RESIDENTIAL R.O. INSTALLATION TIPS!

1) Always use extra length tubing to make your connections, you may want to move the unit to replace the filters in the future.

2) Read the push -in fitting material, make sure you push the tube completely in. Page 2

3) If a fitting is not push-in, then use moderate pressure to snug up the fittings. Modern fittings do not rely on brute strength. They rely on Teflon tape, o-rings or gaskets to make the seal (just snug the fitting to make it secure) Do not over tighten, plastic fittings that have been screwed on to tightly are subject to splitting. Stressed fittings may take days or even months to split and leak .

4) Please, Please, Please read the installation guide before installing the unit. This guide will answer a lot of your basic R.O. questions.

5) Ok ! You installed it without reading the guide. Please read the guide before calling or e-mailing us with any questions or problems.

6) Remember a 50GPD system makes a maximum 2 Gallons per hour, a slow trickle. Yes more water goes to drain than is made. All RO systems send water to drain while operating.

Thanks,

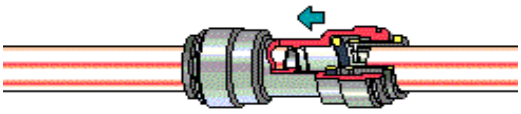
Walter The H2O Guru

By the way this is the automatic shut off valve ASOV

How to Push in Fittings

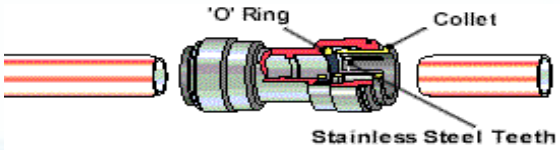
Cut tube square

Cut the tube square. It is essential that the outside diameter be free of score marks and that burrs and sharp edges be removed before inserting into fitting.



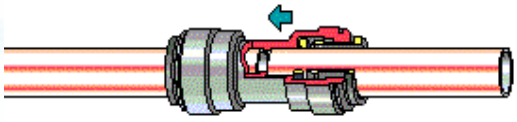
Insert tube

Fittings grips before it seals. Make sure tube is pushed in the tube stop



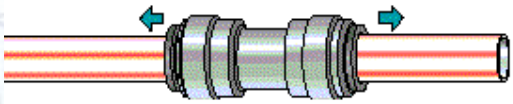
Push up to tube stop

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

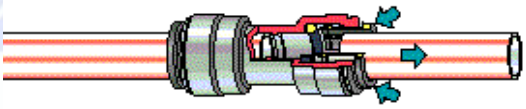
Pull on the tube to check it is secure. It is a good practice to test the system prior to considering your handy work is done. The system doesn't full pressurize until the tank is full.



Disconnecting

Push in Collet and remove tube

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



If you tube will not stay in check to see if you have removed the little white collet.

The fitting could have a blue tube in it which is a dust or dirt cap that needs to be removed. Before you can remove or insert a tube you will need to remove small blue retaining clip

INSTALLATION GUIDE FOR THE INSTALLATION OF RESIDENTIAL REVERSE OSMOSIS SYSTEMS

Please read this guide it is also a basic lesson in Reverse Osmosis systems

This is a generic guide. Our intent is to instruct you about the installation of the common components of these systems.

Prior to cutting the tubing to length, make sure it is long enough to allow you to move the unit for filter changing.

You need only simple tools and patience to complete a leak free reliable installation of your system.

Please exercise caution! You are in charge here.

1) Turn off electrical power near the work area. Check to make certain that you will not encounter any electrical wires or outlets. If you are unsure turn the power off to the work area.

2) Just look around before you drill a hole or pull on something. Will you have enough light to see what you are doing? Our equipment is marketed throughout the world, it may or may not meet local code requirements.

3) As is always the case, you should comply with local codes. Be prepared for spills with some rags and a small bucket. Turn off the water supply where you are working until you have finished the installation. Then turn it on slowly and leave it partially closed, until you verify that you have no leaks.

I like to start the installation of a drinking water system with the Goose neck faucet.

4) The place to start is where the faucet will be. You need to consider looks, function, and space requirements. The area should be flat for at least an inch around the faucet. The location must allow for adequate space underneath the sink for the faucet as well as room for you to make and tighten the connection.

You will need to drill a hole in the sink.

5) I prefer to use a punch to make a dent for starting the drill.

5a) If you do not have a punch use a 1/8 to 1/4 inch drill bit and slowly with light to moderate pressure to start a small hole. Do not push too hard or the drill bit will skid and possibly scratch the sink.

6)The hole size varies with the style of a faucet (7/16 - 9/16) of an inch being the range. I like to use a battery powered drill, see #1. They are safer and they turn more slowly than power drills. (If you do use a power drill make sure it is properly grounded and in good condition.) Slow speed steady light pressure will give you the best results. (If you want to buy a great tool get a step bit). They drill various size holes with the same bit. Don't rush it or push too hard on the drill.

7) Now that you have drilled the hole mount the faucet.

8) Now attach enough tubing to the faucet bottom to reach the rest of the equipment. Cut the tube, leave enough for moving the system for filter changes.

9) The faucet will connect to the system at the final filter. That filter will have an arrow on it. 9a) That arrow will point to the connection for the faucet. The other side of the filter is connected to the tank pressure tank. I will cover that later, when we discuss the pressure tank.

10) Next I install the supply valve. ***(Please Note: The supply valve is not designed to work on braided hose.If you home has braided hose you will need an adaptor. This part is available from us or at your local hardware store.The adaptor is a watts brass fitting #BPAV-664)*** It has

a couple of parts the valve assembly which includes small rubber washer on the under side of the valve, a small aluminum block with two concave sides and a brass screw. (See photo left) The valve mounts on a cold water supply tube. (See photo right)

Never install this valve in front of the stop valve under your sink. This valve is to be installed on the supply tube between the stop valve and the sink faucet . The stop valve is the valve that allows you to turn off the water.

If you are not sure which supply tube is cold, go up to the faucet and turn on the hot water for a couple of minutes, turn off the hot water, go back under the sink and feel the supply tubes. The hot water supply tube will be warmer than the cold

water supply tube. The cold water supply tube can be either 3/8 or ½ inch. If you are not sure about your pipe than just lay the aluminum piece next to the pipe and use the concave side that fits the profile best. Pick a spot on the supply tube that is a couple of inches away from any other valve and mount the valve. Be careful not to interfere with the travel of the spray wand hose, if your sink is equipped with one. Just mount the valve securely not too tight. You just snug up the brass screw against the aluminum block that is fitted against the tube. The valve should not wiggle or turn when properly secured. (very snug do not over tighten). We will return to this valve later.

11) The drain saddle. This drain water is the life blood of the system. If the system cannot drain correctly, it will not function for long. The system is self flushing and the drain should never be blocked or restricted. This is really simple. The drain saddle is two plastic parts that clamp over the waste water plumbing of your home. There is small rubber foam washer that needs to be attached to the inside of the connection on one piece of the drain saddle. Now clamp the drain saddle in place 3-5" above the top of the bend in the P Trap. (see photo left) Again, just snug the drain saddle in place. Do not over tighten. Now drill a 1/8 to 1/4 inch hole thru the fitting hole thru one side of the waste pipe. (see photo right) Do not drill into the back side of the waste pipe. Simple wasn't it? Connect enough tubing to the drain saddle to reach the unit 's drain connection.

Almost done! Really the hard part is over.

12) Mount the system to the cabinet with care. Do not drill or screw into something on the back side of the cabinet. Most cabinets today are made of particle board so do not hang the system. Just place it on the cabinet floor and secure it. Particle board is famous for coming apart and dropping the system.

13) Locate the pressure tank connection, the pressure tank and the tank ball valve. The tank has only one plumbing connection, it is a threaded fitting at the top or side of the tank.
That connection need's Teflon tape applied to the threads, prior to attaching the tank ball valve.
How can this tank work with only one connection for the inlet and the outlet? Think

about a balloon you blow it up and if you release it the air rushes back out the same opening.

14) Once you have mounted the tank ball valve, connect tubing to it and connect the other end to the open end of the final filter. This is the small filter laying down along side the membrane housing.
This is also the filter that is connected to the faucet. (see 9a)

15) Now locate the waste line of the R.O. unit. The waste line has a flow restriction device on it. The flow restriction device looks like this.

It also has an arrow on it. Please check that the arrow is pointing toward the drain saddle, water flowing to drain away from the machine. **Never impede, restrict or stop the waste water flow.** Your system automatically controls the waste water.

16) Now locate the supply connection. It is usually an elbow shaped fitting that is located on one end of the unit. It is screwed into the first vertical filter unit. The first filter is always the sediment filter. The water flows thru this filter first then on to the rest of the system. Got it? Good connect some tubing to this fitting then to the supply valve.

Now we need to return to the supply valve. (see # 10) It is a self piercing valve. It has a needle in it that will poke a hole in the supply tube. Screwing the valve tee handle to the right will drive the needle into the tube. Slow steady pressure will work better than rushing it. Do not force it. Once you have bottomed out the needle turning the tee handle to the left will start the flow of water. At first you want to open the valve just a little bit, and check for leaks. Ok let the water run for a few minutes and open the valve fully. (It will not fall out unless you really over do it and manage to unscrew the cap nut as well.)

Your installation is complete But you are not done yet!

17) You need to check on the system after about 4-5 minutes.

18) Check it agin in another fifteen minutes and again over the next couple of hours. Why the system is filling and it may take three to six hours fo the last part of the system to fill.

19) You will not be aware of any leak in that part of the system until it fills.

20) once the system has filled open the faucet and leave it open until the water slows to a trickle or small stream.

21) Now close the faucet and your system will be ready for use when it refills. Fill time is dependant on water pressure, temperature and membrane size.

It is your house. Use care and diligence in checking for leaks.

Remember to push the tubing completely into the fitting see push-in fittings page.

Your membranes output was determined using 77 degree water at 50 pounds of pressure per square inch. If you have 50 degree water you can expect 60% of the rating. If you water pressure is lower than 50psi your production will be lower.

Your system and it's care:
Once installed your system should not produce any vibration or noise. In some instances if you listen for it you may hear water running to drain. It also appears not to be making any water, water is running to drain but none is being made. This is normal the system needs to displace a lot of air and the membrane needs to be rinsed of the preservation chemical it was stored in. Please be patient. At least ten to twenty minutes before you will get some water at the R.O. faucet.
Remember to test or verify the operation of your unit. Also, empty the contents of the storage tank every couple of weeks. Just flip the faucet handle up or open it until the water becomes a small stream.

Remember the blue plastic dust caps are to be removed according to the instructions on the push in fitting page: " Push in Collet and remove tube"

Typical questions:

How do I know when to change the filters?
The sediment filter traps dirt and will become clogged. When it becomes clogged, the system production will slow down. This is how you determine when to change it. You may go all year.

The Carbon block filters have a very high capacity for chemical removal. The average family of four on average city water can go all year . Please change your filters at least annually. Failure to maintain the filters will result in poor quality water or in the failure of the membrane.

The Membranes typically provides (1-4) years of service. It is a thin film composite membrane and is not subject to bacterial attack. It can be damaged by exposure to chlorine. Once damaged it has to be replaced. Many water chemistry matters go into membrane life and we cannot predict how your membrane will preform or how long it will last.

The final filter sees extremely good quality water and lots of our customers go (2) years between changes. I prefer you change it annually.

The system will on occasion trap air in it when first installed. This trapped air will be absorbed by the water in a couple of days.

Sometimes trapped air prevents the automatic shut off valve from working correctly. This trapped air will cause water to go to drain nonstop. Do not worry it's not that much water and it will stop in either hours or at most three days.

System production may be slow during the first (96) hours. But by that time it should be as good as it will get. Please wait (96) hours prior to calling with production questions.

Your system may run water to drain for the first several hours after the unit is installed. Once you purge the system it will run agin for a long time. Once the system is full, the drain water will stop running. When you use water again, the drain water will run agin but only long enough to replenish the water used.

Thanks for reading our guide.