

OWNER'S MANUAL & INSTALLATION GUIDE

HomePlus Upflow Calcite Neutralizer Filters

highly effective and economical solution to boost pH

APPLICABLE MODELS: N-UF Series

PLEASE READ THIS MANUAL CAREFULLY BEFORE ATTEMPTING INSTALLATION. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY AFFECT THE PERFORMANCE OF YOUR SYSTEM, VOID YOUR WARRANTY, AND/OR RESULT IN PROPERTY DAMAGE.

IMPORTANT SAFETY SYMBOLS



Hazards or unsafe practices that may result in personal injury and/or severe property damage.



Hazards or unsafe practices that may cause operational problems with your water treatment system.

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GENERAL WARNINGS



Do not allow children or pets to play on or around the water filter.

Do not install or store this filter system where it will be exposed to freezing temperatures.

Do not tamper with controls.

Do not repair, replace, or attempt to service any part of the system unless specifically instructed to in this manual and you have the understanding, tools, and skills necessary to carry out the procedure.

Packing materials can be dangerous to children. Keep all packing material (plastic bags, polystyrene, boxes, etc.) well out of children's reach.

Individual components of this water treatment system, and the installed system, are heavy. Precautions should be taken to prevent personal injury or strain. Do not move heavy components without assistance if you are not physically capable of safely carrying out the procedure.

If the water treatment system is to be left unattended for an extended period of time (vacation, etc.), we strongly recommend that you turn off the water supply to the system, or the whole house, while you are away.

If your water pipes are metal (galvanized or copper), they may be used to ground electrical systems, appliances, or your phone line. If this is the case, be sure to install regulation ground clamps to the metal pipe on each side of the control valve and connect a jumper wire between the 2 clamps (#4 gauge solid copper wire recommended). Consult a certified electrician or plumber if you are unsure.

OPERATING CONDITIONS

The following chart provides guidance on the conditions required for successful operation of your system.



USE OF THIS EQUIPMENT OUTSIDE OF THESE OPERATING CONDITIONS MAY ADVERSELY AFFECT THE PERFORMANCE OF YOUR SYSTEM, RESULT IN SYSTEM DAMAGE INCLUDING WATER LEAKS AND CORRESPONDING PROPERTY DAMAGE, AND MAY VOID YOUR WARRANTY.

Minimum Water Pressure	20 PSI
Maximum Water Pressure	90 PSI*
Recommended Water Pressure	40-70 PSI
Water Temperature	36F to 100F (2 to 38C)
Minimum Air Temperature	32°F (0°C)**

* While the system is built to withstand pressures exceeding 90 PSI, if your water pressure is greater than 70 PSI, we recommend that you have a certified plumber install a pressure reducing valve ahead of the system.

** The system cannot be subjected to freezing conditions or severe damage to the system and your property could occur.



CONFIRM THAT YOUR WATER CONDITIONS MEET THE ABOVE SPECIFICATIONS BEFORE COMMENCING THE INSTALLATION PROCESS. IF IN DOUBT, CALL YOUR DEALER FOR ADVICE. INSTALLED UNITS CANNOT BE RETURNED.

INSTALLATION

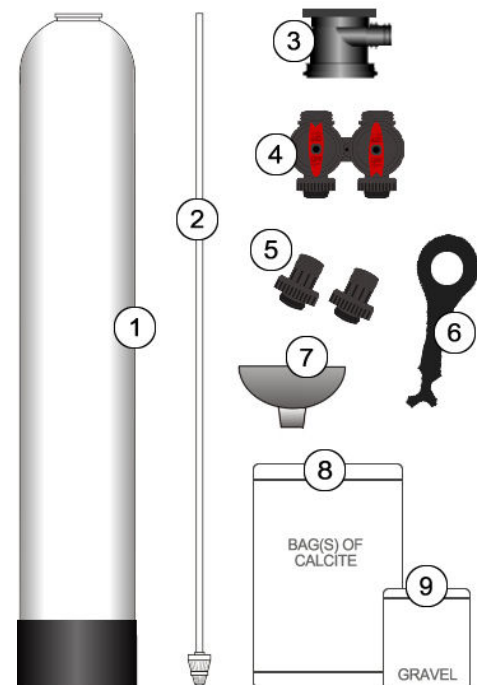


WE RECOMMEND THAT YOU READ THIS ENTIRE MANUAL BEFORE STARTING THE ACTUAL INSTALLATION. WHILE WE STRONGLY RECOMMEND THAT A LICENSED PLUMBER OR WATER TREATMENT PROFESSIONAL PERFORM ALL INSTALLATION WORK, A MECHANICALLY-INCLINED HOMEOWNER WITH SUITABLE PLUMBING KNOWLEDGE CAN INSTALL THIS SYSTEM. IN ALL CASES, IT IS CRITICAL THAT THE INSTALLATION BE DONE IN ACCORDANCE WITH THESE INSTRUCTIONS AND ALL APPLICABLE PLUMBING AND ELECTRICAL CODES. BE SURE TO OBTAIN ALL REQUIRED PERMITS. IF THESE INSTRUCTIONS AND THE APPLICABLE CODES ARE IN CONFLICT, THE RELEVANT PLUMBING/ELECTRICAL CODE SHALL BE FOLLOWED. EQUIPMENT FAILURE, PERSONAL INJURY, OR PROPERTY DAMAGE CAN RESULT IF THIS EQUIPMENT IS NOT INSTALLED PROPERLY.

Step 1. – Pre-Installation Inspection

Inspect all of the components that you received with your unit. You should have received the following:

1. Media Tank
2. Riser Tube and Lower Distributor
3. In/Out Valve w/ Fill Port
4. Bypass Assembly
5. 1" NPT Connectors (2)
6. Service Wrench
7. Funnel
8. Bag(s) of Calcite (you may also have received a bag or bags of Corosex media)
9. Undebed Gravel



Step 2. – Selecting an Installation Location

While exterior installation in warm climate areas is possible, we strongly recommend interior installation only. The system cannot be allowed to freeze or severe system damage could occur. The system should not be exposed to direct sunlight as long-term exposure to UV light could damage components of the system.

In most cases, the system should be located AFTER your water pump and pressure tank(s).



IF YOU HAVE OTHER WATER TREATMENT EQUIPMENT, YOU SHOULD DISCUSS THE ORDER OF YOUR TREATMENT EQUIPMENT WITH YOUR DEALER PRIOR TO INSTALLATION.

Select a location for installation of your water filter that is within close proximity to the main incoming water line of the home. The location should have a firm, level surface with enough space for the unit itself and sufficient space surrounding the unit to facilitate maintenance.



WHILE WATER LEAKS ARE VERY RARE AND UNEXPECTED, YOUR WATER FILTER SYSTEM SHOULD BE LOCATED NEXT TO A FLOOR DRAIN OR PROTECTED BY A WATER LEAK DETECTION SYSTEM WITH AUTOMATIC SHUT-OFF VALVE TO PREVENT WATER DAMAGE TO YOUR PROPERTY IN THE UNLIKELY EVENT OF A WATER LEAK. RECOMMENDED WATER LEAK DETECTION SYSTEMS ARE AVAILABLE AT WWW.A-LEAK-DETECTOR.COM.

Step 3. – Prepare Treatment Tank

At least two types of media are supplied with your system: gravel which forms the base layer (underbedding) in your treatment tank, and a natural mineral called calcite which raises the pH of the water as it flows through it. Your dealer may have also provided another mineral called Corosex which also raises the pH but is capable of faster and larger pH changes.

Place the media tank in the location where it will sit when the installation is complete. Note that the black base of your tank is not permanently attached to the rest of the tank. If your

tank appears to be crooked, the base has likely been knocked out of alignment during shipping. This can be correct by picking the tank up and tapping it on a hard surface while holding it perpendicular to the floor. A few light taps will generally straighten it out.

Insert the distributor and riser tube assembly into the tank. The distributor, which looks like a cone-shaped plastic screen, is pre-connected to the end of the long plastic riser tube which extends from the bottom of the tank to the top of the tank where the control valve is attached. At the bottom of the tank, there is a recess in the center of the tank to accept the distributor to keep it properly aligned. The riser tube has been pre-cut to the correct height for you. When the distributor is correctly positioned, the top of the riser tube will be roughly flush with the top of the tank (+/- 1/8 of an inch). If the tube is protruding further above the top of the tank, the distributor tube is likely not nested correctly in the recess at the bottom of the tank.

Add enough water to the tank to cover the lower distributor with a minimum of 6 inches of water. This will prevent damage to the lower distributor as gravel is loaded. Place the funnel into the tank so that the riser tube is in the middle. Place tape over the open end of the riser tube. This will prevent gravel or media from accidentally going down the tube during the following steps.

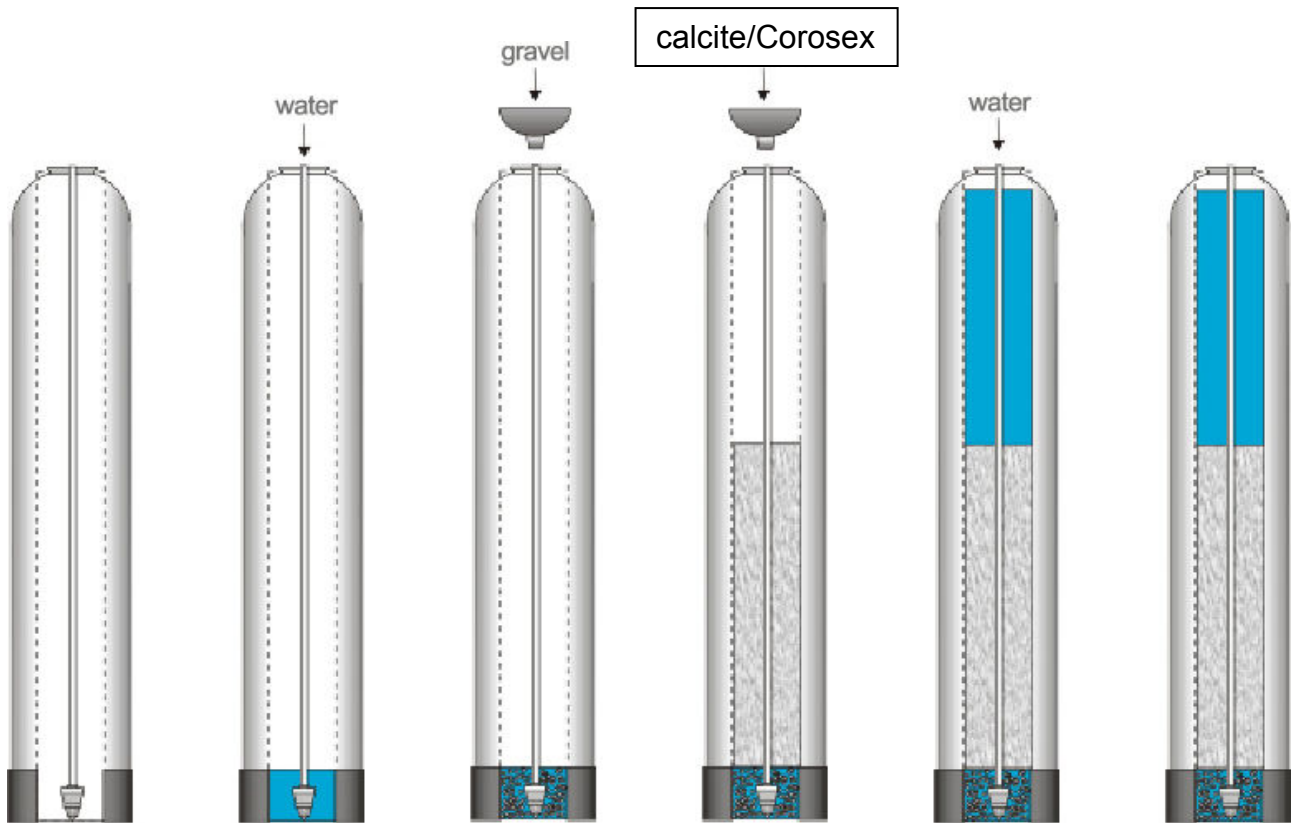
For the following steps, we recommend that you wear a dust mask. Take the bag/box of gravel and, using a small scoop, add the gravel to the tank through the funnel to completely cover the lower distributor. Use all of the gravel. Be sure to provide some downward pressure on the riser tube while adding the gravel to ensure that the distributor does not shift out of its recess or rise up. Ensure that you create an even layer of gravel across the bottom of the tank. A rigid piece of thin wall tubing (conduit, copper pipe, etc.), approximately 1" longer than the tank height works well as a leveling tool if you need it. Ensure that the riser tube remains centered in the opening at the top of the tank.

Next, you will add the pH correction media in the same manner. If Corosex media was provided with your system, you will need to pre-mix the media in a pail to create a blend of calcite and Corosex in the ratio recommended by your dealer. In no cases should this blend exceed 50% Corosex.

It is important not to add too much media. If your system was supplied only with calcite media, use all of the media provided. If your system was supplied with Corosex, use the following chart to determine how much media to add to the tank. Keep the remaining media for future use.

Model	Media Volume (Cubic Feet)	Lbs of Media at Various Corosex Blend Ratios				
		10%	20%	30%	40%	50%
N-UT-8-44	0.75	66	65	64	63	62
N-UT-9-48	1.0	89	87	86	84	83
N-UT-10-54	1.5	133	131	128	126	124
N-UT-12-52	2.0	177	174	171	168	165
N-UT-13-54	2.5	221	218	214	210	206
N-UT-14-65	3.0	266	261	257	252	248

Depending on the capacity of the system, there will only be enough media to fill the tank to about 1/2 to 3/4 full. This is normal. The media tank should never be filled to the top of the tank as the remaining space, known as the “freeboard,” is necessary for the media to have room to expand during high flow rates.



Once you have finished adding the media to the tank, remove the tape from the distributor tube. Be careful not to pull upwards on the riser tube while doing this as it is important that the distributor remain in its recess at the bottom of the tank.

Fill the media tank with water up to within a couple of inches of the top of the tank. This will allow the media to pre-soak.

Apply a small amount of lubricant to the o-ring on the underside of the in/out valve and the top inch of the outside of the riser tube.

Note: Only use food-grade silicone lubricant. Do NOT use petroleum jelly.

The in/out valve can now be secured to the top of the tank. Before attaching the valve, check to make sure that there is no debris such as gravel or media in the tank threads. Do NOT use pipe cement (“pipe dope”) or Teflon® tape on the threads. Screw the valve onto the tank – make sure that the riser tube inserts into the center hole in the valve as you screw on the valve. The valve should be hand-tightened (clockwise). Grasp the base of the valve with both hands - do not use the service wrench or other wrench. 1/4 to 1/2 of a turn past the point at which you start feeling resistance is usually ideal to obtain a good seal. Do not over-tighten.

Step 4. – Turn off the Water & Electric Water Heaters



FAILURE TO FOLLOW THIS PROCEDURE COULD RESULT IN SERIOUS, PERMANENT DAMAGE TO THE HEATING ELEMENTS IN YOUR WATER HEATER.

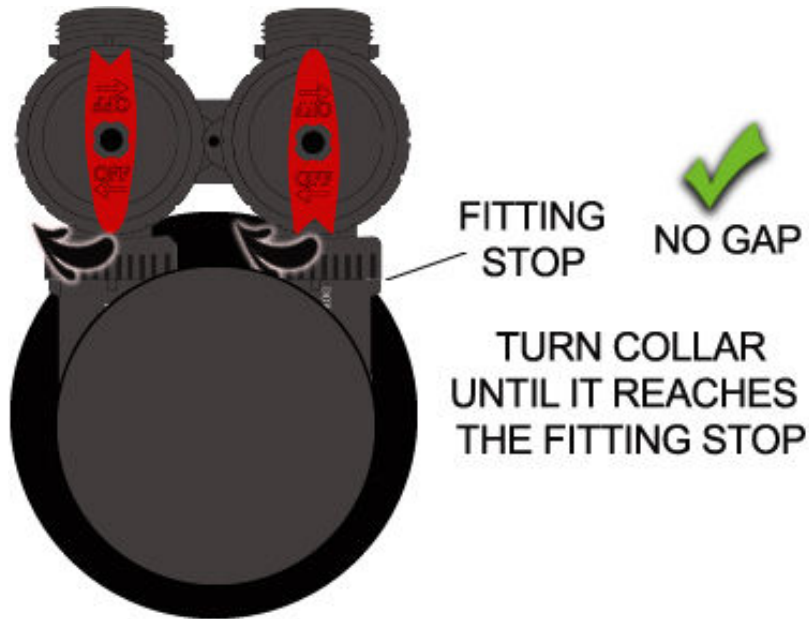
If you have a conventional electric water heater or an on-demand (tankless) electric water heater, we highly recommend that you turn off the power to the heater while installing any water treatment equipment. Turn off power to your water heater now.

Turn off the household main water shutoff valve. Open several plumbing fixtures inside the home as well as the outside faucets to drain as much water out of the plumbing system as possible.

Following completion of the entire installation, restore the water flow by turning on the household main water valve and allow all air to be purged from the plumbing system before turning the power back on to your water heater.

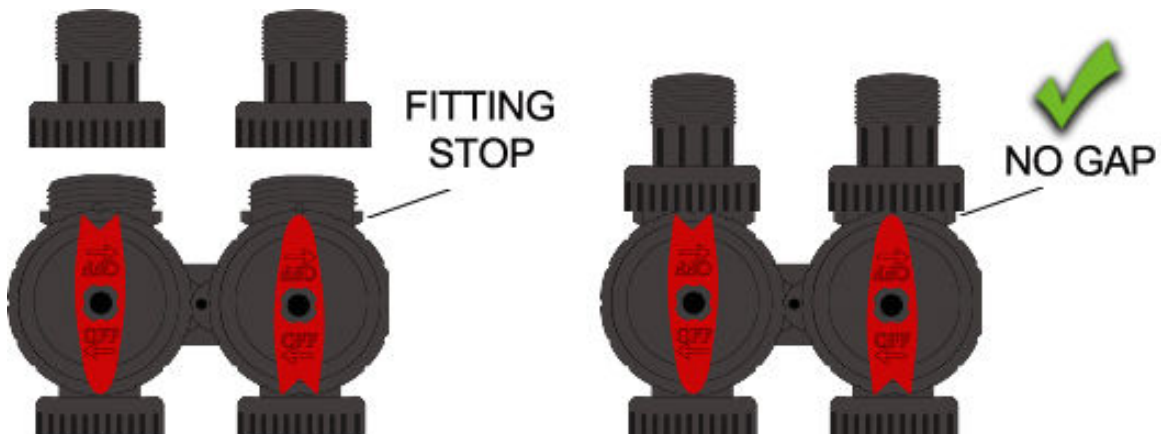
Step 5. – Connect the Bypass Assembly to Valve Head

Thread the bypass assembly on to the valve head. Note the position of the fitting stops. The threaded collars of the bypass assembly should thread right up to the fitting stops with no gap. Excessive force is not required to obtain a good seal. Do not over-tighten.



Step 6. – Connect 1" NPT Connectors to the Bypass Assembly

Thread the 1" NPT connectors on to the inlet and outlet sides of the bypass assembly as shown. Again, note the position of the fitting stops. The threaded collar of the connectors should thread right up to the fitting stops.



If there is a gap between the connector collar and the fitting stop, it is not threaded on far enough. Excessive force is not required to obtain a good seal. Do not over-tighten.

Step 7. – Prepare and Install Inlet and Outlet Plumbing Connections



TEFLON® TAPE IS THE ONLY SEALANT TO BE USED ON THE THREADED CONNECTIONS ON THE 1" NPT CONNECTORS.



IF YOU WISH TO USE COPPER PIPING FOR YOUR INSTALLATION AND WILL BE SOLDERING THE JOINTS, DO NOT APPLY HEAT NEAR YOUR VALVE, BYPASS ASSEMBLY, OR 1" NPT CONNECTORS; OTHERWISE SERIOUS DAMAGE TO THESE PARTS COULD OCCUR. ALWAYS SOLDER JOINTS WITH THESE COMPONENTS DETACHED. IF YOU ARE USING COPPER ADAPTERS TO CONNECT TO THE 1" NPT CONNECTORS, IT IS RECOMMENDED THAT YOU SOLDER A 6" PIECE OF COPPER PIPE INTO EACH OF THE CONNECTION ADAPTERS AWAY FROM THE VALVE, THEN LET THEM COOL OFF BEFORE THREADING THEM ONTO THE 1" NPT CONNECTORS.

Plumb your main incoming and outgoing water lines using suitable pipe, fittings, elbows, etc. as necessary to create a tidy, secure installation. Be sure to follow all local plumbing codes.

You will need to purchase the appropriate fittings to connect the threaded sides of the 1" NPT connectors to the material and size of your main inlet and outlet water lines.

The side marked "Upflow Inlet" is the inlet and the side marked "Downflow Inlet" is the outlet. The in and out arrows on the red bypass handles should be pointing the same direction as the in and out arrows on the outside of the control valve.



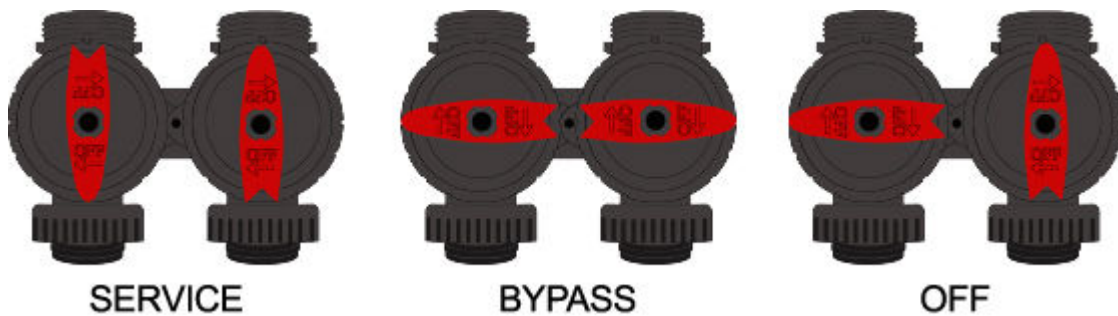
BE VERY CAREFUL TO MAKE SURE YOU PLUMB THE SYSTEM IN THE RIGHT DIRECTION.

 **WARNING**

YOU CAN REMOVE THE BYPASS ASSEMBLY FROM THE CONTROL VALVE BEFORE MAKING THE FINAL CONNECTIONS AS YOU MAY INADVERTENTLY APPLY TOO MUCH PRESSURE ON THE VALVE WHILE SECURING THE ADAPTERS, CAUSING DAMAGE TO THE VALVE BODY.

Step 8 – Initial Start-up and Leak Testing

Place the bypass in the “bypass” position as pictured:



Turn on the main water supply. Open a cold water tap nearby and let the water run for a few minutes or until the system is free of foreign material (usually solder) and air that may have resulted from the installation. Once the water is running clear and free of air, close the water tap.

 **WARNING**

INSPECT YOUR PLUMBING CONNECTIONS AND CONTROL VALVE FOR LEAKS AND REPAIR ANY LEAKS FOUND BEFORE PROCEEDING.

 **WARNING**

BEFORE PROCEEDING, ALLOW THE MEDIA TO SOAK FOR 1 HOUR.

Open the bypass to the service position. Open a cold water tap nearby and let the water run for a few minutes. The initial flow of water may be discolored. This is normal. Once the water is running clear and free of air, open several additional taps to create a high flow rate through the system. Allow the water to run for 10-15 minutes or until running clear and free of air, then close the water taps.



INSPECT YOUR PLUMBING CONNECTIONS AND REPAIR ANY LEAKS IMMEDIATELY BEFORE PROCEEDING.

It is now safe to turn the electricity back on to your water heater.

Congratulations!
Your system is now ready to provide treated water to your home!

FOLLOW-UP pH MONITORING

The extent of the pH boost created by this system is a function of the flow rate, mineral content of your water, and the blend of calcite and Corosex media used. We recommend that you test and monitor the pH of the water after installation to ensure that your desired pH level is achieved. If the pH boost is insufficient, you can either reduce the flow rate, or add some additional Corosex media to the system using the media fill port on the top of the in/out valve (see below) until the desired results are achieved. In most cases, a pH range of 7.0 to 8.0 is ideal.

MAINTENANCE & TROUBLESHOOTING



THE SYSTEM MUST BE DEPRESSURIZED BEFORE REMOVING THE BYPASS, CONNECTORS, OR THE REFILL PORT.

Service Recommendations

Over time, the calcite and Corosex media in your system will dissolve and will need to be replaced. The fill port on the top of the in/out valve can be removed to add media as required. Use the Service Wrench to unscrew the fill port. In most cases, the media will be topped up once per year with a small amount of media. Do not add too much media. Use

the same calcite/Corosex blend ratio. The media level should never exceed 3/4 of the tank height. Use the Service Wrench to replace the fill port. Excessive force is not required to obtain a good seal. Be gentle.

Troubleshooting

PROBLEM	CAUSE	CORRECTION
1. Loss of water pressure.	A. Contaminant build-up in feed line. B. Contaminant build-up in unit C. Inlet of control plugged due to foreign material broken loose from pipe by recent work done on plumbing system.	A. Clean line to water filter. B. Open up several taps or faucets and run a high flow rate of water for 10-15 minutes.
2. Cloudy water and/or poor water pressure after initial installation.	A. Flushing required	A. Open up several taps or faucets and run a high flow rate of water for 10-15 minutes.
3. Treated water is hard and/or leaving spots	A. Increased mineral content	A. pH correction using calcite and Corosex will increase water hardness. Discuss hard water treatment options with your dealer if problematic.

WARRANTY INFORMATION

Your system is backed by a comprehensive warranty program.

The in/out valve valve and related bypass assembly and media tank are manufactured by Clack Corp. The media tank is manufactured by Pentair LLC and are subject to Pentair LLC's Limited Warranty.

Clack In/Out Valve: 1 Year

Pentair Media tanks up to 13" in Diameter: 10 Years

Pentair Media tanks 14" and Greater in Diameter: 5 Years

HomePlus Products Inc. will assist you in obtaining warranty coverage from Clack Corp. or Pentair LLC. To report a warranty problem with your system or request warranty assistance, please call HomePlus Products Inc. Toll free: 1-866-376-2690

Subject to the limitations noted below, all other components are warranted by HomePlus Products Inc. to be free of defects in material and workmanship for a period of 1 year except as noted.**

**Note: Due to the wide variety of potential feed water conditions, there is no warranty on the calcite or Corosex media or underbed gravel.

The term of these warranties begins on the date of delivery of the product to the customer and continues until the earlier of:

- the end of the warranty term noted above; or
- the date in which the product(s) is/are removed from the original location of installation; or
- the date in which the original purchaser sells or otherwise transfers ownership of the home in which the product(s) was/were originally installed.

Only products purchased from an Authorized Dealer or HomePlus Products Inc. directly are eligible for this warranty. The products must have been installed and operated in accordance with the instructions and operating conditions stated in the Owner's Manual.

Customer must register his or her warranty with HomePlus products Inc. within 90 days of original purchase for the warranty to remain valid.

This warranty applies only in Canada and the United States of America.

In the event that a part is deemed defective, the user must immediately inform HomePlus Products Inc. who will furnish a replacement part at no cost to the user. HomePlus' obligation to the customer shall be limited to the replacement of the defective part by prepaid standard freight to the original point of installation. Expedited shipping is available at the discretion and cost of the customer. When required, the return of defective parts to HomePlus is the responsibility of the customer.

This warranty does not cover any labour costs including labour costs related to troubleshooting, repair, installation, replacement, or maintenance.

This warranty does not apply to the following situations: misuse; normal wear and tear; neglect; unauthorized repair or damage caused through installation, adaptation, or modification; use in an improper manner or manner inconsistent with the manufacturer's installation, operating, and maintenance instructions; misapplication; wear or deterioration due to environmental conditions; damage occurring during transit; mishandling; improper

storage; incorrect supply of water; tampering or alteration; fire, freezing; act of God; or any cause beyond the control of HomePlus Products Inc.

The original warranty period does not change in the event of part replacement by HomePlus Products Inc.

This warranty is issued exclusively to the original consumer purchaser of record so long as the product remains installed in the original location of installation, and is not transferable.

The provisions of the foregoing warranties are in lieu of any other warranty, whether expressed or implied, written or oral (including any warranty of merchantability or fitness for a particular purpose). HomePlus Product Inc.'s liability arising out of the manufacture, sale, or supplying of the products or their use or disposition, whether based upon warranty, contract, tort, or otherwise, shall not exceed the actual purchase price paid by the authorized dealer or consumer for the product. In no event shall HomePlus Products Inc. be liable to the distributor or any other person or entity for special, incidental, consequential or punitive damages (including, but not limited to, property damage or loss, loss of incomes, or loss of use damages) arising out of the manufacture, sale, or supplying of the products, even if HomePlus Products Inc. has been advised of the possibility of such damages or losses. These warranties are governed by the laws of the Province of British Columbia, Canada, and may change without notice.

To report a warranty problem with your system or request warranty assistance, please call HomePlus Products Inc. Toll free: 1-866-376-2690

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