Filters: Stages 1, 2, and 3

- 1.1 Make sure O-ring is seated inside the groove on top of filter housings. Food-grade lubricant such as Vaseline or silicon jelly will help O-ring stay in place and seal better.
- 1.2 Filter cartridges are preserved in plastic wrap. Remove the wrapping and logo sticker.
- 1.3 When placing the filter cartridge into its housing, make sure it is centered and the knob protruding from the bottom of the housing fits in the central hole of the filter.
- 1.4 Screw the housing, with filters attached, onto the housing caps (caps are pre-attached onto the system). The cap also has a center knob which should be inserted into the hole of filter cartridge. Twist the housing on in clockwise direction by hand, and then use housing wrench to tighten it up for about 1/4 – 1/2 turn. **Do not over tighten. This can cause leaks and make it difficult to unscrew the housing when replacing filters.**
- 1.5 Follow the steps 1.1 – 1.4 to install the GAC and CTO filters. *note* the second stage GAC is the only filter that must go in a certain direction. Make sure the end with the rubber washer faces up thereby attaching to the housing cap.

- Step 2: Install Reverse Osmosis Membrane

- 2.1 RO membrane is sealed and preserved in moisture. Check for seal and remove it from plastic bag.
- 2.2 Remove the membrane housing screw cap. First, you will need to disconnect the white 1 / 4" tubing from elbow quick-fitting on membrane housing (*refer to How to Use Quick-Fitting section*), and then unscrew (counter-clockwise) cap from. A thick rubber band can be slipped on housing body for stronger hand hold.
- 2.3 Follow the flow direction sign on the membrane, and firmly insert membrane into housing with the smaller end that has two black O-rings first until the other end is even with housing opening.
- 2.4 Screw cap and insert white tubing back on. Hang tight and tighten up for about 1 / 4 – 1 / 2 turn using small plastic housing wrench but do not over tighten.



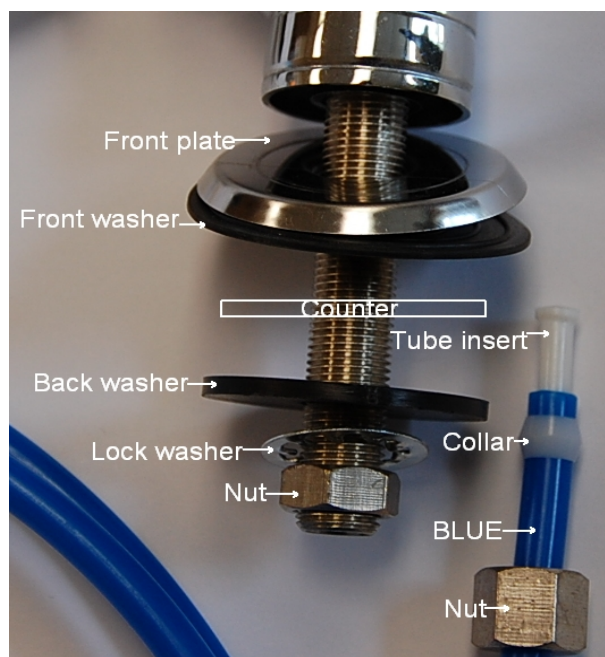
- Step 3: Install 3/8" Feed Water Adapter (AFW)

- 3.1 Turn off the Cold Water Line at your sink via the Cold Water Supply Valve (CWSV). Turn on kitchen faucet to release any pressure and make sure water has stopped before proceeding to the next step.
- 3.2 Get a towel or bucket to catch any water drips. Disconnect Kitchen Faucet Connector (KFC) from CWSV. Wrap CWSV with 2 -3 turns of Teflon tape and screw on the AFW at the female end with O-ring. Tighten using wrench or pliers. Note, the AFW in iSpring tool kit is 3/8", which fits most common flex pipe in U.S. However, if yours happen to be in a different size, this is usually a size of 9/16", please get an adapter from Home Depot.
- 3.3 Reinstall KFC on the male end of AFW. Turn the handle of AFW to cross (OFF) position. Turn on CWSV slowly, check and fix any leaks.
- 3.4 *note* If the fitting end of the AFW is not a quick-fitting but a compression fitting, then unscrew the nut and slip it onto 1/4" **RED** tubing. Insert the tubing into the AFW (the T), push in firmly and then screw and tighten the nut with your hand. Use wrench for final 1/4 turns.



- Step 4: Install RO Drinking Faucet

- 4.1 If your kitchen sink does not have a spare ½" hole, you will need to drill one. (Refer to page 6: *The Tips for Drilling a Hole on Sink or Counter-top*). Wipe clean and dry the area.
- 4.2 Remove blue protection film from front plate, slip it on faucet thread, and slip on black rubber washer that has 3 circles. Insert the faucet thread portion into the hole. Optional plumber glue or sealer could be used.
- 4.3 Under the sink, tighten back rubber washer, small lock washer, and nut.
- 4.4 Slip the compression fitting nut and collar on BLUE tubing, push the insert into the tubing, insert it into faucet end, and tighten up the nut. Pull the tubing to check if it is secure.



- Step 5: Install Tank Shut-off Valve (TSV)

- 5.1 Wrap six turns of Teflon tape clockwise onto the valve thread at the top of the tank.
- 5.2 Screw Tank Shut-off Valve on and tighten up by hand. Do not over tighten.
- 5.3 Install the **YELLOW** tubing onto Quick-Fitting of TSV.

- Step 6: Tubing Hook up (* Model specific steps)



- 6.1 When facing the iSpring logo on the front plate, the vertical 1st stage (clear housing) is located on the right hand side. Connect the **RED** tubing to this elbow fitting (#0) and the other end to the Feed Water Adapter (AFW) (#6) on your cold water line.
- 6.2 Insert the **BLACK** tubing into the flow restrictor (#5), which lays beside the membrane housing and further connects to the drain saddle (#7) to flush out the waste water.
- 6.3 On the right side of the Post Carbon Filter (labeled T33 or FT15), insert the **YELLOW** tubing into the T-fitting (#1), and the other end to (#9) the ball valve of the Tank.
- 6.4 * Model without UV/AK/DI: Insert the **BLUE** tubing (links to RO faucet) into the elbow fitting at left end of T33 Filter (#2).
* Model with UV/AK/DI: Insert the **BLUE** tubing (links to RO faucet) into the elbow fitting at right end of UV/AK/DI filter (#4), whichever is the last stage.
- 6.5 Install the other end of **BLUE** tubing onto (#8) RO faucet.

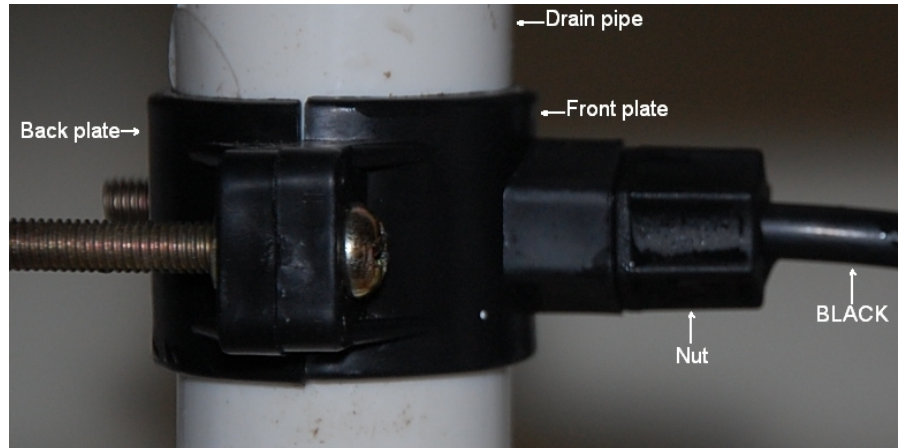
- 6.6 You may organize the tubings, but make sure to leave enough length so the filter system can be moved around the cabinet easily when replacing filters.

- 6.7 You may hang the system using two 10 x 1-1/4 Brass Phillips Flat Wood Screws. This will make replacing filter cartridges easier.



- Step 7: Install Drain Saddle

- 7.1 Choose a spot on drain pipe that is convenient for installing drain saddle and tubing. Horizontal pipe is recommended to limit sound of drainage water running out from system.
- 7.2 Drill a 1 / 4" hole on drain pipe; paste the black sticky pad around the hole.
- 7.3 Cut the **BLACK** tubing end a bit to make a 45 degree angle. Slip the plastic nut and front plate on the tubing, insert the tubing into the 1 / 4" hole on drain pipe, install the back plate and tighten two screws with hex nuts while tubing remains in the hole.
- 7.4 Tighten the nut on Drain Saddle by hand. Pull the tubing to check if it is secure.



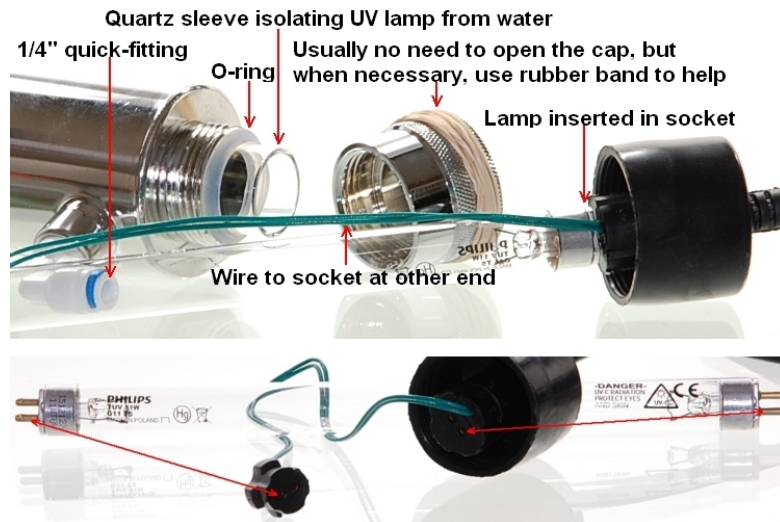
- Step 8: System Start Up (* Model specific steps)

- * If your model has UV stage, do not plug in power until system is fully flushed
- 8.1 Make sure all tubings are not kinked. **Turn Tank Shut-off Valve OFF (cross).**
- 8.2 Prepare a bath towel to catch water leak. Turn on (inline) Feed Water Adapter valve (AFW) then slowly turn on Cold Water Supply Valve (CWSV) and fix leaks if any.
- 8.3 * Plug in booster pump power if your model has one
- 8.4 Within 5 minutes, RO water should start dripping. Let it run for at least 10 minutes. This flushes the system except the tank. Water is black due to loose carbon from new carbon filters. It will turn clear with some air bubble.
- 8.5 Shut off RO Drinking Faucet. Turn on Tank Shut-off Valve. Wait for two to four hours to fill up 3.2 gallon tank.
- 8.6 After two hours, turn on RO Drinking Faucet to flush out all the water in the tank. The water out of the faucet should be much stronger stream since the water is coming from the pressurized tank (7-10 psi). The tank has flushed when the water flow changes back to trickle.
- 8.7 * Plug in UV power and check if RO faucet turns UV on/off through the Flow Sensor Switch.
- 8.8 An optional step would be to compare the TDS level between original tap water and RO water. If the tap water is 100ppm, the RO water should be less than 10ppm. Visit **123filter.com** to check out a TDS Meter.
- 8.9 Check for leaks daily for the first two weeks after installation. Furthermore, a bucket can be put under the system in case of any leaks, and a Flood Alarm can be used together for greater home and cabinet protection.

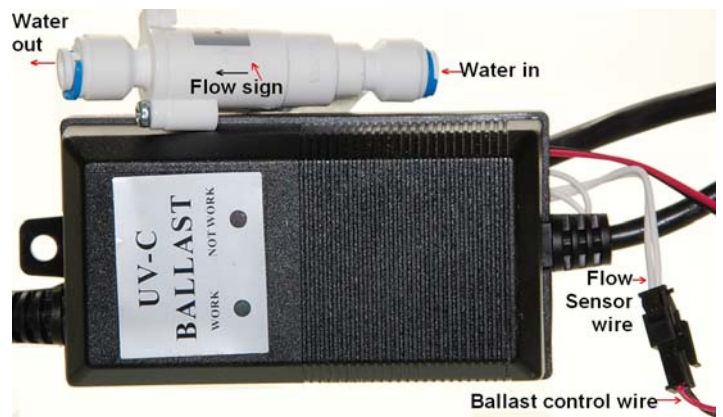


* Model Specific Installation

UV Lamp



The UV module is pre-installed on the models with UV. It should function out of box. The photos are for better understanding about how the components are assembled and work together.



Ice maker kit (optional)

