Nano Filtration System Installation Instructions

Unpack Nano System and check for a brown box with the Nano Membranes, installation kit and accessory faucet (faucet will be included only if it is being installed without an ionizer). The parts in this installation kit will allow you to do a standard under the counter installation with the most common sizes of cold water line connections (1/2" and 3/8").

Before you start the installation process make sure that you have:

- Pliers
- Phillips head screw driver
- Scissors or box cutter
- Drill and ¼" drill bit
- Towels, paper towels and/or trays to collect and dry any excess water from the tubes

If you are installing a Nano 1, it is important to make sure that you have an accessible and available electrical outlet under the sink as you might already have a garbage disposal and/or a dishwasher plugged in. If those are the only available power outlets we recommend that you use a power strip surge protector to safely plug in the Nano.

Before starting the installation process you will want to install the Nano Membranes following these steps:

1- Turn the Nano so that you can see the back.
2- The two larger canisters will be the Nano Membrane housings.
3- Start by taking the top canister from the bracket.
4- Unscrew the compression nut that holds the tube on the side of the Cap. You should be able to do it by hand but if it is too tight you might want to use a pair of pliers.
5- Unscrew the cap from the housing.
6- Make sure your hands are well sanitized before handling the Nano Membranes or use rubber or latex gloves.
7- Take one of the Nano membranes and remove the plastic wrapping. There will be a label on the body of the membrane. You will want to try to remove it before installing the membrane.
8- Insert the membrane by the side with the two O-rings and push it in as far as it can go. The tip of the membrane should be leveled with the edge of the housing.
9- Use a little Vaseline or olive oil to lubricate the O-ring on the housing and screw the cap back on. Be very careful not to pinch the O-ring to prevent any leaks.
10- Insert the tube on the fitting as far as it goes and push down the compression nut. Screw compression nut back on to the fitting and hand tight. Give an extra ¼ of a turn with the pliers if needed.
11- Put canister back on the bracket.
12- Follow the same steps with the bottom canister for the second Nano Membrane.

Nano System Installation Steps:

1- Close cold water connection under the kitchen sink by turning the knob clockwise. Turn on the cold water on your sink faucet to make sure it is closed.
2- With a pair of pliers remove the fitting of the braided steel tube connected to the cold water shut off valve by turning it to the left. (If you have older plumbing under the sink and you have hard copper tubes: your plumber will need to modify them accordingly to fit the new height of the connection). Keep in mind that even if the shut off valve is closed there will be some water inside the tube and you will need to have a tray, paper towels or cloth to collect and/or dry any water that will come from the tube.
3- Take the tee diverter from the Nano installation Kit. You will notice that you have two different sizes, one is ½" and the other is 3/8" both with a ¼" quick connect. These are the most common sizes used in the US. If neither of these works for you, you might need to get an additional tee diverter for the size that your cold water line uses. Choose the corresponding size to your plumbing and screw it onto the top part of the cold water connection and hand tighten but be careful not to over tighten it. Now reconnect the braided steel tube, screwing it onto the top of the tee diverter (or reconnect the hard copper tube after it was properly modified to fit the new connection). Hand tighten and then use pliers to give an extra ¼ turn if necessary but make sure not to over tighten it.
4- Next, install the saddle drain. You will need the drill and the ¼" drill bit for this. It is important to have an idea of where the Nano will go to know which side of the sink drain the hole will be. The saddle drain is two separate pieces that wrap around the drain tube and it comes with two bolts, two nuts and a foam pad each. First, take the foam pad, remove the center of the foam pad and stick it to the side of the saddle drain that has the ¼" fitting. Take the two parts of the saddle drain and clamp them on the straight part of the sink drain tube. (DO NOT use the curved part or "trap" of the drain pipe.) Hold them in place by using the nuts and bolts included. Next, you will need to drill a hole right where the ¼" fitting is. Be careful not to go too far when drilling through, you don't want to drill both sides of the drain pipe. Also, if the fitting is a quick connect, you will want to be careful when drilling not to damage the internal O-ring with the drill bit because this will create a leak and you will need a new drain saddle.
5- At this point you will want to take the Nano and the tank and put them where they will be permanently placed to measure the lengths of tubes that you will use to connect all the different parts of the system. When measuring the lengths always make sure to give an extra couple of inches to each tube segment in case you need to make any modifications but make sure they are not so long that the tube will bend or kink creating some kind of water flow restriction or even brake the tube and create a leak. Also, take into consideration that you will need to do maintenance on the Nano and storage tank and you will need to have enough space to move everything around comfortably.
6- Now that you have all the proper tube lengths, you can start to connect the system. You will notice that there are some extra shut off valves included in the installation kits. These valves are recommended to be installed with some of the tubes as instructed. To do this all you need to do is choose where to cut the already measured length of tube and connect them to the fittings on

each end of the shut off valve. The fittings will be quick connect fittings and all you have to do is to push the tube in until it stops (should be about ¼" to 3/8" in). The place of the valve along the tube will not make a difference but try to make sure that it is accessible enough for the times you need to turn them on and off. You will also notice that you have a small bag with end stops that you need to save in order to cap the connections from the drain saddle in case you need to send your ionizer or Nano system in for service.

7- Start by connecting the tee diverter to the Nano's water inlet. This is one of the tubes where it is suggested to use a shut off valve. After installing the shut off valve, connect one end of the tube to the fitting of the tee diverter and the other end to the Nano's incoming water connection which is the fitting next to the blue/purple see through housing in the front of the Nano system.

8- Next take the tube that will connect the Nano's drain valve (electric Nano) or "Brine out" connection on the permeated pump (non-electric Nano) to the drain saddle fitting.

9- Now, take the shut off valve for the tank and install it on the inlet/outlet of the tank. Then connect the tube from the two ways fitting from the Nano (fitting connected to the inlet of the inline carbon filter usually on the left side of the cartridge) to the Nano tank's shut off valve. It is possible that the two fittings will be of different sizes. If this is the case you should have a reducer that will allow you to connect ¼" size tube to 3/8" size tube.

10- Finally, connect the tube that goes from the Nano's water outlet ("L" shape fitting on the inline taste and odor carbon filter outlet usually on the right side of the cartridge) to the accessory faucet or the ionizer's water inlet. If you are connecting the Nano to an ionizer then this will be another tube where you will want to connect an extra shut off valve. In addition, you will want to wait until after flushing the Nano system to connect this tube to the ionizer's water inlet.

11- The filters in the Nano system must be flushed. Again, it is very important to keep in mind that if you are installing the Nano with an ionizer you will want to do this flushing first and then connect the tube to the ionizer's water inlet. If you do not do this the carbon dust that is being flushed out from the filters might go in and through the ionizer and cause damages and this will void the warranty of the ionizer. These are the steps to follow to do the flush:

    a. If you have an ionizer, take the tube that is coming from the Nano's water outlet fitting (on the inline carbon filter) and secure the tube into the sink so that the tube will not become loose while flushing the filters. If the tube is not long enough you will want to use a bucket to collect the water that is being flushed out. If you are installing the Nano with an accessory faucet you can finish connecting the tube to the faucet and flush the filters through the faucet.

    b. If you have a Nano 1 (electric Nano), make sure that the black lever on the waste valve is on the closed position, which is the position that this lever should be at all times unless you are back flushing the Nano membranes. The Nano 2 with the permeated pump will not have a waste valve and you won't have to worry about this.

    c. Make sure that the shut off valve for the storage tank is closed; you do not want the carbon residues to go into the tank. This applies to both electric and non-electric Nanos.

    d. Plug the Nano system to the power outlet (If you have a Nano 2 you won't have to worry about this) and turn on the shut off valve for the cold water line under the sink. Water should start flowing through the system at this point.

e. If you have an accessory faucet turn on the water on the accessory faucet. It will take several seconds to completely fill up the Nano system and for the water to start coming out.
f. It is normal for the initial water to be very black and cloudy in appearance. Allow water to run through the filters for 10 minutes. Turn water off and let stand for 5 minutes. Then flush filters for 10 more minutes.
g. While the water is running through the system take the entire body of the Nano filter and tilt it on one leg at approximately a 45 degree angle. Hold it in this position for a minute or two and then tilt it up onto the other leg for the same amount of time. Then perform this same step tilting the Nano frontwards and backwards. This will assist in flushing the filters and purging the air out of.
h. After you have completed these steps, if you have a Nano 1 turn on the water once more and open the black lever on the waste water valve to flush out any larger carbon sediments that may have settled into the Nano membrane housings. Back flush the membranes for 5 minutes. Then return the black lever handle to its proper position, which will look closed. Turn off the water again.
i. Flushing the system will also help to test and make sure that all the connections are leak free. This is also good practice as you will need to repeat this flushing process when you replace filters.

12- If you don't have an ionizer, all you need to do now is to open the shut off valve for the storage tank if you are using one and allow it to fill up with water and then you can start using your filtered water.
13- If you have an ionizer, once you have properly flushed the Nano, make sure that you close the cold water line again and unplug from the power outlet (if it is an electric Nano). Connect the end of the tube to the ionizer's water inlet. This is another tube where you might want to connect one of the extra shut off valves if you have one available. Please make sure to refer to the ionizer's installation manual/instructions in case there are any additional parts that need to be installed on the incoming water line to the ionizer.
14- After connecting the Nano to the ionizer you can open the cold water shut off valve, plug back to the power outlet if you have an electric Nano and open the shut off valve for the storage tank. Allow the tank to fill up with water and then you can start enjoying your ionized water.