



## PARTS KIT



### FAUCET DIVERTER VALVE ADAPTER

- Easy installation, attaches to the majority of kitchen faucets. Adapter ring included for faucets the valve does not fit. Non-permanent.
- Built in valve switches water flow between faucet use and RO system.



### GARDEN HOSE/UTILITY SINK ADAPTER

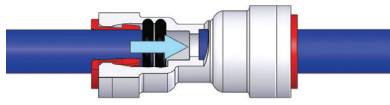
- Provides a quick, non-permanent connection to a hose, laundry sink faucet, or fittings with similar threads.
- Provides a quick connect fitting for the RO/DI tubing.



# SYSTEM SET-UP

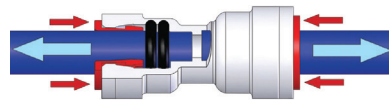
## 1 PUSH CONNECT FITTINGS

It may be necessary to connect or remove RO tubing from fittings. Illustrations below show how to perform these actions.



### Connect Push Connect Tubing

Firmly push one end of tube into fitting. It's important to push tubing all the way into fitting for a complete seal.



### Remove Push Connect Tubing

Hold round retention ring tightly against fitting then pull tubing away while twisting. Tubing should slowly release.

## 2 TURN WATER SUPPLY OFF AT CONNECTION POINT

**Hot water should never be used** with the RO system as it can damage the RO membrane and may also contain additional contaminants from the heater. For this reason, only the **cold water** supply should be used.

## 3 CHOOSE APPROPRIATE SOURCE WATER ADAPTER FROM PARTS KIT

### Faucet Diverter Valve Adapter

1. Remove the compression nut and slide over red tubing
2. Connect red tube to barbed connection on faucet adapter, and thread the compression nut back onto the faucet adapter
3. Ensure rubber gasket is seated inside of the female faucet threads of the valve body.
4. Thread the adapter onto the faucet threads of the water source.

\*It may be necessary to use one of the included thread adapter rings, depending on your faucet type.



### Garden Hose/Utility Sink Adapter

1. Thread the fitting onto the garden hose threads of the water source
2. Insert the red RO tubing firmly into the push connect fitting of the adapter



## 4 INSTALL RO SYSTEM

**RED Tubing** = Input from home water line | **BLACK Tubing** = Waste water | **BLUE Tubing** = Purified product water

1. Attach home water source to **RED** line of the RO system using any of the included source water adapters.
2. Direct **BLUE** line to a suitable collection/storage container. This is the output line for the purified/filtered water.
3. Guide **BLACK** line down a drain. This is referred to as waste or brine water and should be discarded.

## 5 PRIME RO SYSTEM

The RO/DI unit must be run for a minimum of 1 hour before using product water. Ensure that all fittings and hoses are correctly hooked up. This process should be repeated any time membranes are replaced.

1. Turn on household water supply
2. Allow the system to run for at least 1-2 hours and discard all water produced. Fine particles from the carbon block(s) as well as preservatives from the RO membrane may be released during this time. This is a good time to check all fittings and connections for leaks.
3. Your system is now ready for use. During the first 24 hours of operation the TDS may be higher than normal as fine particles and other manufacturing preservatives are released from the filters.

## ★ FOR OPTIMAL RESULTS

### Water Pressure

Minimum operating water pressure is 50psi for 75/100 GPD systems and 65psi for 150/200 GPD water saver systems. If operating pressure is below the recommended threshold, a reduction in water production and a lower rejection rate may be experienced. Consider adding a booster pump kit to increase performance. Ratio of product to waste water will vary based on pressure and system configuration. Typical product/waste ratio is 1:3 for 75/100 GPD systems and 1:1.5 for 150/200 GPD Water Saver Systems.

### Membrane Flush

Plus Systems include an integrated membrane flush valve. Flushing the membrane for 1-2 minutes before and after each use is recommend and may extend the useful life of the membrane. If water production needs are infrequent (less than every two weeks), it is still advisable to operate the unit periodically to flush the system of stagnant water.

# MAINTENANCE & UPGRADES

## FILTER MAINTENANCE

Filter life depends on many different factors including the volume of water production and quality of the source water.

### REPLACEMENT FILTER KIT

4 Stage RO/DI Replacement Filter Kit (SKU 210142)

### SEDIMENT FILTER

Sediment filters should be changed when clogged with dirt and sediment. Identify when it's exhausted by monitoring the water pressure feeding the membrane. As the filter gets clogged, it reduces the pressure feeding the membrane and reduces system performance.



For systems that don't include a pressure gauge, change every six months, or when the filter is visibly dirty and there is a noticeable drop in water production.

Purtrix 5 Micron Depth Sediment Filter (SKU 200053)

### CARBON BLOCK

BRS VOC and Chlorine Carbon Blocks were developed to maximize reduction of both chlorine and volatile organic compounds (VOC's). Manufactured using high performance carbon combined with new binder technology that maximizes the surface area to improve performance, making it the highest performing 5 micron carbon block in the industry. Will remove Chlorine from source water for up to 15,000 gallons. Replace every six months or as needed based on chlorine break-through. The periodic use of a chlorine test is recommended.



BRS 5 Micron VOC Carbon Block (SKU 208658)

### COLOR CHANGING DI RESIN

DI resin removes the majority of elements that passed through the RO membrane and is the final water polish. It's color indicating and turns from blue/black to golden brown from the bottom up as it depletes. Replace when cartridge nears complete color change (approximately 90%). Using DI Resin to complete exhaustion can lead to increased TDS in product water. The color change is an *indicator* of the depletion of DI resin and certain water parameters could interfere with the color changing process.



A TDS meter is a more accurate measurement of DI resin performance and should be used to identify when the resin needs to be replaced. If the system has a TDS meter, use it to confirm the DI resin cartridge has been exhausted. "Out" monitors DI resin performance and if it measures anything higher than zero, it's time to replace the resin. Remove the cartridge from the RO canister and discard the exhausted resin. Reload the cartridge with fresh DI resin.

Color Changing DI Resin (SKU 200123)

### RO MEMBRANE

The RO membrane is located in the white cylinder on top of the filter/RO system and should be replaced approximately every three years or when the TDS reading from the membrane product line begins to rise.



Dow FilmTec 75 GPD RO Membrane (SKU 200051)

## PLUS SYSTEM FEATURES

Get the most out of your RO/DI system and keep tabs on filter performance with these helpful features.

### TDS METER

Verify the purity of water, and measure membrane and DI resin performance through the measurement of total dissolved solids (TDS) of the water at specific points in the RO/DI System.



Dual Inline TDS Meter DM-1 (SKU 200031)

### PRESSURE GAUGE

This handy gauge provides visibility of one of the most critical components of RO membrane performance. It is important to maintain proper operating pressure, and a drop in pressure can indicate that it's time to change out clogged filters.



Oil Filled Pressure Gauge (SKU 200215)

### MEMBRANE FLUSH VALVE

The Membrane Flush Valve has an integrated flow restrictor with a bypass valve and provides a convenient way to manually flush the membrane. Regular use helps to rinse the membrane of impurity buildup and may extend the life of the membrane.



550mL Membrane Flush Kit (SKU 208852)

# FREQUENTLY ASKED QUESTIONS

**Q: Is it normal for the DI stage to not fill completely with water?**

A: Yes, air gets trapped in the top of the canister and has no way to escape. This does not interfere with system performance, but if desired open the canister slightly while the unit is running to allow the air to escape. Re-tighten the canister when the water reaches the top.

**Q: Is it normal for TDS to be higher when the system is first turned on?**

A: Yes, this is called "TDS creep" and is normal on all RO systems. Allow the RO system to run for 10 minutes before testing TDS.

**Q: Is it okay to leave water in the canisters between uses?**

A: Yes, it is advised to keep them wet between uses, and store in a cool, dark location away from environmental extremes. Exposure to sunlight or freezing can cause damage to the filters and canisters and should be avoided.

**Q: How often should I use the flush kit?**

A: We suggest flushing the membrane for a few minutes before and after use. There is an auto flush kit available for a more automated solution. (SKU 200209 or 200208)

**Q: My pressure gauge reads less than 50 psi, do I need a booster pump?**

A: The membrane will not perform "optimally" below recommended pressure, but the reduced performance may not be substantial enough to warrant a booster pump. As it approaches 35 psi the performance drop will become significant and you will likely want to purchase a booster pump. (SKU 200216)

**Q: What is a normal TDS reading?**

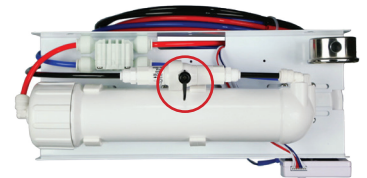
A: TDS from most tap water will be in the 100-300 range but many sources can be well over 500. Normal product water from RO membrane will be around 98% of tap water's TDS under optimal conditions. Tap water with a TDS of 300 should be around six coming out of the membrane. Product water emitted from the DI resin canister should be zero. Operate the system for ten minutes prior to testing for TDS, readings will always be higher when the system is turned on initially.

**Q: My DI resin seems to be depleting quickly, what's wrong?**

A: Usable lifespan of the DI resin cartridge will vary widely. Feeding the resin from the RO membrane with one TDS will have approximately five times the usable life as feeding it with five TDS. Outside of that, carbon dioxide in your water supply or a poorly performing RO membrane are the biggest causes of early DI exhaustion.

**Q: I know I have good pressure, but all of the water is rushing down the drain and I'm barely getting any product water; what's going on?**

A: It's not uncommon to accidentally leave the flush valve in the open/flush position. For normal water production, the valve should be the closed/perpendicular position, as illustrated. Only during membrane flush should the valve be parallel with the line.



**Q: My system doesn't seem to be making a lot of water, what's wrong?**

A: Keep in mind that 75 GPD is approximately three gallons an hour. The flow will be slow and close to a constant trickle. If it is slower than that, it's almost always because the flush kit is open or the home's water pressure is low and there is insufficient pressure feeding the membrane.

**Q: Can I reduce the amount of waste water my system produces?**

A: The waste water is a critical component of a properly functioning RO system. The best way to reduce the volume of waste water to product water ratio is to install a second membrane\* in series which will effectively cut this ratio in half. (\*150 GPD Water Saver Upgrade Kit, SKU 200432 or 200 GPD Water Saver Upgrade Kit, SKU 211528)



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