User Manual of Product 1:

Home Master TMAFC-ERP Artesian Full Contact Reverse Osmosis System, 7-Stages, Patented 2-Pass Alkaline Remineralization, Fast 4.5s Fill Rate, 1:1 Waste Ratio, 8.5” Catalytic Carbon, 5-Yr Limited Parts

User Manual of Product 2:

iSpring ICEK Ultra Safe Fridge Water Line Connection and Ice Maker Installation Kit for Reverse Osmosis RO Systems & Water Filters, 1/4", 20 feet

Perfect Water Technologies

Home Master®
Reverse Osmosis System
Installation & Service Manual

Home Master® Standard RO
Home Master® Full Contact® Artesian
Home Master® IRON
Home Master® ULTRA
Home Master® HydroPerfection®

Register your warranty

Installation Video

- Scan these 2D barcodes with your smartphone
Or visit: https://www.theperfectwater.com -

Customer Service Hotline 1-877-693-PURE

Home Master® RO Contents:

1 Assembled RO filter cluster
1 Storage tank
1 Tank valve
1 Drain saddle & gasket
1 Roll Teflon tape
1 Mounting clip & screw
1 Chrome long reach RO faucet (or custom choice); faucet adapter and hardware.
1 EZ adapter—feed water adapter 3/8" mc x 3/8" fc x 3/8" tube

General System Specifications

- Feed water: PSI 40 - 100 PSI
- Feed water Temperature: 40° - 100°(F)
- Max. Total Dissolved Solids (TDS): 1500 ppm
- Max. Hardness: 10 gpg
- pH limits: 4 - 10
- Turbidity: 5 NTU

Maintenance Schedule (see page 11)

Replace filters — ANNUALLY or sooner if needed
Sanitize tank & Check tank pressure (7 psi) — ANNUALLY
Inspect tubing and fittings for stress and wear — ANNUALLY
Replace Membrane — 3-5 years or sooner if needed

—> VIDEO INSTALLATION INSTRUCTIONS AVAILABLE ONLINE <—

Google Keywords: Home Master The Perfect Water FAQ Installation Videos & Instructions

Please register your warranty

www.theperfectwater.com/**warranty-registration.html**

System Location

The Home Master® RO may be installed under a sink, or in a basement within 10' feet of the RO sink faucet as long as the Home Master® RO is not subjected to freezing temperatures (please see FAQs page for more basement location details). The Home Master® RO should be mounted vertically where the drain line out is at the bottom. Mount the reserve tank on a sturdy shelf, because it will weigh over thirty pounds when full.

Tools Required

Safety glasses
Phillips screwdriver
Medium Crescent wrench
Felt tip pen or marker
Towels
Scissors
Medium pliers
Unscented (regular) bleach
Variable speed corded power drill (3/8" for the sink hole, ¼" for the remainder)
¼" metal drill bit w/ cobalt tip
½" metal drill bit w/ cobalt tip (not required if sink has a pre-drilled hole)

½" masonry drill bit (not required if sink has a pre-drilled hole, or if sink is not porcelain)

Drilling hole for RO faucet – porcelain sinks steps 1-5; stainless sinks steps 3-5

WARNING: Serious cracking and damage may occur to your sink even if instructions are followed exactly due to age and the imperfections inherent in natural materials. Instructions may not apply exactly to your sink. Use caution – sink may be slippery.

1. Remove base cover plate from RO faucet packaging. Line-up base cover plate with other sink faucets. Check underside of sink for spacing from trim, curvatures, and other obstacles. Don't place spigot too close to obstacles - leave yourself enough room under the sink to use hand tools. Either right or left side of the sink is OK provided previous conditions are met. Mark center of base cover plate with marker. Place towel underneath sink, below drilling site, to collect fillings. Always wear protective eyewear and gear while drilling, and while under sink.

2. Using ½" masonry bit and variable speed corded power drill, slowly begin drilling through the porcelain. Drill bit should be perpendicular to sink. Failure to do so may cause the drill bit to slip and cause bodily injury, and/or property damage. Rinse & dry drill bit tip and sink area with cool water for every 20 seconds of drilling to prevent drill bit overheating and sink damage. Small localized flaking or chipping may occur. **Use caution – drill bit may be very hot. DO NOT touch drill bit. Electrical hazard! DO NOT allow power drill electrical components to come into contact with water. Use caution – sink may be slippery.**

3. When metal is struck, switch to ¼" metal bit with cobalt tip. Drill bit should be perpendicular to sink. Failure to do so may cause the drill bit to slip and cause bodily injury, and/or property damage. Begin drilling to drill a hole all the way through the sink. Rinse & dry drill bit tip and sink area with cool water for every 20 seconds of drilling to prevent drill bit overheating and sink damage. Small localized flaking or chipping may occur.

4. When ¼" hole is completely drilled through, switch to ½" metal drill bit w/ cobalt tip. Drill bit should be perpendicular to sink. Failure to do so may cause the drill bit to slip and cause bodily injury, and/or property damage. Begin drilling to enlarge the ¼" hole to ½" all the way through the sink. Use caution when hole is near completion to avoid damaging sink surface. Rinse & dry drill bit tip and sink area with cool water for every 20 seconds of drilling to prevent drill bit overheating and sink damage. Small localized flaking or chipping may occur.

5. When ½" hole is drilled through completely, install RO faucet with provided mounting hardware. For more details, see mounting instructions enclosed with hardware. Connect Home Master® RO to RO faucet using Quick connect faucet

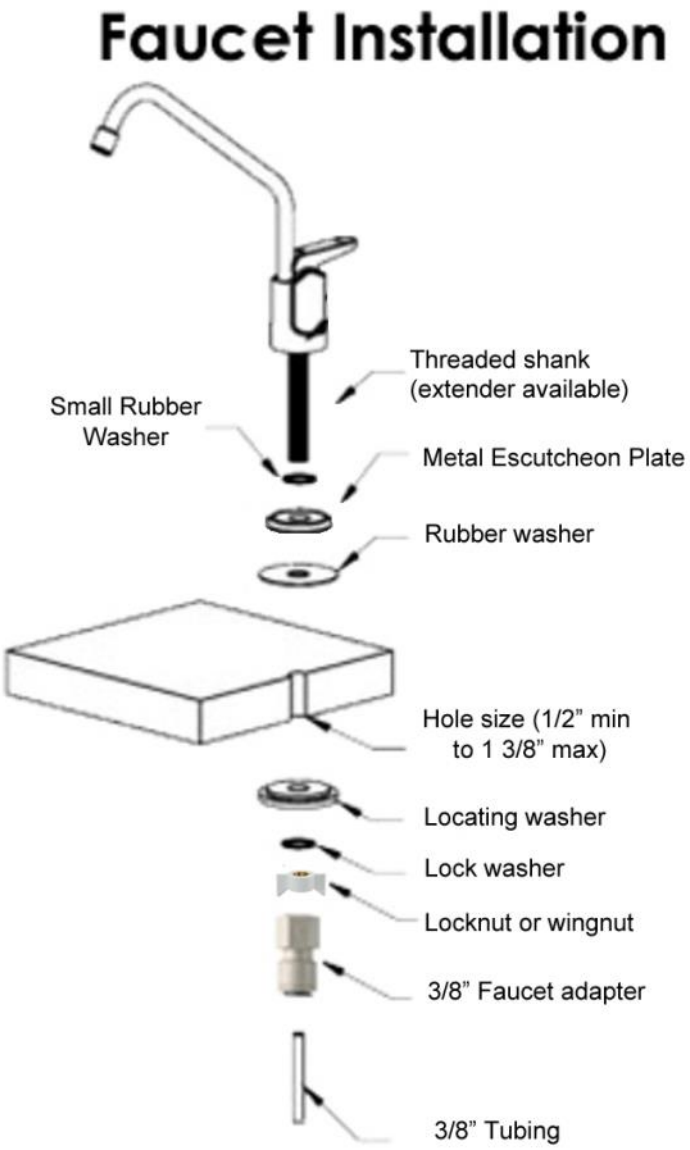
adapter as outlined later.

Installing The Home Master® Reverse Osmosis System

1. Mount RO Faucet*

1. Use existing hole, or drill 1/2" hole in sink top. See page 3.
2. Slide small rubber washer onto faucet shank, then metal escutcheon plate.
3. Slide rubber washer onto faucet shank.
4. Insert shank through hole in sink.
5. Slide locating washer, followed by locking washer onto shank under sink.
6. Thread either lock nut or wingnut hand fastener onto shank, position faucet and tighten.
7. Wrap threaded shank with Teflon tape 1-2 times. **DO NOT tape to end.** Leave final thread exposed for easier fitment.
8. Hand tighten the 3/8" RO faucet adapter. **Avoid cross-threading** faucet adapter, by first rotating the adapter counter-clockwise until it seats, then finger-tighten.

Note: RO faucet is non-air gap. If an air gap faucet is required for your installation, one can be provided to you at no charge upon request with alternate drain saddle and tubing. Call customer service 1-877-693-7873.



2. Install EZ adapter on cold water line - Always wear protective eyewear. Locate the cold water angle-stop (the main water lines under the sink – one hot water, one cold water), and turn clock-wise to shut off the water. Locate 3/8" fitting, typically found on the line out of the angle-stop or where the existing line connects to the kitchen faucet. Disconnect the 3/8" fitting on either the angle-stop or the kitchen faucet. Use Teflon tape on the EZ adapter and the angle-stop male threads, and make sure o-rings are properly seated. Fit the EZ adapter and tighten. Make sure EZ adapter ball valve is in the closed position then check for water pressure & leaks on ball valve. Close EZ adapter valve, by turning the handle perpendicular to the tube opening as shown below. Open angle-stop valve by rotating angle-stop counter-clockwise. Have a bowl or cup nearby to catch water. Dry all parts, check for leaks, and snugness.

Faucet Adapter

EZ Adapter on angle-stop

Reserve Tank Shut-off Valve

3. Install drain saddle clamp – Identify a vertical section of drainpipe with enough space to mount the drain saddle clamp. NOTE: A horizontal section of pipe can be used provided the drain saddle opening flows downward into the pipe, like a manhole drops down into the sewer. DO NOT mount the drain saddle between the P-trap and the wall. The drain pipe material can be either metal or plastic. Locate drain hole template supplied with drain saddle clamp, and peel off its backing. Place the template on the previously identified location of drainpipe for the drain saddle clamp. Place ¼" drill bit inside template hole, and drill a hole into the drainpipe. Drill through one side only. DO NOT drill a hole clean through both sides of the drainpipe. Mount the drain saddle clamp on top of the template with the holes aligned. You may use a screwdriver to align the holes. Fit drain saddle clamp back-plate and screws. Alternate tightening screws on each side of the drain saddle clamp to ensure an even, snug fit. NOTE: slimmer drain clamp and garbage disposal adapter available.

Drain Saddle

4. . Mount the Home Master® RO - Identify location for installing mounting clip to hang the Home Master® RO filter cluster. Location should allow room for the reserve tank, for connecting and disconnecting the unit, and enough room for performing general service on the unit. Use supplied mounting clip and mounting template located inside back cover. Home Master® RO should be mounted vertically where the drain line out is on the bottom. Once mounted, cut the zip-ties holding the tubing together.

Mounting Clip

4a. Mounting Permeate Pump (optional) - Mount permeate pump side by side with the Home Master® RO using supplied mounting clip and screws. **IMPORTANT: permeate pump must be mounted with indicator arrow pointing up. Indicator arrow is the large, center arrow. See mounting orientation diagram below.**

4b. Install refrigerator kit (optional) – Installation may vary according to make, model, and age of your refrigerator. Make sure refrigerator icemaker and water center are turned OFF. Clean area below and around refrigerator thoroughly. Use care when rolling out refrigerator. Flooring may become scratched, gouged or damaged from moving refrigerator. Consult your local licensed contractor or plumber for trimmed-in refrigerators, or refrigerators without rollers. Roll out refrigerator. Unplug refrigerator electric plug. Locate water line in for refrigerator. (Yours may already be connected to a water line from wall. If so use local angle-stop to shut off water. Disconnect female fitting.) Plan the route for the water line from the Home Master® RO. Drill ¼" holes through

the lower cabinetry, high along the back wall just below the drawers. Make sure cabinet contents are removed, prior to drilling, and ¼" tubing does not come into contact with drawers, doors, or sharp objects. Smooth the holes free from splinters and sharp edges. [Alternate route for refrigerator line -- run ¼" refrigerator tubing along the baseboard, and enter the kitchen sink cabinet by drilling a ¼" opening in the bottom board of your kitchen sink cabinet, towards the front baseboard.] Push tubing through the cabinetry holes from the Home Master® RO to refrigerator. Allow 2-4' of extra tubing at the refrigerator, and position it so that it cannot be crushed or otherwise damaged while rolling the refrigerator. Connect the female metal fitting from the refrigerator kit to the male metal fitting on the refrigerator. Make sure all male metal fittings are thoroughly Teflon taped to prevent leaks. Do not roll back refrigerator until the Home Master® RO is fully installed and operational. IMPORTANT: Make sure shut off valve on the refrigerator connection kit at the Home Master® RO is in the CLOSED position, where the blue handle will be perpendicular to the body until after the fill and drain procedure has been performed at least twice. Also remember to dump the remaining ice and flush the water center prior to use.

5. Affix product label found in the parts bag to the top of the reserve tank.

6. Install reserve tank – Using eyedropper or a small spoon, place a few drops of unscented (regular) bleach inside the 1/4" threaded water nipple at the top of the storage tank. Wait 2 minutes then shake out into sink. NOTE: You should repeat this step when performing annual service. DO NOT touch the air nipple near the bottom of the tank found under a blue cap at this time. **IMPORTANT:** Wrap plumbers pipe tape clockwise 5 times around the 1/4" water nipple on top of the reserve tank. Hand tighten the reserve tank shut off valve to the 1/4" water nipple until it is snug. **Do not over tighten**. Insert BLACK 3/8" tubing into the tank shut off valve. Push tubing all the way in, then pull back gently to check fit. Most push-pull fittings take about a **¼"** of tubing inserted into them. Make sure reserve tank shut off valve is in the CLOSED position, where the blue handle is perpendicular to the body and tubing.

TUBING COLOR CODE

ORANGE—LINE IN	**BLACK—TO RESERVE TANK**
RED—TO DRAIN	**BLUE—TO RO FAUCET**

7. Connect System Tubing

A) **Line IN**: Insert ORANGE 1/4" tubing into cold water EZ adapter used in step 2. Push tubing all the way in, then pull back gently to check fit.

B) **RO Faucet:** Insert BLUE 3/8" tubing into RO faucet adapter. Push tubing all the way in, then pull back gently to check fit. Push twice to be sure its really in.
C) **Reserve tank-** Insert BLACK 3/8" tubing into the tank shut off valve. Push tubing all the way in, then pull back gently to check fit.
D) **Drain —** Locate the black plastic nut found in drain saddle parts bag. Press it onto the RED 1/4" tubing attached to the filter cluster. The red tubing should protrude from the black plastic nut slightly. Wrap excess tubing around the drainpipe so that some loops are above the drain saddle. Hand tighten black plastic nut onto the drain saddle male fitting until it is snug. Do not over tighten and please DO NOT add a tubing insert.

8. Pressurize the Home Master® RO - For UV filter equipped systems first connect power adapter to UV filter so the UV filter cap glows. If unit fails to illuminate, then check power outlet with a known good device like a lamp. Many undersink outlets are switched.
Make sure unit is dry. Double check to make sure all valves are in the closed position, except for the main angle-stop valve, which should be open. Water should flow normally from your kitchen faucet. SLOWLY open the EZ adapter ball valve. You should hear water rushing through the system. Open the RO faucet to by flipping the lever up, where it should stay open. A **trickle of water** should be present after 2-20 minutes. Some blackening of the water may present due to loose carbon being flushed out. Close the lever on the RO faucet after the trickle runs clear, and allow the system to pressurize. **When the system has pressurized and shuts off automatically** <**IMPORTANT STEP**> **dry unit thoroughly, gently tug on each connection and check for leaks.** Then open the reserve tank valve slowly. Allow 1-3 hours for reserve tank to fill. System will produce waste water while producing clean water. The system will produce waste water in tandem with product water.

9. **Fill and Drain Procedure**—First close the EZ adapter ball valve so that the system is no longer producing new water, then open the RO faucet. Let the water run out until it comes to a **COMPLETE STOP**. Close RO faucet. Slowly open the EZ adapter ball valve and let the system refill, then repeat this step. System **must be flushed at least twice prior to use**. Some harmless fine air bubbles may be present and will dissipate with time and use. [OPTIONAL- Following successful fill and drain procedure you may plug in refrigerator electric plug; open refrigerator connection kit ball valve. Make sure refrigerator icemaker and water center are turned ON. Check for leaks. Check for pressure at the refrigerator's water center. **Flush the water center until the water runs clear and is at room temperature; and dispose of the first two batches of ice following new installation, and after filter changes.** Use caution when rolling refrigerator back into place. DO NOT crimp or crush water line, as a leak will likely develop.]

Troubleshooting

IMPORTANT NOTE: Before performing service on the Home Master® RO at any time, and for any reason: first close all under-sink water valves, except for the RO faucet, which you should open to relieve system pressure and drain away excess water from the lines. Push-pull and quick connect fittings are nearly impossible to remove when under pressure.

Leaks from metal fittings Unscrew fittings and re-tape male fitting. Tape should be wound 5-7 times around male thread. Tape should not cover opening. Use only Teflon tape. Re-tighten fitting securely. Do not over-tighten**.**

Leaks from plastic fittings Plastic fittings should be firmly finger tightened. Under tightening can result in leaks, over tightening can crush the tubing and result in a **water blockage**. For plastic fittings only; make sure the plastic tubing has an insert in the tube end, and a feral (oring which compresses the tubing around the insert) in the plastic female fitting. Drain tubing does not need an insert.

Leaks from push-pull or quick connect fittings Disconnect fitting by depressing the collet ring on the fitting with one hand and pulling out the tubing with the other hand while the collet ring is still depressed. Tubing cannot be pulled out without depressing the collet ring, and relieving system pressure. Make sure the tubing is cut is straight, the edge is completely smooth, and the tube is rounded. Scratched, gouged, damaged, or oblong tubing end will leak. Re-insert the tubing into the push-pull fitting. Push tubing all the way in, then pull back gently, to check fit. Most push-pull fittings take about a 1/3” of tubing inserted into them.

Fine Air Bubbles/Grey Tinted Water: tiny air bubbles often accompany a new system installation and filter changes. Air becomes trapped inside the tiny carbon pores and is released over time, not gallons. After pouring a glass of water, allow a few seconds for the water to clear. Enjoy! Please ensure you have completed installation step #9 by repeating the fill and drain procedure exactly.

Noises: **Hissing or flowing** sounds from Home Master® RO are normal during the water purification process. Sounds should last for approximately 1 hour per gallon of water used. Sounds should stop once the reserve tank is full. Permeate pump equipped systems will "**click**" and "**whoosh**." If the clicking from the permeate pump is troublesome, then place some insulating material between the mounting clip and the wall, such as a rubber jar gripper mat or some Dynamat which is available upon request.
A **GROANING** sound upon start-up indicates air bubbles in the automatic shut off valve. This will go away with time or your can pull the Home Master® RO off of its mounting clips and rotate it 90° left and hold it there for 10 minutes, then rotate it 180° right and hold it there for 10 minutes while the system is operating in order to pass the air bubbles. Repeat as needed.
Gurgling noises from the drain can be present during normal operation. Sounds should last for approximately 1 hour per gallon of water used. If the noise is troublesome there are a few things you can do. A) Disconnect the red drain line from the drain saddle, adjust the red tube protruding from the nut (add a little more or reduce it), while ensuring there is at least some visible red tube protruding, and reconnect. B) Empty your P trap to ensure the system waste water isn't dropping into standing water. C) Use a common rubber stopper to cover your sink’s drain opening to muffle the sound.

Weak pressure at RO faucet & Reserve tank filling slowly

NOTE: *Seasonal changes in temperature can cause pressure imbalances within the system resulting in slow water production. Oftentimes the imbalance will correct itself on its own within a few days. You may also restore the internal system pressure balance by draining the tank, unplugging the tubing from the automatic shut off valve (ASV—shown here), then allow the system to stand open overnight. Then reconnect, open the feed valve, and allow the tank to refill.*

Weak pressure is either a storage problem or a production problem. To determine which close the tank valve and open the RO faucet. After a brief burst, you should see a steady thin trickle of water, or -if you have the permeate pump—a trickle that pulses on and off. If this is what you see, then it's a storage tank problem. If you see zero water, or only a few broken drops then it's a production problem. Also, a light/ empty tank may indicate a production problem, and a heavy/full tank a tank problem.

Storage tank problems:

1. Make sure storage tank is full, and has been flushed at least twice.
2. Make sure the angle-stop is wide open.
3. Check all tubing for kinks or sharp bends - this can impede the flow of water.
4. Check reserve tank air pressure. Tank MUST be empty of water, tank valve OPEN, system feed valve CLOSED and RO faucet OPEN. Air valve is located on the side of the tank under a cap. Use a bicycle tire pressure gauge. Tank should have 7.5 psi when empty of water. If the pressure is less or if tank is heavy with water, then add air using a bicycle pump (not a compressor.) Please add 3 pumps, then pause, repeat. Allow 20 minutes to pump out water and repressurize tank. Do not overfill. Replace tank if it does not hold air .

Production problems

1. Check flow to the membrane housing. Close water at the feed water adapter and tank, and briefly open the RO faucet at the sink to relieve any system pressure. Then pull the black tube out of the top of the blue membrane housing at the quick connect fitting. (There is only one fitting on the top of the membrane housing, the bottom has two - one white, one grey). Point the tube you have just disconnected into a pitcher and turn on the EZ adapter valve. The water flow from the tube should be fairly strong.
2. If the flow to the membrane housing is strong, then check the water flow exiting both the white elbow and the grey elbow at the bottom of the membrane housing. The water flow from the white elbow should be a thin, but steady trickle, and the flow from the grey elbow should be greater than the white elbow . If the flow from the grey elbow is less than the white than it should be replaced. If there is no flow from either then change the membrane and the grey elbow. **Please note that the minimum water pressure for the system to operate is 40psi.** Also remember to inspect your drain line where the red tube connects to the drain saddle, and you can also unscrew the grey elbow at the bottom of the membrane housing. If gunk is obstructing the drain line, then the system cannot produce good water.

3. If the flow to the membrane housing is weak, then start working your way backward and check each connection point until you find the blockage point. At each point - turn off the water at the EZ adapter and tank, and briefly turn on the RO faucet at the sink to relieve any system pressure. Disconnect the tube from the fitting. Point the tube you have just disconnected into a pitcher and turn on the EZ adapter valve.

Poor Taste The first step is to purge the system. Close the system feed valve and open the RO faucet like you were getting a drink of water. Leave the RO faucet in the open position until the water stops flowing completely. Then open the feed valve, close the RO faucet and allow the system to refill.

If the poor taste persists, then review your maintenance service record, and also consider that if your usage is higher than normal, you may have exceeded your filter life and require a filter or a membrane change. Changing the filters or membrane is the most common course of action to resolve a poor taste problem.

The next step in assessing a poor taste problem is checking for the correct flow rate from the RO faucet and from the drain line. Here are the steps:

With the feed valve to the system open, and the tank valve closed, please open the RO faucet like you were getting a drink of water. The water flow should settle at a pinpoint thin trickle of water that is either steady or if you have a permeate pump, it should fluctuate in conjunction with the pump's action. Please note the flow rate and continue on to the next step while leaving the RO Faucet open.

With a bowl and towel in hand please remove the red line from the drain saddle. There is a black nut there that you can loosen by hand. There should be water present, so point the line into a bowl. Please note the flow rate. The flow rate should be equal to, or greater than, the flow from the RO Faucet. Please note the flow rate. Also inspect the opening of the red line and the opening into the drain saddle for any obstructions or inserts. Both should be wide open without obstruction.

Please report your findings to our support team. Also please note as to whether you have city water or a private well on your land.

Poor taste from the **refrigerator water and ice center** can be caused by a number of issues – bad fridge filter, internal lines, absorbing off-tastes from foods. Close valve feeding the fridge and taste the RO water. If good, then its

likely not a problem with the RO system directly. Flush & Drain water center, dump at least 2 batches of ice, dispose of foods/leftovers/condiments that are out of code, sanitize shelves and all surfaces. Seal and reseal recent leftovers and frozen goods. Call for support if poor taste persists.

No water or ice from refrigerator water center Make sure line from Home Master® RO to refrigerator has pressure. Make sure refrigerator water center and/or icemaker are turned ON, and refrigerator is plugged in. If water center works, but icemaker does not, then defrost the freezer as the line may have frozen.

Discoloration of water The first batch of water may be discolored due to the presence of carbon and air bubbles from the carbon filters. This is normal. Please discard the first 6.5 gallons of water. Tiny air bubbles often accompany a new system installation and filter changes. After pouring a glass of water, allow a few seconds for the water to clear. Please ensure you have completed installation step #9 by repeating the fill and drain procedure exactly.

Typical Maintenance Schedule*	MODEL					
Maintenance Item	**TM**	**TMA**	**TMAFC**	**TMIRON**	**TMULTRA+**	**TMHP+**
ISetTM8	Annually					
ISetTMA8		Annually	Annually			
ISetTMFe8				Annually	Year 3	
ISet-TMUL-MY12					Year 1 & 2	
Iset-TMHP-MY12						Year 1 & 2
UVFilter3					Year 3	Year 3
ISetTMFe8-A						Year 3
Membrane *MH50, MH75)	3-5 years	3-5 years	3-5 years	3-5 years	3-5 years	3-5 years
Inspect all components for signs of leaks, wear & stress	Annually	Annually	Annually	Annually	Annually	Annually
Check tank pressure to 7 psi	Annually	Annually	Annually	Annually	Annually	Annually
Sanitize System (p.6, step 6)	Annually	Annually	Annually	Annually	Annually	Annually

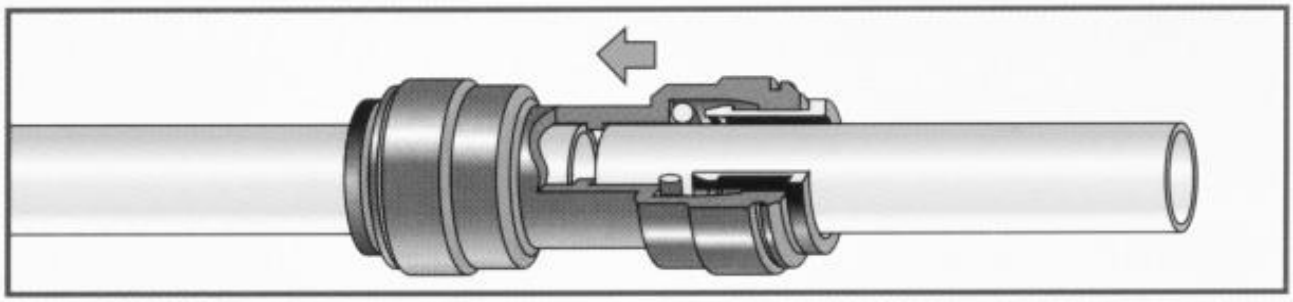
+The filters and UV bulb are changed every year on UV equipped system; every 3rd year the entire UV module is changed. Then restart the cycle.

****Based upon family of four; 70F, 77psi, 250 ppm nacl TDS, <10 gpg hardness, 0 iron bacteria. Your results may vary.***

****Subject to change without notification***

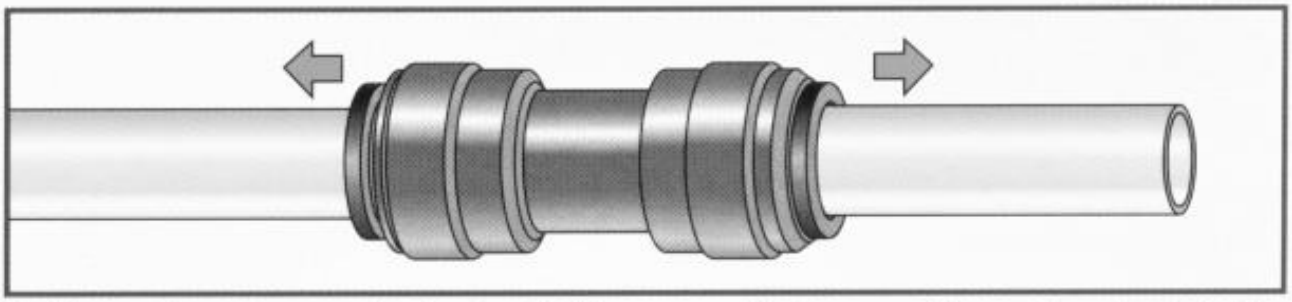
USING QUICK CONNECT FITTINGS

Insert tube Push up to tube stop



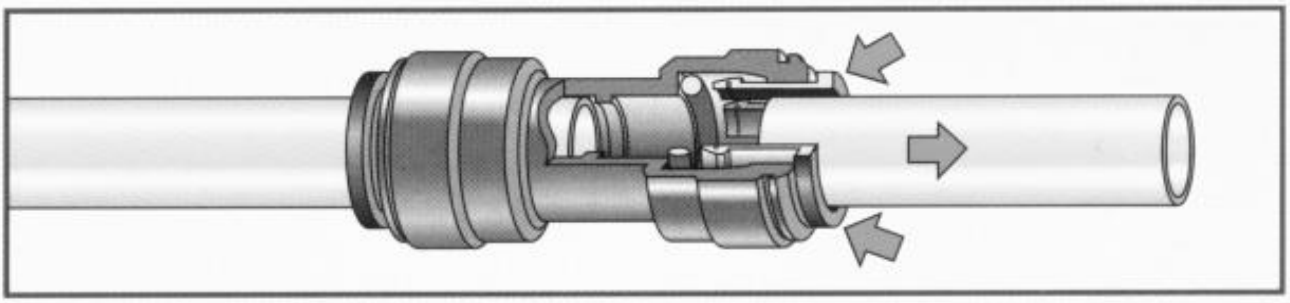
Push the tube into the fitting, to the tube stop. The collet (gripper) has stainless steel teeth which hold the tube firmly in position while the 'O' ring provides a permanent leak proof seal.

Pull to check secure



Pull on the tube to check that it is secure. It is a good practice to test the system prior to leaving site and/or before use.

Push in collet and remove tube



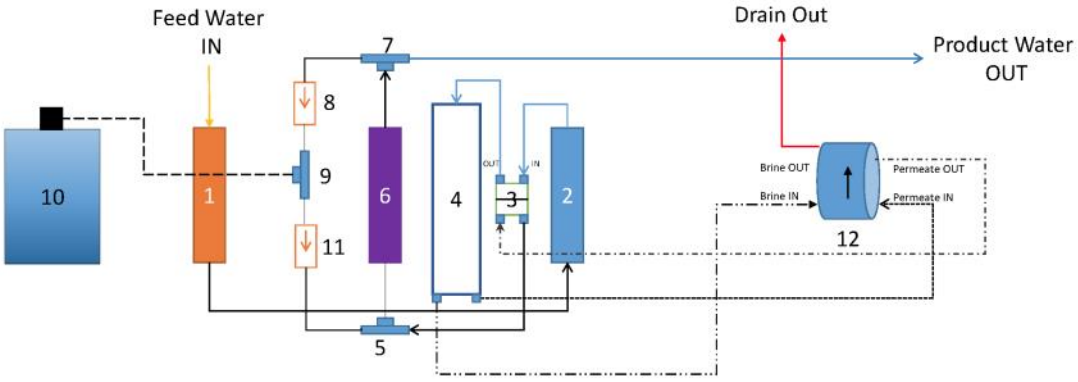
To disconnect, ensure the system is depressurized before removing the tube. Push in collet squarely against face of fitting. With the collet held in this position, the tube can be removed.

SAMPLE SCHEMATICS

Have a problem? Call us 877-693-7873

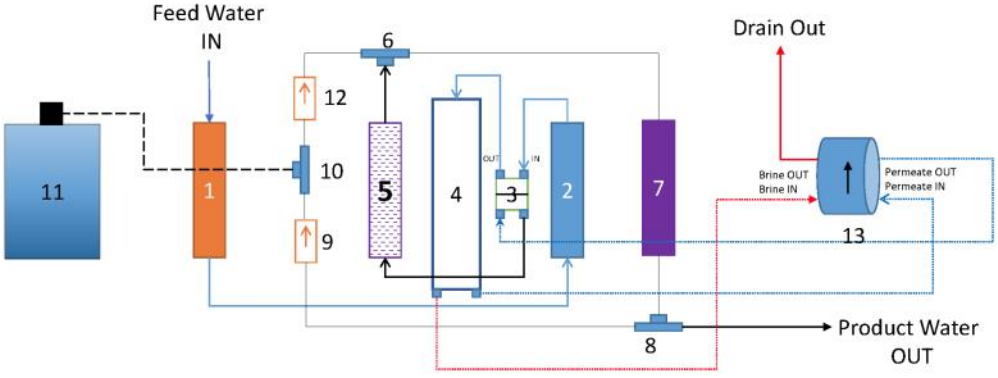
We want to be part of the solution

Home Master® Artesian Full Contact® with Permeate Pump
Reverse Osmosis System

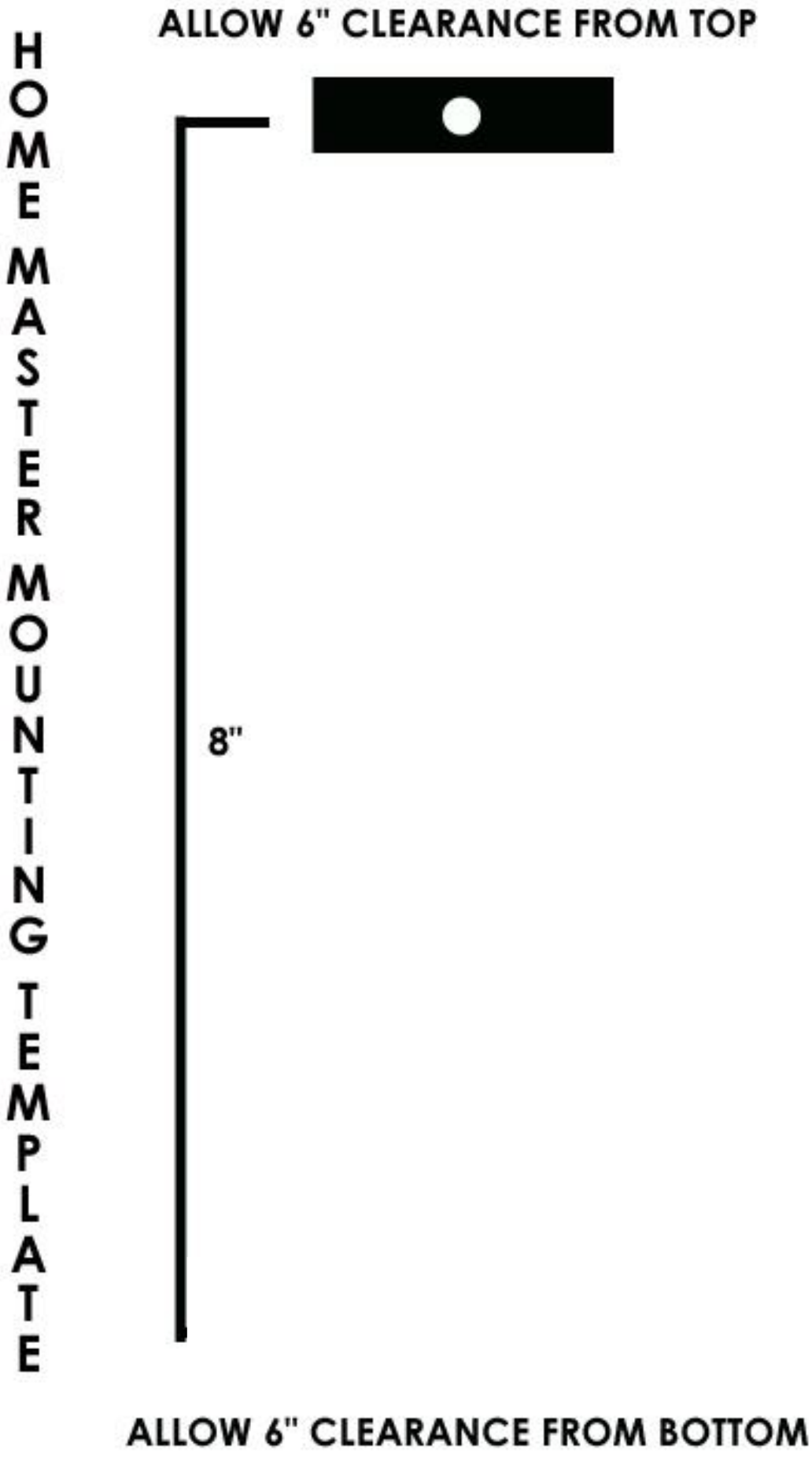


1) Sediment Filter	6) Artesian Filter	12) Permeate Pump
2) Carbon Filter	7) 3-Way Tee Fitting	
3) Automatic Shut-off Valve	8) Check valve	
4) Reverse Osmosis Membrane	9) 3-Way Tee Fitting	
	10) Storage Tank	
5) 3-Way Tee Fitting	11) Check valve	

Home Master® HydroPerfection
Reverse Osmosis System



1) Sediment Filter	6) 3-Way Tee Fitting	12) Check valve
2) Iron Filter	7) Artesian Filter	13) Permeate Pump
3) Automatic Shut-off Valve	8) 3-Way Tee Fitting	
4) Reverse Osmosis Membrane	9) Check valve	
	10) 3-Way Tee Fitting	
5) UV Filter	11) Storage Tank	


ALLOW 6" CLEARANCE FROM TOP
HOME MASTER MOUNTING TEMPLATE
8"
ALLOW 6" CLEARANCE FROM BOTTOM

10 Tips for an Easy and Successful Installation

1. Keep it simple - there are 4 connections to make, and the tubing is color coded.
VIDEO INSTRUCTIONS ARE AVAILABLE ONLINE

2. Have plenty of time, light, space, and towels before getting started. If everything goes well, you should be done in 45 minutes. However, if your feed water line is a different size, or if you don't have an extra hole for the faucet, it can take somewhat longer.

3. NEVER use plumber's putty, thread-lock, or anything else you wouldn't eat on any part of this system. You may use as much white Teflon plumber's tape as you like. If you use plumber's putty on your faucet, you will have disgusting and potentially toxic water for the life of the faucet.

4. Mount the faucet first, and when making the final connection, use the quick connect faucet adapter found in the bag of parts with the EZ adapter, tank valve, and drain clamp.

5. If you have a 3-hole sink and want to avoid drilling a 4th hole for the RO faucet, then get a single handle *kitchen* faucet. This will free up 2 holes, one of which you may use for the RO faucet, the other you can use for a soap dispenser or side sprayer.

6. Mount the Home Master® RO vertically so that the blue cap is on top. There is only one "blue cap" and it has only one fitting at its top. Mount the (optional) permeate pump correctly or nothing will work. There is a long arrow on the permeate pump, make sure it points up.

7. Mount the drain saddle on a vertical section of drain pipe. If you have to mount the drain saddle on a horizontal section, then drill the hole on the top side of the pipe or at least at an angle where the drain water from the Home Master® RO drops down into the drain pipe. [Think of a manhole passage into the sewer] When making the connection from the system to the drain saddle - wrap the tubing around the drain pipe a few times, so that some loops of tubing are higher than the fitting.

8. DO NOT touch the air nipple on the side of the reserve tank during new system installation. Tank comes pre-pressurized. Please check pressure and pressurize as part of annual maintenance.

9. Read the instructions thoroughly before beginning. There is a lot of information there, some of which you may not need for your application. If you have questions – call or email. Email will usually be answered within hours even on weekends.

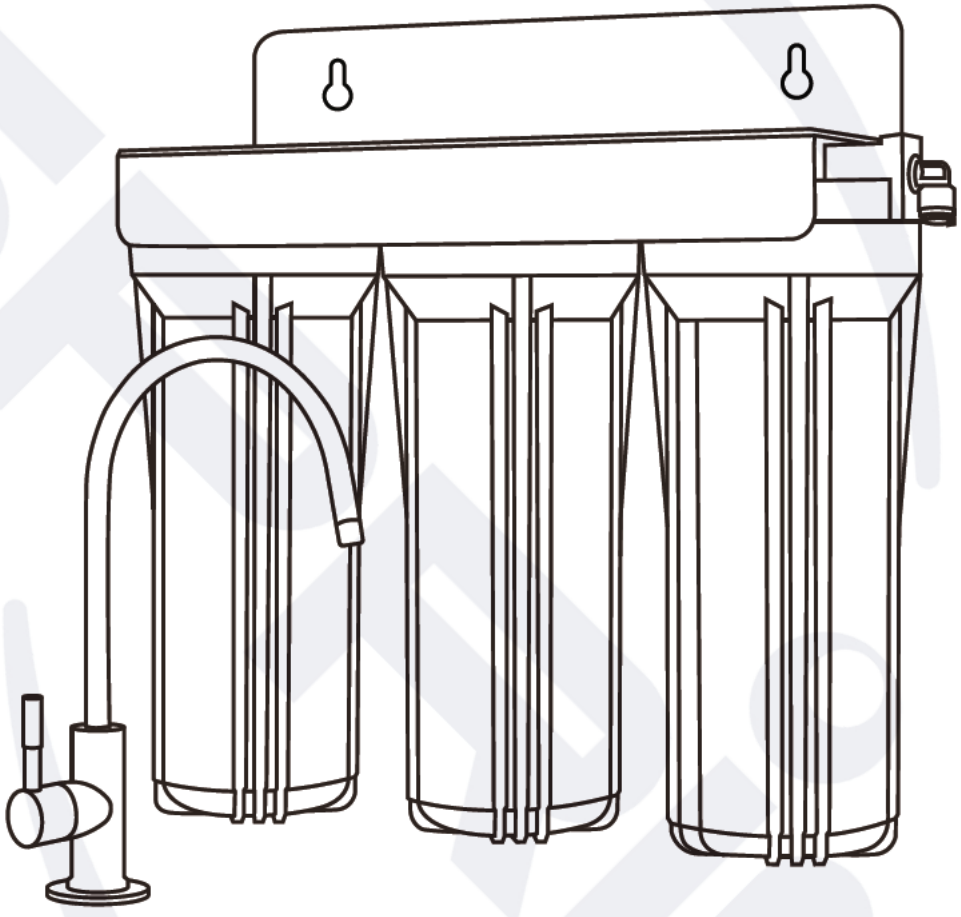
10. Have patience. Your new Home Master® RO may take some time to break in and start flowing. Make sure you fill, and drain, the reserve tank at least twice.

TUBING COLOR CODE

ORANGE—LINE IN	**BLACK—TO STORAGE TANK**
RED— TO DRAIN	**BLUE—TO RO FAUCET**

UNDER SINK

iSpring US31 3-Stage Under Sink Tankless Water Filtration System



Model: US31

Installation Instructions & User Manual

Ver. 11/2022

iSpring Water Systems

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.

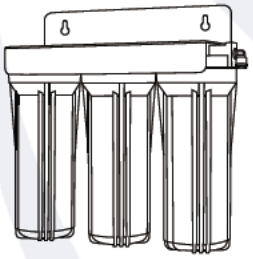
Table of Contents

User Information

The user must adhere to the installation specifications described in this Product Installation and Operation Manual (hereinafter referred to as the "instruction manual"). iSpring is not responsible for damage, loss, or injury resulting from neglect, improper maintenance, or unauthorized modification of 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 (4 - 37 °C). This water filtration system is NOT designed for HOT water. If the water temperature or ambient temperature falls below 40°F, immediately shut off the inline water supply and drain the remaining water from the system.
- Use only authorized iSpring parts and filters. Using unauthorized or aftermarket components will void the product warranty.
- It is recommended that users check external fittings and connections regularly to ensure all components are secure and operating properly.
- Unauthorized modification and disassembly are strictly prohibited and will void the warranty.
- This system 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 the use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- This system can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved. Children shall not play with the system. Cleaning and user maintenance shall not be made by children without supervision.
- The new hose-sets supplied with the appliance are to be used and that old hose-sets should not be reused.

Packing List



Housing and Bracket Assembly

3 Cartridges

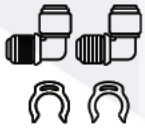
Faucet w/ Installation Kit

Feed Water Adapter
(Model: AFW43)

Tubing

Faucet Bracket

Plumber's Tape



Fittings

Wrench

Product Features

Parameter	Specification
Minimum Inlet Water Pressure	30 psi
Maximum Inlet Water Pressure	70 psi
Incoming Water Temperature	40 - 100 °F

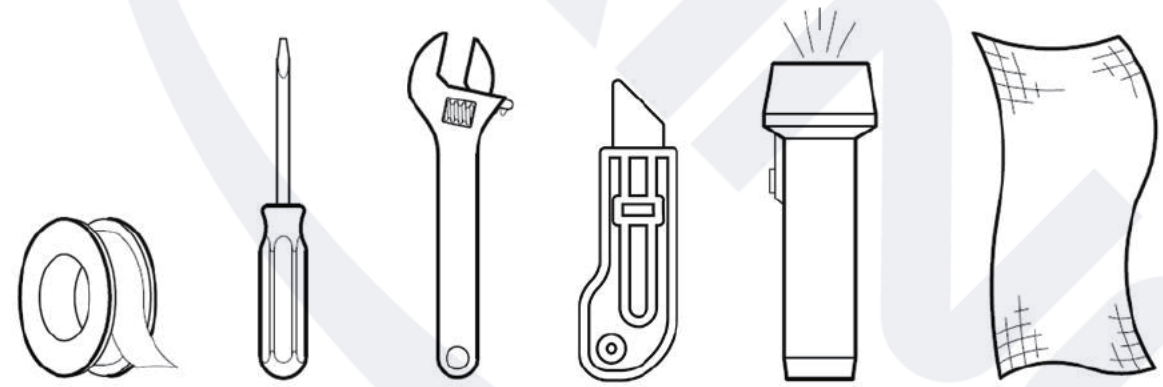
- Maximum water pressure: 70 psi, or a pressure regulator (Model: APR70) is required for high inlet water pressure.
- Minimum water pressure: 30 psi, or a booster pump is needed.
- Do not use this system with microbiologically unsafe water or which has been potentially inadequately disinfected.
- This 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.
- This purification system DOES NOT reduce TDS concentration.

If you have any questions or concerns during the installation, please contact us at **support@123filter.com** or visit our help page at **123filter.com/support**

Prior to Installation

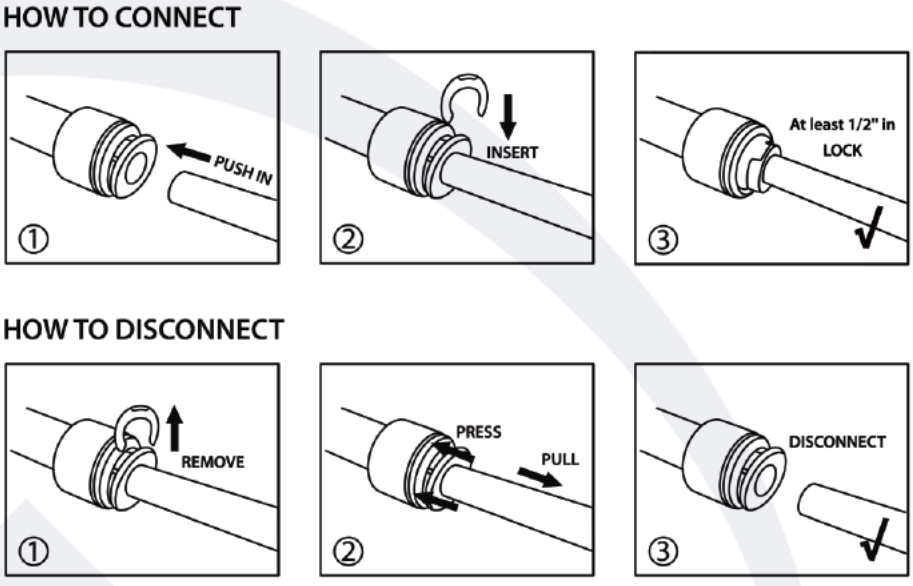
Before you start the installation

- It is highly recommended that you watch the video **"How to Install iSpring US31 Under Sink Water Filtration System | Step by Step Easy DIY"** on **YouTube.**
- 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



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

Step1. Install Feed Water Adapter (AFW43)

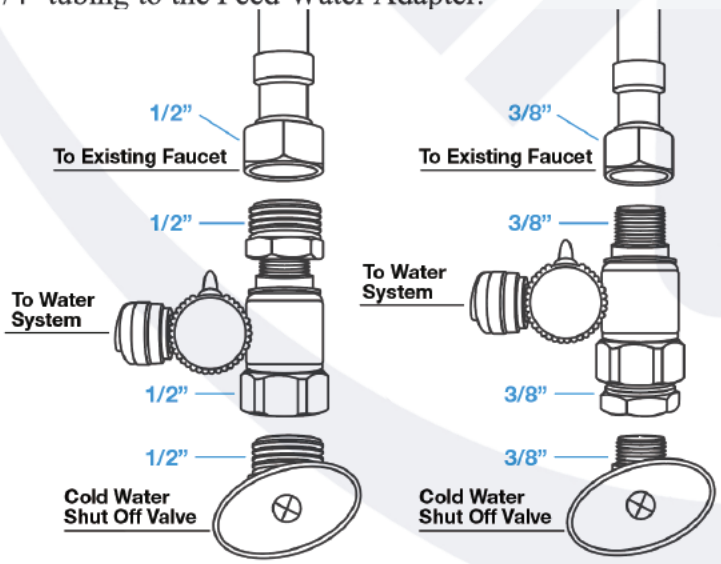
It is highly recommended that you watch the video **"How to Install a Feed Water Adapter for Reverse Osmosis (RO) and Other Applications | iSpring AFW43"** on **YouTube.**

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 1/4" 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

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***. 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.

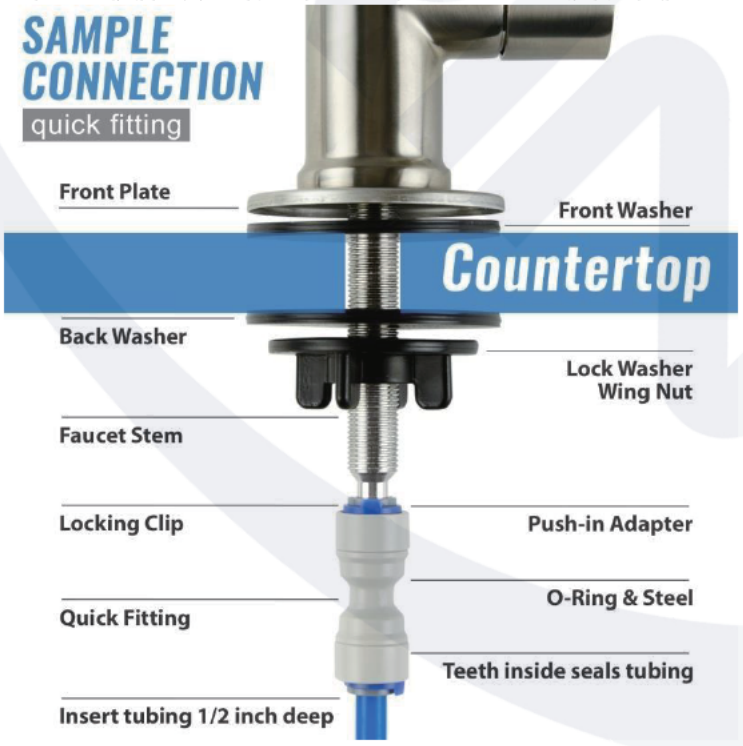
See the figure on the next page for better illustration.

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

a. Mount the bracket to the sidewall of the cabinet.
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".



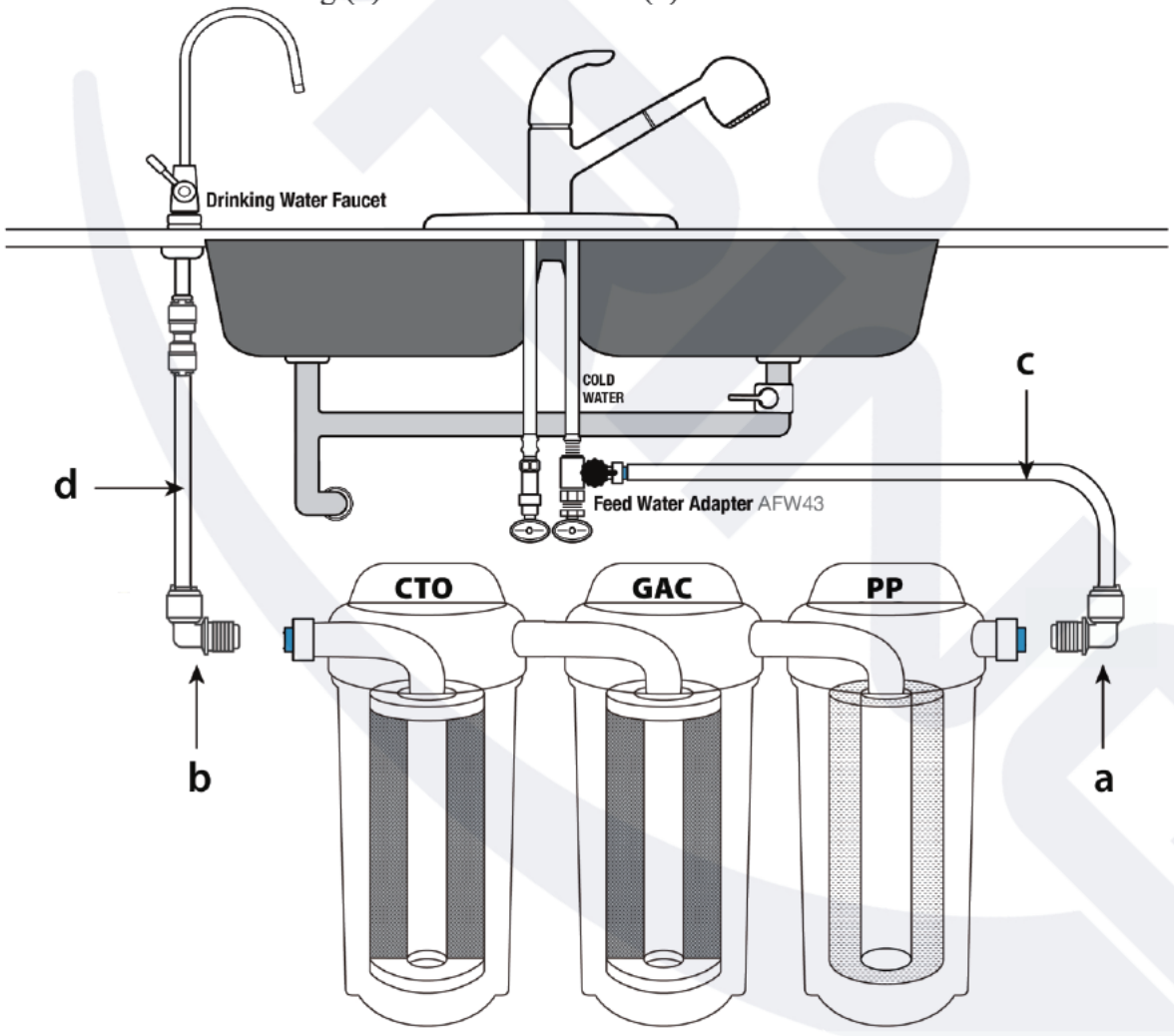
Step 3: Install the Filters: Stage 1, 2, and 3

A. Make sure that the O-ring is seated inside the groove at the top of the filter housing. 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 filter is the only filter that must go in a certain direction. Carefully follow the instruction on the GAC filter for reference.

Step 4. Tubing Connection

A. Install the fittings (a & b) onto the inlet and outlet of the system. Wrap the male end of the fittings with 4-5 wraps of plumber's tape to ensure a proper seal, and then screw them into each side of the system. Do not over-tighten.
B. Insert the supply tubing (c) onto the inlet side (a).
C. Insert the faucet tubing (d) onto the outlet side (b).



Step 5. System Start-up

A. Make sure no tubing are kinked. Place a towel under the system to catch any possible water leaks.
B. Open the drinking water faucet. Slowly turn on the Feed Water Adapter (AFW43) and check for 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.**
C. Rinse the system for at least 5 minutes.It is normal to see residual carbon and fine air bubbles in the water when flushing the system for the first time.
D. 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 US31 Under Sink Water Filtration System!

Troubleshooting Guide

A. Zero output water from drinking water faucet

a) Water supply is closed. Open the water supply to the system.
b) Incorrect installation. Verify all tubing connections.
c) A tubing is crimped, blocking the water flow. Check all tubings and uncrimp any crimped tubings.

B. Low water flow (trickle) at drinking water faucet

a) One or some of the filters are clogged and need replacement.
b) Water supply is not fully opened. Open the water supply to the system.

C. 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 treated water. This can cause the water to appear "cloudy." The bubbles will disappear as the system clears itself of trapped air and are harmless for the time being.

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

a) Incorrect installation. Verify all connections on the system.
b) One or some of the filters has reached its lifespan and need replacement..

E. 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 on the fitting is not creating a seal. Unscrew the elbow fitting, and replace it with a new one. Make sure to wrap the new fitting thread 4-5 times with plumber's tape before screwing it in.

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 123filter.com, Amazon, or HomeDepot.com.

Filter Set Model	Content
F3	FP15*1 + FG15*1 + FC15*1
F3CTO	FP15*1 + FC15*2
F4CKC2	FG15*2 + FC15*2
F6CTO	FP15*2 + FC15*4

*Please note, the general filter cartridge replacement schedule is for reference only. Not all filters included in the same filter pack. Carefully choose the filter pack that suits your RO system. Filter replacement schedule may vary depending on the quality of your source water.

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.

How to change the filters?

A. Turn off the inlet cold water valve and open the drinking faucets to release pressure.
B. With a towel or bucket underneath, twist the filter cartridge wrench clockwise to remove.
C. Install the new filter and twist the cartridge back on.
D. Check the tubing connection. Open the inlet cold water valve and rinse the system for at least 5 minutes.

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

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 and empty the system. To do this, close the knob on the feed water adapter, and open the faucet until it stops running. This will signify that the system is empty of water. The filters should be replaced if the system is not used for over a week as they will be sitting in stagnant water.

Optional Add-on

Ice Maker Connection Kit (Model# ICEK)

The iSpring ICEK can be purchased separately to feed water to your refrigerator for crystal clear ice cubes and great tasting water. It can be easily installed to connect the US31 system to the ice maker or water dispenser of your fridge.

Tubing (Model# T14B or T14W)

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

Top Mount Faucet Installation Kit (Model# AIG1)

A US patent tool-free product for countertop drinking water 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 Standard Limited Warranty (End-Users Only)

In order to be eligible for this warranty, the end-user must register at www.123filter.com.

For all water filtration systems, and upon registration by the end-user, iSpring Water Systems, LLC (iSpring) warrants for a one year from the date of purchase that the product is free of defects in materials and workmanship and that it will function for the duration of the warranty according to its specifications (the "Limited Warranty"). EXCEPT FOR THIS LIMITED WARRANTY, ISPRING EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ANY WARRANTIES OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. iSpring has no liability for any defect or deterioration which results from the improper installation, service, repair or use of the product. End-user's sole and exclusive remedy for any breach of the Limited Warranty shall be repair or replacement, at iSpring's option and expense. This warranty is only provided to end-users and only applies to products purchased directly from an authorized iSpring dealer or reseller.

However, we do not have the order information from websites other than 123Filter.com (Amazon, Home Depot, etc.), so please be sure to fill in that information upon registration of your system. If you have any questions or concerns about your product, please do not hesitate to call or email us, or put it in the notes/comments upon your warranty registration. Your satisfaction is our business!

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

Warranty Registration Form

Name _____ Order# _____

Email _____ Phone _____

Address _____

City _____ State _____ Zip Code _____

Model #/ Serial Number

_____

Purchased at (e.g. Amazon, Home Depot)

_____

iSpring Water Systems, LLC
2480 Industrial Park Blvd, Cumming, GA 30041
678-261-7611

Plumber's information (Optional)

To best serve our customers, we'd like to recommend good plumbers throughout the USA. If you are happy with your installer, please provide their information so that we can pass it on as a courtesy.

Thank you!

Name of the plumbing company used to install your system:

_____

Phone #: (_____)-_____ or email : _____
of the technician.

Like our products?
Please show your support by writing a product review on the marketplace where you make your purchase. Even just a quick statement means a lot to us.

Thank you!

iSpringFilter.com

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

support@123filter.com

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

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