iSpring RCB3P

iSpring RCB3P Tankless Reverse Osmosis Filtration System User Manual

Model: **RCB3P** | Brand: **iSpring**

1. Introduction

The iSpring RCB3P Tankless Reverse Osmosis Filtration System is designed to provide high-quality purified water for residential and light commercial applications. This system effectively removes up to 99% of over 1,000 contaminants, including PFAS, lead, chlorine, fluoride, arsenic, asbestos, calcium, sodium, and more, ensuring clean and refreshing drinking water. Its tankless design, coupled with a built-in booster pump, offers a high production rate of up to 300 gallons per day and an efficient 1.5:1 pure to drain ratio.

Figure 1: iSpring RCB3P Tankless Reverse Osmosis Filtration System

2. Safety Information

Before beginning installation or operation, please review the following safety precautions:

- **Water Pressure:** Ensure the incoming water pressure is between 25 psi and 90 psi. If your water pressure exceeds 90 psi, a pressure regulator may be required.
- **Indoor Use:** This product is designed for indoor use only. Do not install outdoors or in areas exposed to freezing temperatures.
- **Power Outlet:** The system requires a standard power outlet for the booster pump. Ensure the outlet is properly grounded.
- **Operating Temperature:** The system's operating temperature range is 40°F to 100°F (4°C to 38°C).
- **Wastewater Drain:** A drainpipe is required for wastewater discharge. Ensure proper connection to prevent flooding.
- **Drilling:** Faucet installation may require drilling a hole into your sink or countertop. Exercise caution and use appropriate safety gear.

3. Package Contents

Verify that all components are included in your package:

- Reverse Osmosis System Unit
- Pre-filters (Sediment, GAC, CTO)
- RO Membranes
- Post Carbon Filter
- Drinking Water Faucet
- Feed Water Adapter
- Leak Stop Valve
- Drain Saddle
- Housing Wrench
- Tubing (various sizes)

4. Required Tools

Gather the following tools before starting installation:

- Flashlight
- Spanner Wrench
- Power Drill
- Towels
- Utility Knife

5. Installation

5.1. Feed Water Adapter Installation

The feed water adapter connects the system to your cold water supply. It fits common 1/2-inch and 3/8-inch connectors. If you have a different size fitting, a converter will be needed.

1. Turn off the cold water supply valve under your sink.
2. Open the connected faucet to drain any air and water from the connector hose.
3. Unscrew the connector hose from the cold water supply valve. Have a towel ready to catch any excess water.
4. Ensure the O-ring is properly seated inside the feed water adapter.
5. Install the feed water adapter to the cold water supply valve and tighten it with a wrench.
6. Reinstall the connector hose to the feed water adapter and tighten it with a wrench.
7. Turn the feed water valve on the adapter to the OFF position.
8. Insert the 3/8-inch tubing (usually red) 1/2 inch deep into the quick connect fitting on the adapter.
9. Insert a C-clip to lock the tubing in place.

5.2. Drain Saddle Installation

The RO system requires a drainpipe for wastewater. A drain saddle is used to connect the drain tube to a drainpipe.

1. Choose a spot on the drainpipe that is convenient for installing the drain saddle, preferably a horizontal pipe to minimize dripping sound.
2. Drill a 1/4-inch hole into the drainpipe.
3. Paste the seal pad around the hole to prevent leaks.
4. Cut the end of the 1/4-inch tubing tip at a 45-degree angle.
5. Insert the tubing through the drain saddle into the drainpipe.
6. Install the backplate and tighten the two screws with hex nuts while the tubing remains in the hole.
7. Pull the tubing lightly to ensure it is secure.

5.3. RO Drinking Faucet Installation (Optional)

Depending on your system's usage, you may need a dispensing faucet if not connecting to a machine or device. The included faucet offers three installation options:

Option 1: Bottom-Mount Kit

This is a standard installation method where the faucet is secured from underneath the sink.

1. Choose a suitable, flat surface on the sink or countertop. If no pre-existing hole is available, drill a 1/2-inch to 1 1/2-inch diameter hole.
2. Clean and dry the area around the sinkhole.
3. Insert the front plate and the rubber washer onto the faucet stem.
4. Insert the faucet into the faucet hole.

5. From under the sink, insert the rubber washer, followed by the wing nut, onto the faucet stem. Tighten the wing nut to secure the faucet.
6. Insert the 1/4-inch tubing into the quick-connect fitting 1/2 inch deep.
7. Insert a C-clip to secure the tubing in place.

Option 2: Top-Mount Kit

This kit allows for installation of a standard drinking faucet on the countertop without needing to reach under the sink. It requires a 3/4-inch to 1 1/4-inch faucet hole.

1. Clean and dry the area around the faucet hole.
2. Insert the front plate through the faucet stem and the top-mount plate with the rubber side up.
3. Install the metal nut on the faucet stem below the plate.
4. Insert the 1/4-inch tubing into the quick-connect fitting 1/2 inch deep.
5. Insert a C-clip to secure the tubing in place.
6. Connect the quick-connect fitting to the faucet stem. Secure the fitting with a C-clip.
7. Lift and tilt the plate. Insert the tubing, fitting, faucet stem, and plate into the hole.
8. Let go of the plate. It will drop and latch onto the metal nut via the triangular grooves on both sides.
9. Lift the faucet body to secure the plate and nut. Tighten the faucet by turning it clockwise.

Option 3: Faucet Bracket

A faucet bracket is used when the faucet cannot be installed on the sink or countertop and needs to be mounted on a wall or a door. The bracket fits 1/4-inch or smaller screws, and a screw anchor is recommended if installing it on a drywall.

1. Find a desired location to install the bracket.
2. Mark the 3 mounting screw positions with the bracket on the wall surface.
3. Pre-drill the marked holes with a drill bit smaller than the mounting screws.
4. Install the bracket to the surface with mounting screws.
5. Ensure the bracket is steady.
6. Install the faucet to the bracket according to the installation instructions provided with the bracket.

Figure 2: Quick and Easy Faucet Setup

5.4. Reverse Osmosis Membrane Installation

The RO membranes are crucial for filtration. All systems are tested with pressurized water flow, so some water residue may be present.

1. Disconnect the quick-connect fitting on the membrane housing cap.
2. Unscrew the cap by turning it counterclockwise using the housing wrench.
3. Unwrap and insert the membrane into the housing, ensuring it is aligned.
4. Check that the membrane housing O-ring and housing cap O-ring are correctly seated.
5. Screw the cap back onto the housing. Use the housing wrench to tighten the cap with another quarter to half turn. **Do not overtighten**, as it can cause leaks and make future filter replacement difficult.
6. Connect the push fitting back to the membrane housing cap.
7. Repeat these steps to install the remaining two membranes.

5.5. Pre-filter Wash

Pre-filters are positioned in front of the RO membrane. Performing a pre-filter wash is recommended every

time you install or replace pre-filters to prolong membrane service life and maximize system performance.

1. Unscrew Stage 1, 2, and 3 filter housings.
2. Take out and unwrap all the filters.
3. Insert the filters back into their housing and ensure the housing O-rings are properly seated to prevent leaks.
4. Twist the housing counterclockwise onto the housing caps. Using the housing wrench, tighten the housing another 1/4 to 1/2 of a turn. **Do not overtighten**.
5. Remove the C-clip and insert the 3/8-inch tubing from the feed water adapter to the system water inlet fitting. Then insert the C-clip to lock the tubing in place.
6. Remove the C-clip and remove the tubing from the first RO membrane housing cap.
7. Turn on the cold water supply valve and slowly turn on the feed water valve.
8. Catch water from the tubing with a bucket. Allow water to flush the pre-filters until it runs clear.

Figure 3: RCB3P Filtration Process

5.6. System Installation (Connecting Components)

This section outlines the final connections for the system.

1. Reconnect the tubing back to the membrane housing cap. Secure the fitting with a C-clip.
2. Remove the C-clip on the wastewater port. Connect the tubing from the drain saddle to the system wastewater port. Insert the C-clip to lock the tubing in place.
3. Connect the 1/4-inch tubing from your machine, device, or the drinking faucet to the post-carbon filter. Insert the C-clip to lock the tubing in place.
4. To install an optional water storage tank, connect a tubing from the water storage tank to the post-carbon filter T-fitting.

5.7. Leak Stop Valve Installation

The leak stop valve automatically shuts off the inlet water to the system when it detects a leak, effectively protecting against water damage. The valve is highly sensitive to water; install it with extra caution. The leak stop pad inside the valve will easily absorb water and expand, so it must be replaced every time it comes into contact with water.

1. Find a dry and flat spot under the sink, close to the system, to place the leak stop valve.
2. Measure and cut the feed water tubing. Catch any residual water with a towel. If you prefer not to cut the tubing, use an additional piece for the connection.
3. Connect the tubing from the feed water valve to the leak stop valve's inlet port.
4. Connect the remaining tubing from the system inlet to the leak stop valve's outlet port. Please ensure all tubes are inserted 1/2 inch deep into the fittings.

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Video 1: Official iSpring installation guide for the RCB3P series RO water filter system, detailing step-by-step setup procedures.

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Video 2: A short instructional video demonstrating the correct method to connect and disconnect quick connect fittings used in iSpring water systems.

6. System Startup

1. Plug the system into a power outlet. The booster pump will turn on automatically when water flows through.
2. If the system has a water tank, ensure the tank valve is in the "closed" position.
3. Turn on the feed water valve and carefully check all connections for leaks. Fix any leaks before proceeding.
4. Turn on the machine, device, or drinking faucet to purge out all the air. The water will start to purge within a few minutes.
5. Let the water run for at least 10 minutes to drain residual materials from the membrane and filters. Once the water is clear, your system is ready for use.
6. If the system is connected to a water storage tank, shut off the machine, device, or drinking faucet and turn on the tank valve to fill the tank. The water storage tank usually takes about 1 hour to fill a standard 4-gallon tank.
7. **Important:** Do not use the first tank of water after the tank is full. Drain out the tank twice before drinking any water from a new water storage tank.

7. Operating Instructions

Once installed and flushed, the iSpring RCB3P system operates automatically. The booster pump will activate when water is drawn from the system, maintaining optimal pressure for efficient filtration. The tankless design provides on-demand purified water without the need for a storage tank, though an optional tank can be added for increased capacity.

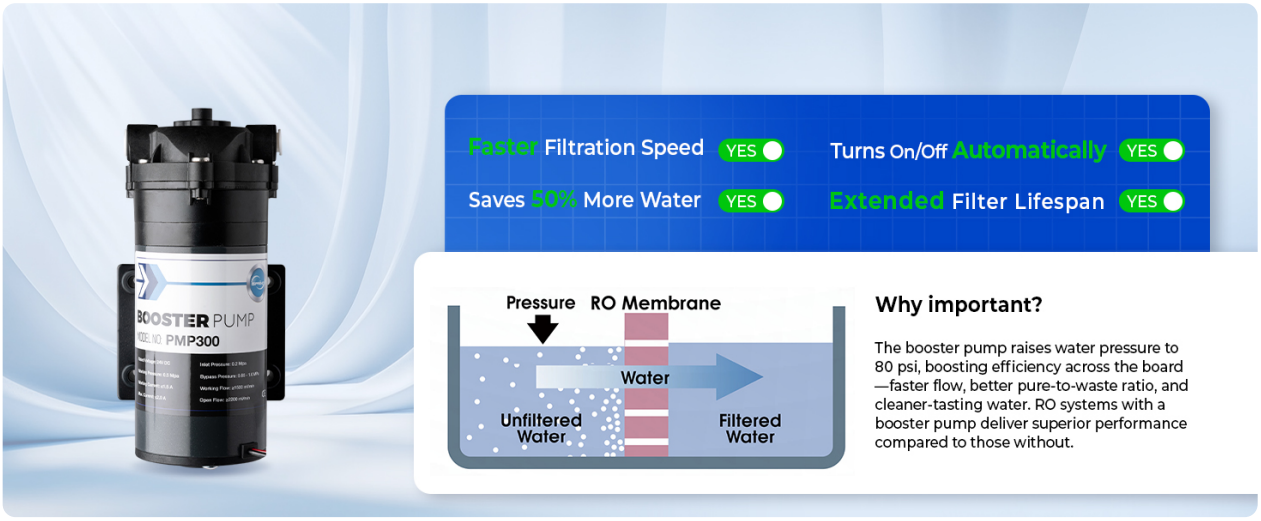


Figure 4: Booster Pump Benefits

8. Maintenance

Regular maintenance ensures optimal performance and longevity of your iSpring RCB3P system. Filter replacement is crucial for maintaining water quality.

8.1. Filter Replacement Schedule

- **PP Sediment Filter:** Replace every 6-12 months.
- **GAC Carbon Filter:** Replace every 6-12 months.
- **CTO Carbon Block Filter:** Replace every 6-12 months.
- **RO Membrane:** Replace every 2-3 years.
- **Post Carbon Filter:** Replace every 6-12 months.

Note: Filter lifespan may vary based on water quality and usage.

8.2. General Cleaning

Periodically wipe down the exterior of the system with a clean, damp cloth. Avoid using harsh chemicals or abrasive cleaners.

Figure 5: RCB3P 5-Stage Replacement Filter

9. Troubleshooting

If you encounter issues with your iSpring RCB3P system, refer to the following common problems and solutions:

- **No Water Flow:** Check the feed water supply valve, ensure the system is plugged in, and verify that all tubing connections are secure. Clogged pre-filters can also restrict flow.
- **Slow Water Production:** This can be caused by low incoming water pressure (ensure it's above 25 psi), clogged filters (especially the RO membrane), or a malfunctioning booster pump.
- **Unpleasant Taste or Odor:** This often indicates that the carbon filters (GAC, CTO, Post Carbon) need replacement. Ensure proper flushing after filter changes.
- **Leaks:** Immediately shut off the main water supply to the system. Check all quick-connect fittings and O-rings for proper seating and damage. Ensure the leak stop valve is functioning correctly.
- **High TDS in Purified Water:** This usually means the RO membrane needs replacement or is not functioning correctly. Ensure the system has been properly flushed after installation.

For persistent issues, please contact iSpring customer support.

10. Specifications

Feature	Specification
Brand	iSpring
Model Name	RCB3P
Product Dimensions	19.5"L x 11"W x 28"H
Item Weight	52 Pounds
Installation Type	Countertop (Under-Sink)
Power Source	AC (110 Volts)
Supported Water TDS Level Maximum	2000 PPM
Lower Temperature Rating	40 Degrees Fahrenheit
Upper Temperature Rating	100 Degrees Fahrenheit
Special Features	Filters, parts and tubing, Reduce TDS, Tankless

11. Warranty & Support

The iSpring RCB3P Tankless Reverse Osmosis Filtration System comes with a**1-year limited warranty**. iSpring is dedicated to providing high-quality drinking water solutions and offers expert customer support for all product inquiries. For assistance, please refer to the contact information provided in your product packaging or visit the official iSpring website.

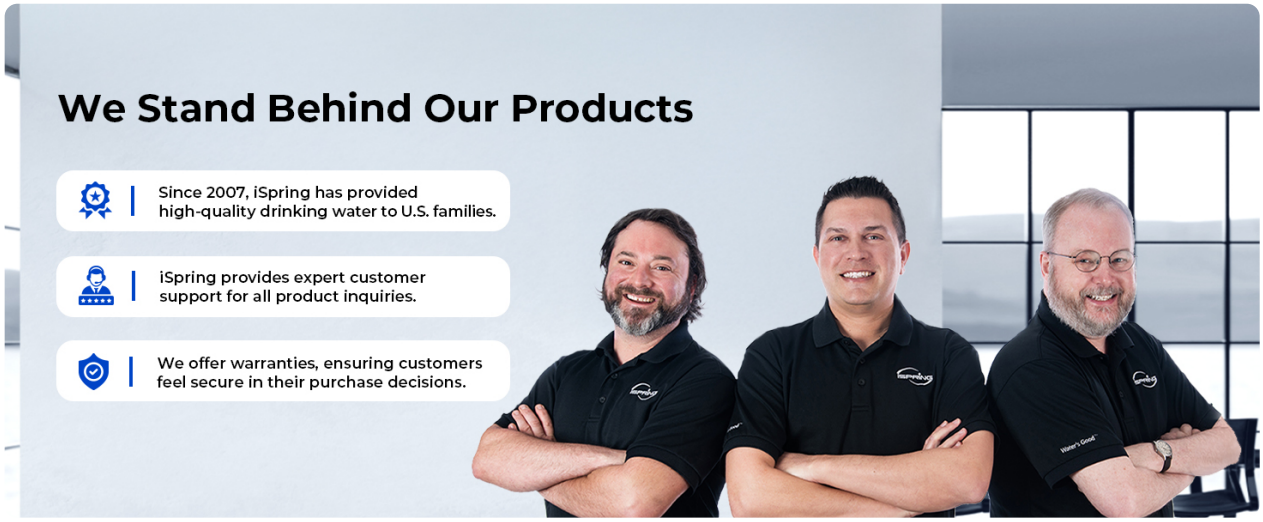
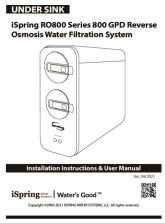
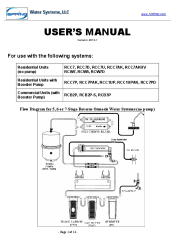


Figure 6: iSpring Customer Support Team

Related Documents - RCB3P

	[iSpring RCB3P Reverse Osmosis System User's Manual] This user's manual provides comprehensive instructions for the iSpring RCB3P Reverse Osmosis Water Filtration System, covering specifications, installation, operation, maintenance, and warranty information.
	[iSpring CRO1000 Reverse Osmosis System: Installation & Operating Manual] Comprehensive installation and operating manual for the iSpring CRO1000 Commercial Grade 1000 GPD Reverse Osmosis System. Learn about setup, features, maintenance, and troubleshooting for pure drinking water.
	[iSpring RO800 Series 800 GPD Reverse Osmosis Water Filtration System Installation and User Manual] This manual provides installation instructions and user guidance for the iSpring RO800 Series 800 GPD Reverse Osmosis Water Filtration System. It covers product introduction, system installation, usage, maintenance, and warranty information.
	[iSpring Reverse Osmosis Water Systems User Manual] Comprehensive user manual for iSpring Reverse Osmosis Water Systems, covering installation, operation, maintenance, troubleshooting, and warranty information for various models.
	[iSpring Reverse Osmosis Water Filtration Systems: Installation and Owner's Manual] Comprehensive guide for installing and operating iSpring Reverse Osmosis water filtration systems, covering setup, maintenance, and troubleshooting for optimal performance.
	[iSpring RO100 Reverse Osmosis Water Filtration System: Installation & Owner's Manual] Comprehensive installation instructions and owner's manual for the iSpring RO100 5-stage reverse osmosis water filtration system. Learn about setup, maintenance, troubleshooting, and warranty.