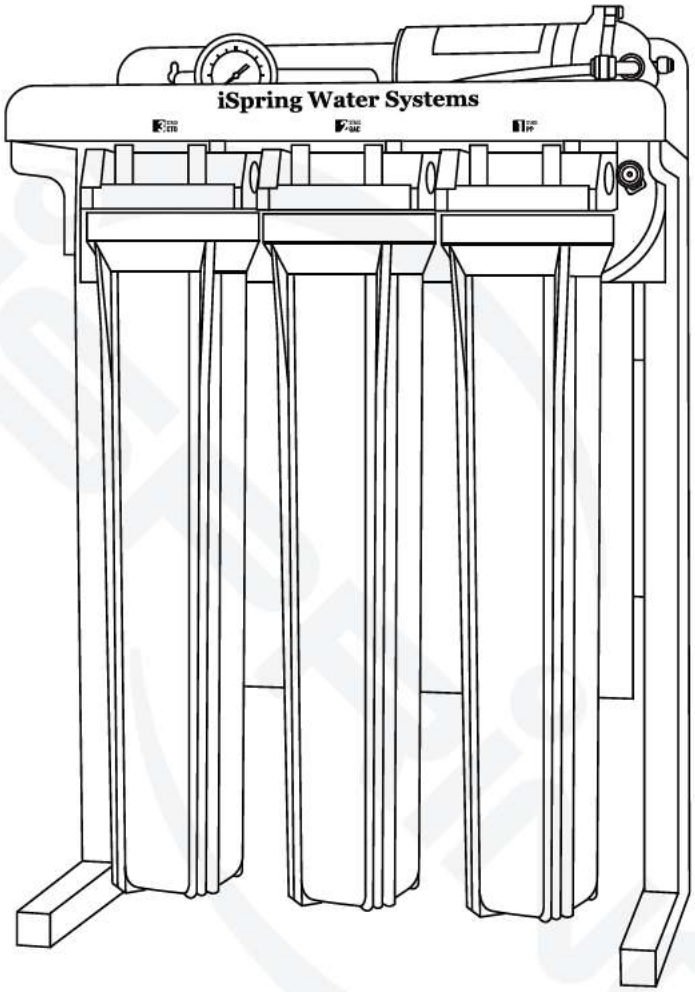
REVERSE OSMOSIS

iSpring RCB3P 300 GPD RO Water System



Model: RCB3P

Installation Instructions & User Manual

Ver. 09/2024

iSpring Water Systems

Any questions?
Scan the QR code
for support.

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.

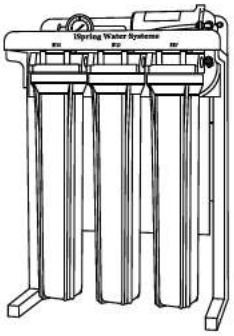
Prior to Installation

Read this instruction manual carefully before installation.

Keep this manual readily available for future reference.

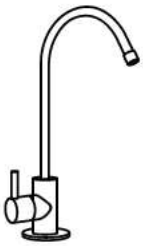
Table of Contents

Packing List

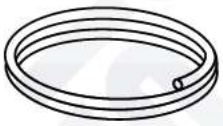


Pre-assembled System

RO Membrane (Mode#: MC1)



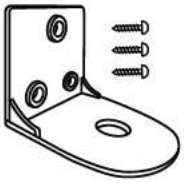
Drinking Water Faucet



Tubing and Spare Parts

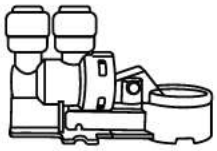
Feed Water Adapter (Model: AFW38)

Drain Saddle



Faucet Hanger

Wrench



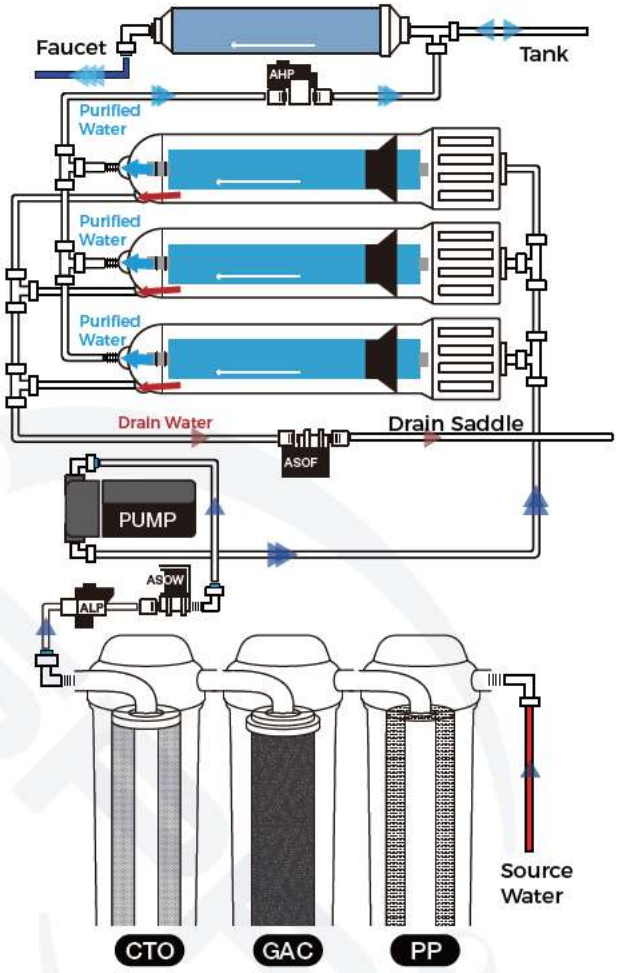
Leak Stop Valve (Model: ALS3)

Product Features

Parameter	Specification
Production	300 GPD
Inlet Water Pressure	25 - 90 psi
Inlet Water Temperature	40 - 100 °F
Inlet Water pH	3 - 11
Maximum Inlet Water TDS Value	750 ppm
Filtered Water Flow Rate	up to 0.2 GPM *when no tank
Booster Pump Model	PMP300
Power Specification	Input: 100 - 240V, 50/60 Hz, 1.5A; Output: 24V, 2A;

- Performance data was tested under standard laboratory conditions; actual performance may vary.
- Do not use this system with microbiologically unsafe water or which has been potentially inadequately disinfected.
- This system is designed to be used on a cold supply only and kept away from freezing environments.
- The installation must comply with applicable local plumbing codes and/or regulations.
- Choking hazard. Small parts are included in the package. Please keep the package out of the reach of small children at ALL times.

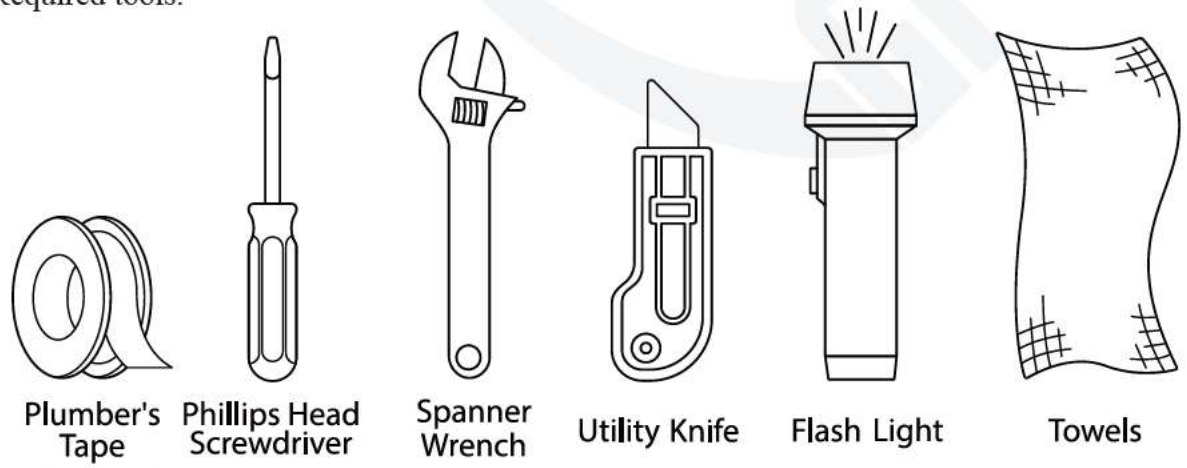
Installation Diagram



Prior to Installation

Before you start the installation

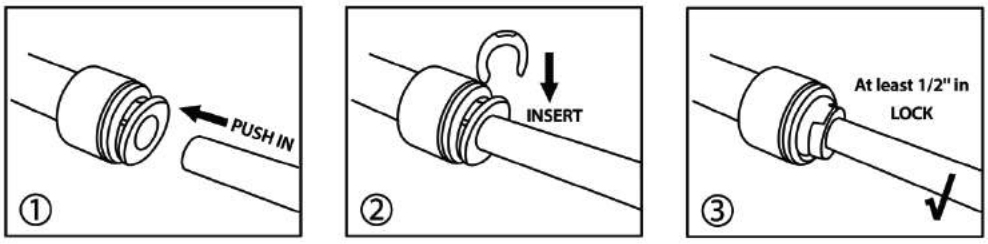
- Choose a suitable location for the system. Again, it must be placed on a flat surface and make sure this system is to be installed on INDOOR cold-water supply ONLY.
- Check the packing list to confirm all accessories are included in the package. Contact iSpring customer service if any components are missing.
- Required tools:



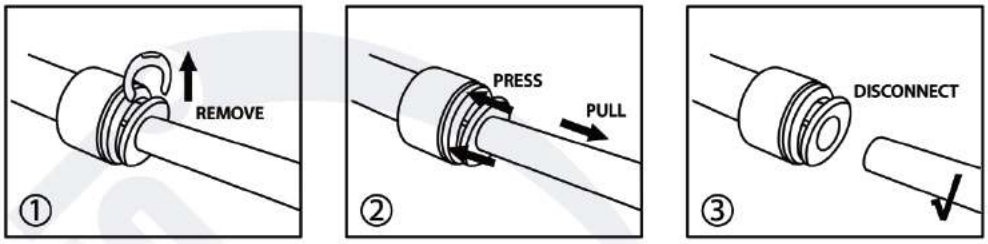
- Optional tools:
  - Variable speed drill with two bits: 1/4" (for drilling a hole on PVC drain pipe), 1/2" hollow diamond (for drilling a hole on the countertop for drinking faucet)
  - 5/8", 9/16" open-end wrench, or adjustable wrench, pliers

- Quick connect instruction

HOW TO CONNECT



HOW TO DISCONNECT



It is highly recommended that you watch the video ***How to Connect and Disconnect Quick Connect Fittings | DIY Installation*** on YouTube. Cut the tubing end squarely using utility knife or scissors. Insert the tubing into the quick connect fitting for at least 1/2". You will need to wiggle the tube and apply additional pressure to create a seal.

Installation Instructions

Step 1. Install Feed Water Adapter (AFW38)

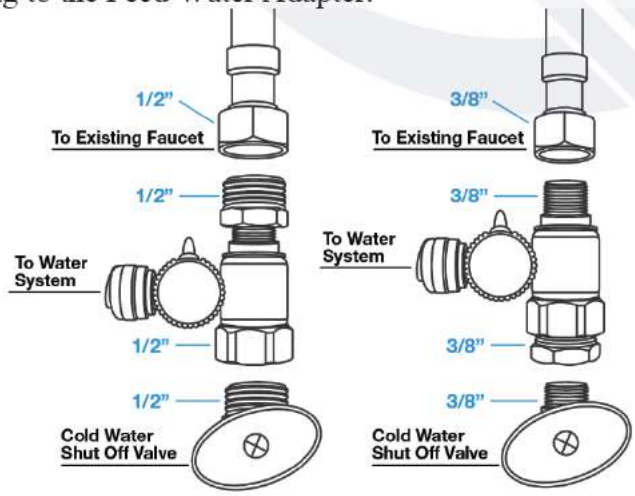
It is highly recommended that you watch the video ***How to Install a Feed Water Adapter for Reverse Osmosis (RO) and Other Applications | iSpring AFW43*** on YouTube.

A. Turn off the Cold Water Supply Valve (CWSV) under the sink and open the kitchen faucet to release pressure. Prepare a towel or bucket to catch any water drips. Disconnect the kitchen faucet connector pipe from the CWSV.

B. Install the Feed Water Adapter onto the CWSV and tighten it using a wrench or pliers. Make sure the O-ring is seated inside the adaptor.

C. Re-install the kitchen faucet connector pipe onto the male end of the Feed Water Adapter. Turn the handle of the Feed Water Adapter to the perpendicular OFF position. Turn on the CWSV slowly, and ensure you are getting a proper seal.

D. Connect the 3/8" tubing to the Feed Water Adapter.



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

Step 2. Install Drinking Water Faucet (Optional)

A. Drill a hole to install the faucet

a. If your kitchen sink does not have an existing 1/2" faucet hole, drill a hole under the guidance of ***How to drill a Hole on Sink or Countertop*** section on page 7. Wipe clean and dry the area.
b. Slip the front plate on the faucet stem, followed by the front washer. Insert the faucet stem into the hole on the countertop. Under the sink, slip on the back washer, and tighten the nut with the lock washer wing nut.
c. Slide the quick fitting up to 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 of the quick fitting.
d. Insert the tubing about 1/2" into the push-in fitting, and again, secure it with the clip.

B. Install a faucet bracket (included) instead of drilling a hole

a. Mount the bracket to the sidewall of the cabinet or walls nearby.
b. Insert the faucet stem into the hole on the bracket. Slip on the back rubber washer.
c. Tighten the nut with the plastic wing.
d. Insert the tubing about 1/2" into the push-in fitting and secure it with the clip.

How to Drill a Hole in Sink or Counter-top

1. It is highly recommended that you watch the YouTube video ***How to Drill Faucet Holes.***
2. Choose a 1/2" Diamond Core Bit for granite and a titanium drill bit for steel. Do NOT use a hammer drill on natural stone, glass, and ceramic.
3. An indent should be made with a punch on steel before drilling to help guide the bit.
4. Use caution when drilling on a Porcelain sink, as it could be easily chipped - set drill speed on slow. Press the bit downward firmly until it breaks through the slippery surface.
5. Use a coolant to disperse heat. Choose water for granite and oil for steel. Use the Water Suction Cup to hold coolant inside and prevent the drill bit from slipping.
6. Hold the drill firmly and vertically at the slowest speed to prevent the drill bit from slipping on the counter.
7. Once you break through the smooth surface, swirl the drill a little to evenly apply pressure in a circle. Be patient and deliberate. It can take 20 - 40 minutes to drill through 1".

Step 3: Install Drain Saddle (ADS1K)

It is highly recommended that you watch the video ***How to Install iSpring Drain Saddle (ADS1K) for Reverse Osmosis (RO) System | DIY Installation*** on YouTube.

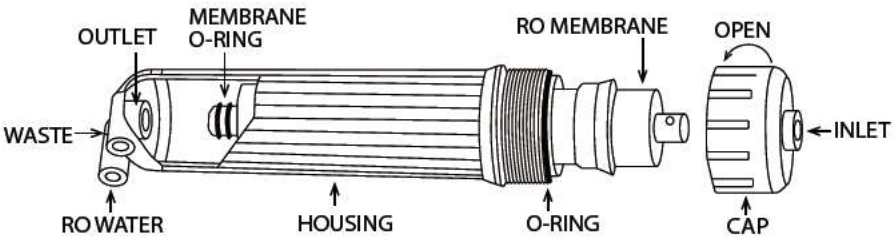
A. Choose a proper spot anywhere before the P-trap on the drain pipe to install the drain saddle and tubing. Remember the drain saddle should NOT be installed after the P-trap to prevent potential microorganism growth.
B. Drill a 1/4" hole in the drain pipe, and paste the black sticky pad around the hole.
C. Cut the 1/4" tubing end to make a 45° angle. Insert the tubing into the 1/4" hole in the drain pipe, install the back plate, and tighten the two screws with hex nuts while the tubing remains in the hole.
D. Insert Lock Clip. Pull the tubing lightly to make sure it is secure.

Step 4: Install the Vertical Filters: Stages 1, 2, and 3

A. Make sure that the O-ring is seated inside the groove at the top of the filter housing. Stretch the O-ring in case it shrank during storage. Food-grade silicone jelly may help the O-ring stay in place and seal better.
B. Filter cartridges are preserved in shrink wrap. Note the direction sign on the sticker before removing the wrap.
C. When placing the filter cartridge into its housing, make sure it is centered, and the knob is protruding from the bottom of the housing fits in the central hole of the filter.
D. Screw the housing, with filters attached, onto the housing caps (caps are pre-assembled on the machine head). The cap also has a center knob that should be inserted into the center hole of the filter cartridge. Twist the housing on in a counter-clockwise direction by hand, and then use a housing wrench to tighten it up for about 1/4 - 1/2 turn. **Do not overtighten. This can cause leaks and make it difficult to unscrew the housing when replacing filters.**

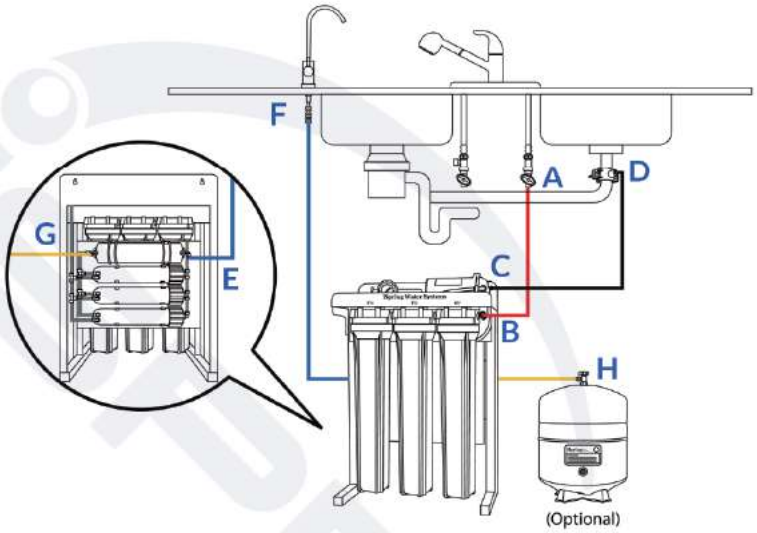
Note: The second stage GAC is the only filter that must go in a certain direction. Make sure that the end with the rubber washer faces up, attaching to the housing cap.

Step 5: Install Reverse Osmosis Membrane



A. Disconnect the tubings from the quick-fitting connection on the three membrane caps.
B. Open the membrane housing caps. Use the included wrench if needed. A thick rubber band can be slipped on the housing body for better grip.
C. Cut open the end of the sealed bag, use it to hold the RO membrane to avoid contamination.
D. Firmly insert the membrane into the housing until the outer end without O-ring is completely inside the housing. Note that the inner end of RO membrane has 2 O-rings.
E. Before twisting the housing cap back on, check that the O-ring is evenly snagged on the membrane housing. Tighten it up for about 1/4 - 1/2 turns using the wrench, but do not over tighten.

Step 6: Tube Connections

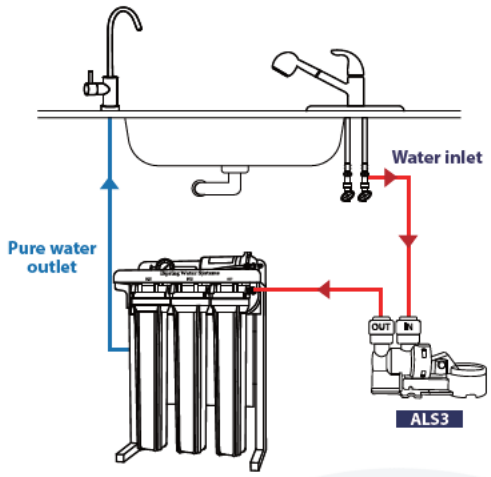


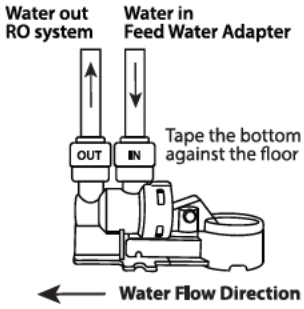
- **Supply Tubing** (3/8"): connect source water from the Feed Water Adapter (**Point A**) to the 1st stage water inlet elbow fitting (**Point B**)
- **Drain Tubing** (1/4"): connect wastewater from the Auto Flush Solenoid Valve (**Point C**) to the Drain Saddle/drain pipe (**Point D**)
- **Faucet Tubing** (1/4"): connect the 5th stage Post Carbon Filter (**Point E**) and the drinking faucet (**Point F**)
- **Tank Tubing** (1/4", *optional): connect the T-fitting on the inlet of 5th Stage Post Carbon Filter (**Point G**) and the storage tank (**Point H**)

A. Measure the length and cut the tubings. Be careful to make a smooth, flat, square cut.
B. Connect the tubings following the above instructions. See ***Quick Connect Instruction*** in ***Prior to Installation*** section in page 5 for more information about quick connection.
C. You may neatly organize the tubing, but make sure to leave enough length so the filter system can be moved freely when replacing filters.
D. Check all fittings to make sure that they are all securely tightened.

Step 7: 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. Make sure the end of the tubing is cut square 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 against the floor.





Warning:
Pulp is for ONE TIME USE only. In case of any leak incidence and the pulp is expanded, please shut off incoming water supply completely, fix the leak, and replace the expanded pulp before turning the water supply back on.

Step 8: System Start-up Procedures

Note: You may now plug in the booster pump to an outlet. The pump will not turn on until water is flowing.

A. Make sure no tubing are kinked. Place a towel under the system to catch any possible water leaks.
B. Disconnect the RO membrane housing cap inlet tubing. Open the Feed Water Adapter Valve (AFW38) and Cold Water Supply Valve (CWSV), and flush the first three stages into a bucket until the water turns clear.
C. Once water is clear, shut off the AFW38 and reconnect the tubing to the RO membrane housing cap. **You will want to flush the first three stages like this whenever they are changed.**
D. Open the RO faucet. Slowly open the AFW38 and check for any leaks. The top 3 causes of leaks are: 1) The tubing is not fully inserted into the quick-connect fitting. 2) The O-ring is not in the correct place or is kinked. 3) The Housing/Cap is not tightened properly or is misaligned with the threads.
E. Within 5 minutes, the booster pump will kick on, and water will start slowly trickling from the RO faucet. Let the faucet trickle for at least 15 minutes to flush out the entire system. Water may appear black at first due to loose carbon from new carbon filters. It will eventually turn clear apart from many tiny air bubbles leaving the system.
F. Check for leaks daily for the first two weeks after installation to ensure the system is functioning properly.

Congratulations, you have successfully installed your iSpring RCB3P 5-Stage Water Filtration System!

Maintenance

All iSpring Water Filter Systems are designed with ease of use and low maintenance in mind. If the filter cartridges are changed on schedule as suggested, the system will work properly for years to come. See the chart below for the filter pack model numbers for your system. The filter packs can be found on ispringfilter.com, Amazon, or HomeDepot.com.

Filter Set Model	Content
FPFGFC25*1	6 month package
F7RB	1 year package
F17RCB3P	2 year package

When to change the filter?

The filters are highly suggested to be replaced when they reached their recommended replacement cycle. However, the actual lifespan of filters may vary depending on the source water quality and daily usage. If you notice a great decrease in the tap water flow, or detect a unpleasant smell, taste, and odor, it would be a good time to get your filters changed.

Stage No.	Model#	Filter Method	Filter Lifespan
1	FP25	PP Sediment, 5 micron	Up to 12 months
2	FG25	GAC Carbon	Up to 12 months
3	FC25	CTO Carbon	Up to 12 months
4	MC1	RO Membrane	Up to 3 years
5	FT15	Post Activated Carbon	Up to 12 months

How to change the filters?

Carefully follow the instructions that comes in with the filter package.

O-rings: Replace every 3 years or sooner if leak happens at O-ring.

The package comes with spare O-rings for the pre-filter housing and the membrane housing. Please save them with this manual.

Tank Maintenance (Only applicable for people use tank)

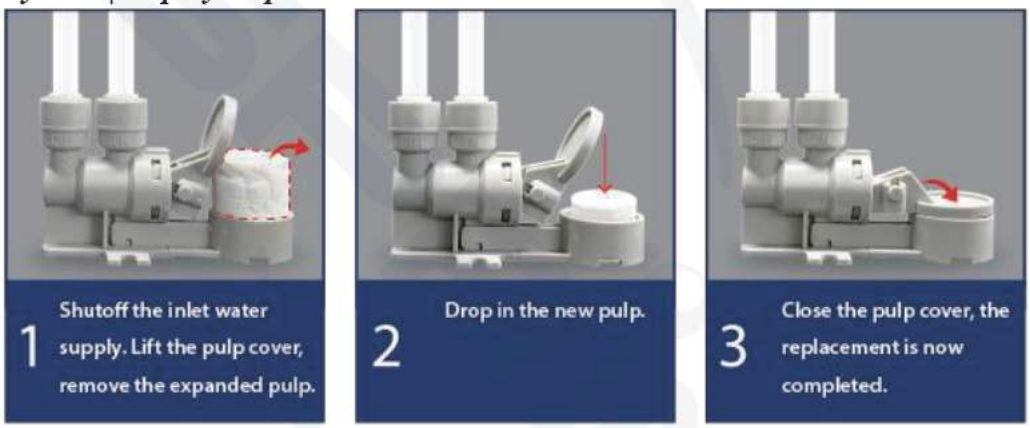
It is recommended to empty and refill the tank at least once a month. This keeps the water inside the tank fresh and not sitting for an extended period.

What should I do with the system when going out of town?

When you are leaving for an extended time, you will want to shut off the water supply to the system. To do this, close the knob on the feed water adapter, and open the faucet until it stops running. Pull out the old membranes and put them in a ziplock baggie of RO water and set into the refrigerator (not the freezer). The filters should be replaced if the system is not used for over a week as they will be sitting in stagnant water.

Leak Stop Valve Pads (ALS1P3) Replacement (Only applicable for people use Leak Stop Valve)

It is highly recommended that you watch the video ***Absorb Pad Replacement of iSpring Leak Stop Valve | Easy DIY | Step by Step*** on YouTube.



Optional Add-on

Ice Maker Connection Kit (Model# ICEK, only use with tank installed)

The iSpring ICEK can be purchased separately to feed RO water to your refrigerator for crystal clear ice cubes and great tasting water. It can be easily installed to connect the RO system to the ice maker or water dispenser of your fridge.

TDS Test Meter (Model# TDS2 and TDS3)

The TDS test meter can be used to check your tap water quality regularly and help determine the time for filter replacement.

Tubing (Model# T14B, T14W, and T38W)

1/4" food-grade tubing in a 50' roll, and 3/8" food-grade tubing in a 10' roll, which are good to use for tubing replacement and extension as needed.

Top Mount Faucet Installation Kit (Model# AIG1)

A US patent pending tool-free product for Countertop RO faucet installation. It works great for countertops with 1" - 1 ½" (D) holes and also fits standard 7/16" drinking faucet stem. It is highly recommended that you watch the video ***How to install a drinking water faucet WITHOUT reaching under sink | iSpring AIG1 Installation Kit*** on YouTube.

iSpring Tank (T11M, T20M, T32M, T40M, and T55M)

This RO system can be used with a storage tank up to 40 gallons. A tank helps meet the impulsive high volume demand and build a commercial or whole house Reverse Osmosis solution.

Troubleshooting

A. Zero/low output water from RO faucet

a. Water supply is closed. Open the water supply to the system, so the valve is in line with the red tubing.
b. Incorrect installation. Verify all tubing connections.
c. The pump is not working, therefore not allowing water through. Make sure the pump is plugged into a live outlet that gets continuous power.
d. A tubing is crimped, blocking the water flow. Check all tubings and uncrimp any crimped tubings.

B. Leaking from where the tubings are inserted into the fittings

a. The tubing is not pushed in past the O-ring inside the fitting, therefore not creating a seal. Make sure the tubing is pushed in a full 1/2" into the fitting. It will take some extra pressure, but you will feel the tube go entirely into the fitting when it does so.
b. The O-ring inside the fitting is not creating a seal with the tubing. Unscrew the elbow fitting, and replace it with one of the extra elbow fittings. Make sure to wrap the new fitting thread several times with Plumber's tape before screwing it in.

C. Leaking from the membrane cap and membrane housing

a. If the membrane housing is leaking, make sure the O-ring is seated correctly. It should be seated on the end of the membrane housing before the threads begin. The membrane cap is then screwed on over it. When positioned incorrectly, it will create a gap or damage the O-ring. When in the correct place, there will be no pressure or tension on the O-ring.

D. High TDS in RO water

a. The system will provide a 90%+ TDS rejection rate when working properly. For instance, if the TDS of your tap water is 500 ppm, the TDS of treated water from the system should be 50 ppm or lower.
b. Incorrect installation. Verify all connections on the system.
c. If the TDS of the tap water and treated water from the system is about the same, ensure the RO membrane is not out of expiration date and is properly installed. The semi-permeable membrane is blue, comes in sealed packaging, and goes in the stage 4 membrane housing.
d. If you are getting some reduction in TDS but not 90%+, some water could be bypassing the membrane. Contact iSpring customer support to identify the exact cause.

E. Cloudy water after installation

a. In the weeks after installing the system or changing the filters, you will see many tiny air bubbles in the RO water. This can cause the water to appear "cloudy". The bubbles are harmless and will disappear as the system clears itself of trapped air.

F. The system drains water 24/7 (continuous drain)

a. The pump is running 24/7. See ***Pump runs 24/7*** section below.
b. The inlet water solenoid valve is defective and cannot shut off the incoming water supply. Please contact iSpring customer support team.

G. Water from the system tastes the same as tap water

a. Incorrect installation. Verify all connections on the system.
b. The RO membrane is not installed in the housing. Ensure the membrane has been installed.

H. Pump does not start

a. No power. Make sure the pump is plugged in. If it is plugged in and still not kicking on, make sure it is not plugged into the same outlet as the garbage disposal. Typically this outlet only has power when the garbage disposal is switched on.
b. Incoming water pressure is below 25 psi. The low-pressure switch kicks on the booster pump at 25 psi, and if this pressure is not reached, the pump will not turn on.
c. Low-pressure switch is not functioning correctly and is therefore unable to turn the pump on. Please contact iSpring customer support team.

I. Pump runs 24/7

a. If the pump is running 24/7 and the output flow remains normal, the high-pressure switch is faulty and not triggering the pump to turn off. Please contact iSpring customer support team.
b. If the pump is running 24/7 and you are getting little to no output flow, either the check valve is losing pressure, or the pump itself is faulty. Please contact iSpring customer support team.

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