VIRGO

WATER SYSTEMS

VIRGO Water System Installation & Programming Guide For:
VIRGO CRYSTAL
VIRGO PURE
VIRGO CLEAR

Overview

- This guide provides step by step procedures for installing and programming VIRGO Whole House Water Filtration and Conditioning Systems.
- Once installed, the VIRGO will require no maintenance and will automatically perform a sixteen-minute system regeneration each week.
- The VIRGO Water System will arrive completely assembled with all media in the tank and with the control valve already attached.
- Please carefully read this guide prior to beginning the installation process.
- All steps provided herein are for typical installations only. If you require additional plumbing, drain or electrical work to properly install the VIRGO unit, please contact an appropriate tradesman to properly prepare the site.
- Typical installation should take no more than a few hours.
- Be sure to gather any necessary supplies prior to beginning installation.
- VIRGO Water Systems can safely handle a water pressure range of 25-120 psi. For best operation, an operating range of 35-80 psi is recommended.

Pre-Installation

- The VIRGO Unit should be located in a protected, dry, level and non-freezing area, such as a garage or laundry room. It can also be buried provided a minimum 6" clearance is maintained below the control valve.
- The drain outlet has a ¾" threaded fitting. We recommend a matching size PVC drain fitting be used. Please always follow local plumbing codes when installing the drain line. The drain line is pressurized so it can be run slightly uphill if necessary.
- The unit requires power from a standard 2-prong, 120V, grounded outlet that is not controlled by a switch. The VIRGO control valve includes a 15' power cord, but you can use an extension cord if an outlet is not nearby. Please follow any local building/safety codes if you need to use an extension cord.
- Make a list of all the plumbing fittings you will need to completely install the system to make it ready for operation. Brass reducers may be necessary.
- Assemble all tools needed to install the system and start your installation.
- Now go ahead, open the box and get started!

System Installation

1. Locate the following items provided in the VIRGO box:

   - The **plastic bag** containing the Bypass Assemblies, Brass Adapters and plastic fittings.

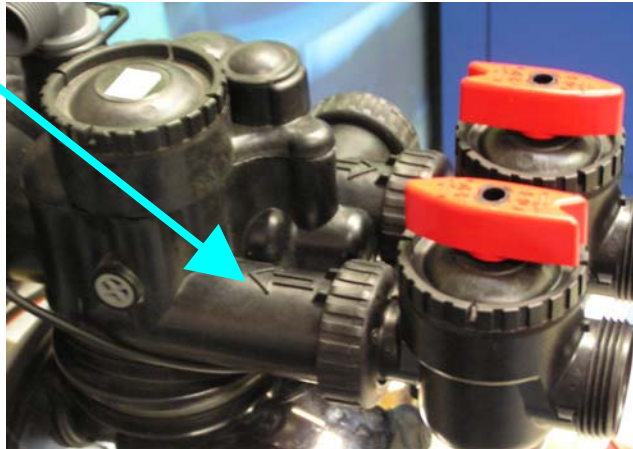   - Each of the following items need to be put aside because you will not need them during installation but you will need to leave them with homeowner when installation is complete:
     - ➢ The VIRGO Warranty
     - ➢ The Valve Installation and Operation Manual
     - ➢ The VIRGO Water Tips Brochure

2. Determine VIRGO installation location. *NOTE* As you look at the rear of the VIRGO control valve, the input water line will always enter the hole on the LEFT SIDE of the bypass valve assembly. The control valve assembly has an arrow indicating water flow direction on top of the assembly.

3. Turn off the main water valve and drain water from the main line.

4. Cut and remove a section of the main incoming water line entering the home where the system is to be installed to ensure the system is treating all water entering the home (both hot and cold water). If a pressure regulator is on the system, install the VIRGO downstream of the regulator. Allow this line to drain thoroughly.

5. You may need reducers to ensure the fittings provided are compatible with the type and size pipe where you are working.

6. Solder adapters in place on inlet and outlet piping.

7. Once cooled; apply nut, split ring and o-ring. Do not over-tighten adapters!

8. After all soldering is finished and the adapters are securely attached to the bypass assembly, then attach the bypass assembly to the control valve and secure it using the black plastic fittings. VIRGO is now in place and ready for charging.

9. Place the bypass valve is the "Service" or "Bypass" position to test solder joints.

10. Turn on water to test for leaks in pipes supplying the VIRGO system.

Installing the Drain Line to the Valve

1. The VIRGO 5-STAGE control valve has a threaded plastic swivel drain connection located directly behind the electronic control valve.

2. Attach a PVC schedule 40 drain line to the drain fitting and run to an appropriate discharge area such as a flower bed, utility sink or area drain. Remember to leave a small air gap at the end of the hose if feeding into a house drain (please follow local plumbing codes).

3. When backwashing, water will flow from the drain line with a fair amount of pressure and the line may "jump" slightly when changing cycles.
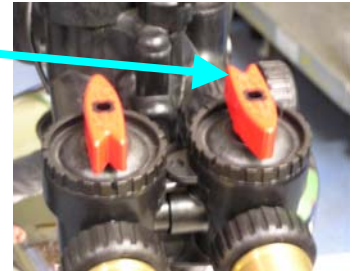
Charging the System

1. Keep the bypass valve in the "Bypass" position.
2. Make sure the water main is turned on.
3. Open the intake side of the bypass valve to allow the VIRGO 5-STAGE tank to fill with water. This will take less than five minutes.
4. Open an outside Hose Bib close to the VIRGO unit. Water should not yet be flowing.
5. Gradually open the outlet side of the bypass valve halfway and check for leaks.
6. If everything is leak-free, completely open the outlet side of the bypass valve.
7. Return to the previously opened Hose Bib and allow the water to run for ten minutes or until the water becomes consistently clear. It is normal for the water to be "gray" initially.
8. Close the outside Hose Bib when the water runs clear.
9. Individually open each fixture in the house and run the water until it flows clear.
10. VIRGO installation is now complete and it is time to program the VIRGO system!

VIRGO Start-Up and Programming Procedures
To Be Performed After VIRGO Unit Installation For:
VIRGO CRYSTAL, VIRGO PURE & VIRGO CLEAR

1. **Select System Regeneration Program "P8"**
   a. **Press "SET HOUR" and the ▲ button** simultaneously for 3 seconds until you see the Time for Regeneration Screen with the Flashing Arrow pointing toward "Regen" at the bottom left corner of the screen
   b. **Press "SET HOUR" and the ▲ button** simultaneously for another 3 seconds until you see the program screen. This screen will display a number from 1-9 preceded by the letter "P"
   c. **Press the ▲ or ▼ buttons** until **P8** is selected (**P8** provides a weekly 16 minute system regeneration consisting of a 10 minute backwash and a 6 minute rinse)
   d. **Press "SET HOUR" to accept this setting** (a blinking arrow with dashes will appear pointing to Min. Fill)
   e. **Press "SET HOUR" Button** again *(a blinking arrow will appear next to "Days to Regen" in the bottom right hand corner of the screen with the number 7 or 99 also on the screen)*

2. **Set 7 Day System Regeneration Cycle**
   a. Press the ▲ or ▼ button to select **7** Days to Regen *(this indicates a once weekly regeneration)*
   b. **Press "SET HOUR"** to accept this setting *(the number 60 will appear with flashing arrows)*
   c. **Press "SET HOUR" again** *(dP will flash along with an arrow pointing to Regen Hour in the bottom left hand corner of the screen)*
   d. **Press "SET HOUR" button once more to exit**

3. **Set Time of Day**
   a. **Press "SET HOUR"** button once and then use the ▲ or ▼ buttons to select the appropriate current hour of the day *(Please note the hour is AM unless PM is indicated by a ▶ pointing toward the PM on the right side of the display screen)*
   b. **Press "SET HOUR"** again to exit once the hour is correct

4. **Select System Regeneration Settings**
   a. **Press "SET HOUR" and the ▲ button** simultaneously for 3 seconds until the digital display begins to flash. This screen will allow you to set the time for regeneration of the VIRGO unit
   b. **Press the ▲ and ▼ buttons** to adjust the time for regeneration
   c. **2 AM** is recommended and is the factory default setting
   d. **Press "SET HOUR"** to accept the setting and to advance to the next step in the programming process

5. **Set Current Day of the Week**
   a. The current day of the week will flash on the screen in the form of d1-7 (**d1** = Sunday, **d2** = Monday, **d3** = Tuesday, **d4** = Wednesday, **d5** = Thursday, **d6** = Friday and **d7** = Saturday)
   b. **Press the ▲ or ▼ button** to select the current day of the week
   c. **Press "SET HOUR"** to accept the setting and to advance to the next step in the programming process

6. **Set Sunday (d1) For Regeneration**
   a. d1 (Sunday) should now be flashing on the screen
   b. **Press the ▲ or ▼ buttons** until the indicator ◄ points to "Regen" in the top left corner of the display. This tells the unit to regenerate on Sunday.
   c. **Press "SET HOUR"** to accept the setting
   d. When **d2** appears (Monday), press the ▲ or ▼ buttons until the indicator (◄) **DOES NOT** point to "Regen" in the top left corner of the display. This tells the unit to NOT regenerate on Monday.
   e. **Press "SET HOUR"** to accept the setting
   f. Do this for all remaining days **d3** *(Tuesday)* through **d7** *(Saturday)* to be sure the arrow pointing to "Regen" only appears on **d1** *(Sunday)* or on another specified day you or your customer select for regeneration
   g. **Press "SET HOUR"** again to accept these settings

7. **Main Screen Will Now Display Two Selections**
   a. *Time of Day*
   b. *Days Until The Next Regeneration*
   c. **Press the ▲ or ▼ buttons to toggle between the two choices**

8. **Programming Is Now Complete!**

9. **It Is Now Essential To Force An Immediate System Regeneration**
   a. Ask the homeowner to refrain from using any water until the Regeneration cycle and system flush is complete *(approximately 16 minutes)*
   b. **Simultaneously press and hold the ▲ and ▼ Buttons** until Regeneration cycle begins.

10. After the System Regeneration is complete, **please run water from the closest hose bib until the water runs clear. Now run water from each fixture in the home for 2 minutes** to completely flush the system.

11. If water remains cloudy and won't run clear, **Repeat STEPS 9 & 10.**

12. **Flush the fixtures one more time** and thoroughly clean any carbon residue from each fixture. *If steps 9-12 are not accomplished, it is likely the customer will complain about carbon residue and water turbidity.*

Please Call 1-888-726-9752 For Technical Support or Visit
www.virgowatersystems.com