

Installation Instructions



Home Water Treatment Plant



Slime In Your Toilet's Clean Water Tank?

If so, most likely you have bacteria, and Iron and Sulfur filters will not work without chemical treatment.

If this is the case, you need our Home Water Treatment Plant!

Introduction

(Model HWTP-150-80)

The Safety Zone Home Water Treatment Plant is our well water treatment system, which provides **disinfection** to kill bacteria and other harmful microorganisms. In addition, this system also provides **oxidation** to make other contaminants easily filterable.

Removes / Kills

- Bacteria, cysts, viruses and other harmful microorganisms
- Harmful chemicals
- Tastes & odors
- Iron (up to 2 ppm of clearwater Iron) without an optional Iron filter
- “Rotten egg” odors from Hydrogen Sulfide

Options

- Iron filter for high levels of Iron and “oxidized Iron”
- Acid neutralizer (needed when pH is 6 and below)
- Tannin softener for decayed vegetation (near lakes & rivers)
- Larger softener and filter models for 1-1/2” and 2” pipe

Components

Components include:

- Chemical pump (flow actuated – connects to softener valve)
- 15 gallon solution tank
- Hydrogen Peroxide for disinfection, one 5 gallon pail included
- 80 gallon contact tank with bottom drain
- WHF-150-A whole house filter (removes chemical before use)
- WC-150 water softener and brine tank
- Two weather covers (for outdoor installation)
- Test strips for Hydrogen Peroxide (TS-HP)

Note: All the above ships on one pallet and may be shipped to your job site.

Component Placement

1. Chemical injection (install fitting in water line, prior to contact tank)
2. Contact tank (inlet is at the top)
3. Hose bib (install directly after the contact tank for chemical testing)
4. Carbon filter (to remove chemical)
5. Water softener

Other components

- Chemical feed pump
- Solution tank
- Chemical (Hydrogen Peroxide – five gallon pail)
- Test strips for Hydrogen Peroxide (to test for chemical residual)
- Optional Neutralizer and Iron filter (install before other equipment)



If you have slime here ,most likely you have bacteria.



Chemical injection point before the contact tank.



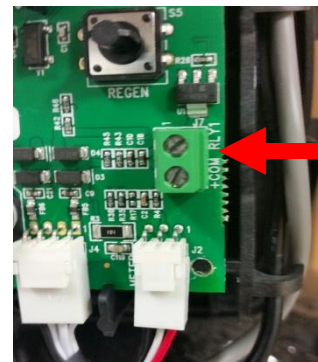
Flow actuated chemical pump. No flow switch needed. Connects to relay in softener valve.



Install a hose bib after contact tank for chemical testing.



Must program relay in the softener valve.



Connect wires from chemical pump here.

Prior to installation, test the water for:

1. Water hardness
2. Iron
3. Hydrogen Sulfide (smell for “rotten egg” odors or test)
4. pH
5. Bacteria (check for slime in the clean water tank or test)

Progress as follows:

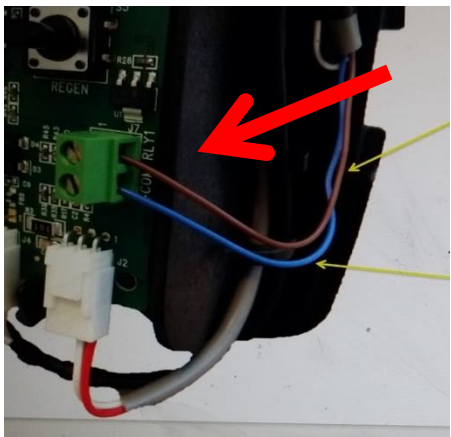
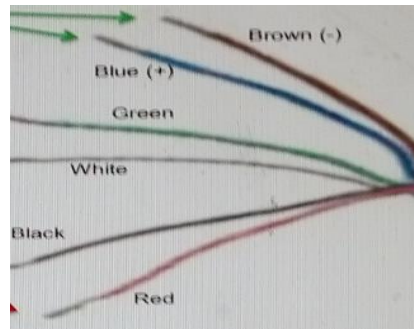
1. Install shut-off valve in the main water line before all equipment.
2. Install chemical injection fitting in main water line after the shut off valve, before all equipment.
3. Install the chemical pump. (On post or wall.)
4. Connect pump to 110v weather protected electrical outlet.
5. Place the solution tank near the chemical pump.
6. Install the contact tank after the chemical injection point.
7. Directly after the contact tank, install a hose bib to test the water for chemical residual . Install the carbon filter (used to remove the chemical).
8. Build your drain for the filter (drain water must be free flowing)
9. Install the water softener.
10. Build the drain for the softener (drain water must be free flowing)
11. Set-up the brine tank and make tube connections.
12. (Be sure 3/8” brine line tubing is pushed into both fittings securely!)
13. Add 6” of potable water to the brine tank (do not add salt at this time).
14. Test for water hardness; program the hardness into the softener valve.
15. Connect filter and softener to a weather protected electrical outlet.
16. Connect the chemical pump to the relay in the softener valve.
17. Program the valve for relay settings (see directions below).
18. Program the chemical feed pump (see directions)
19. Add Hydrogen Peroxide to the solution tank.
20. Make tube connection for chemical feed pump.
21. Bleed pump (see directions below).
22. Install shut-off valve after the system.
23. Supply water to the system.

Home Water Treatment Plant

How to connect the **E20PHG** flow actuated chemical pump to the relay in the softener valve. (No flow switch needed.)

Pump wiring:

Use only the BROWN and BLUE wires from the chemical pump to connect to the valve. (Put tape on the ends of the other wires to inactivate.)



Wiring to valve

It is necessary to snake the wires through the valve's back plate next to the existing power cord. (See left.)

BROWN wire on top and BLUE wire on the bottom.

Program The Relay In The Softener Valve

1. Press and hold simultaneously "**NEXT**" and "**Arrow Down**" buttons together for several seconds until you see "set softening" .
 2. Press **Next** eleven times until you get to "**Relay**".
 3. Press "**Up**" to relay "**ON**"
 4. Press "**Up**" to get to **Amount of Gallons**
 5. Press "**NEXT**" and set **Number of Gallons** to **1**
 6. Press "**Next**" to get to **Amount of time**
 7. Set **Amount of time** to **0:10** min.
 8. Press **Next** and the relay set up is complete.
- (Now you are back at the clock.)

Set Up For Flow Actuated Chemical Pump

1. Press **"Mode"** and **"%"** to unlock keypad.
2. Press and Hold **"Mode"** and press **"Up"** or **"Down"** to get to **"Auxiliary"** mode.
3. Press and Hold **"%"** and press **"UP"** or **"DOWN"** to raise percentage to **"32%"**. (Percentage will change the amount of Chlorine or Hydrogen Peroxide injected into the system.)
4. Prime Pump (See Instructions Below)
5. Press and Hold **"Mode"** and **"Standby"** to get out of standby state, and pump will be available to work on the softener's valve Relay . (Pump will not operate in "standby" mode.)
6. Need to connect Chemical Pump's power cord to Valve, Brown wire on top and blue wire on bottom. (See instructions.)

Prime The E20PHG Flow Actuated Chemical Pump

Remove chemical tube connection from the injector tee.

Press and Hold **"Mode"** and **"PRIME"** to start priming the pump.

May need to unlock the keypad (see above).

Pump will turn on.

Continue pressing **PRIME** until chemical flows out of the tubing.

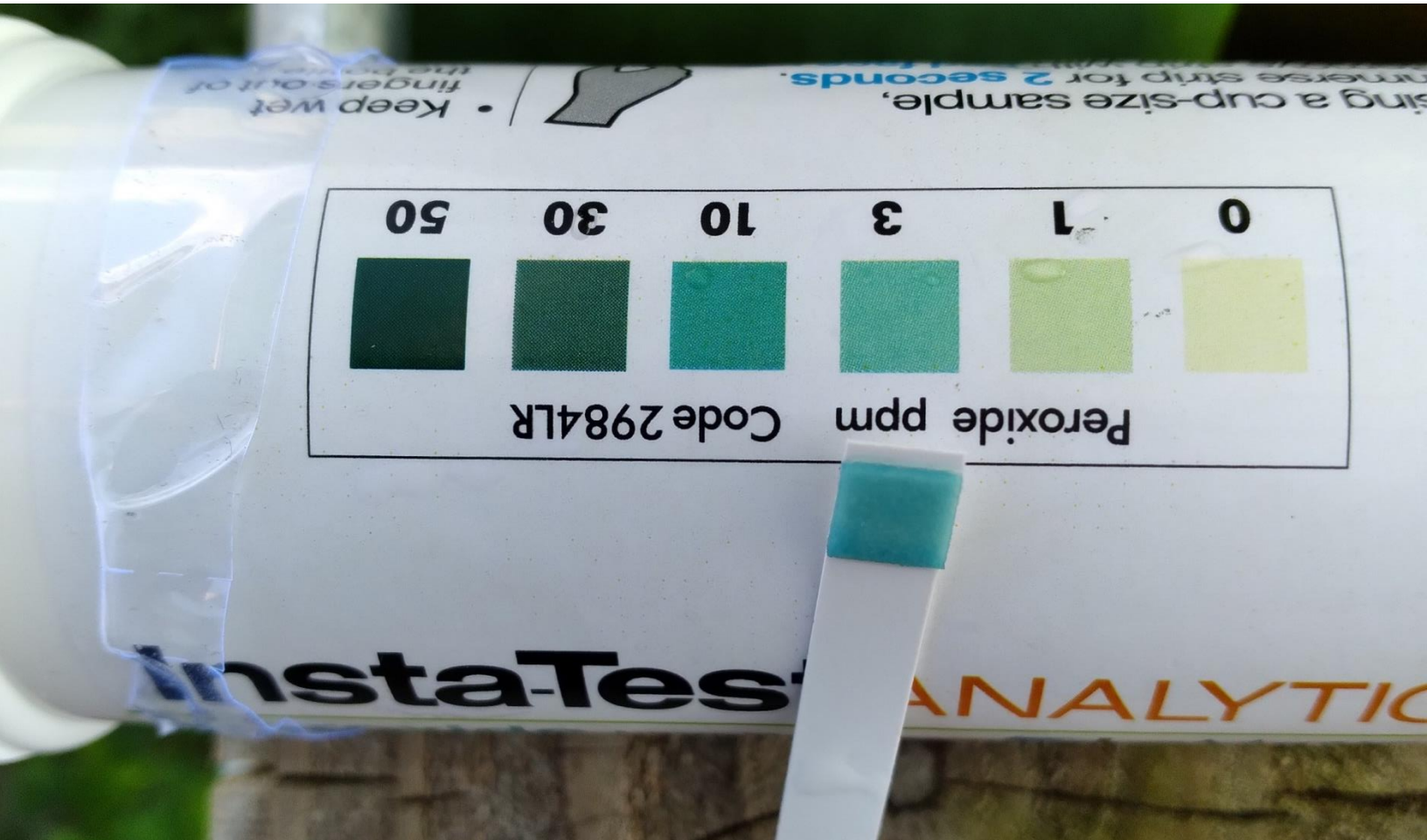
(This may take some time.)

With chemical flowing, reconnect the tubing to injection point.

Other Instructions

See individual instructions and videos for WATER SOFTENER and WATER FILTER installation and start-up procedures. These instructions should be followed closely.

Important



Customer Orientation

It is essential to check the chemical residual from the hose bib you installed directly after the contact tank to be sure the chemical residual is sufficient for proper disinfection, and to be sure the residual is not excessive. With Hydrogen Peroxide, the residual should be 1-3 ppm. Adjust the pump if necessary to maintain the proper residual. Our TS-HP test strips are included with your system, and routine testing is highly recommended. (If your customer will not do this, we suggest you schedule a service call by-monthly to make sure the proper chemical residual is being maintained.) We also recommend you give your customers an “orientation” to explain salt in the brine tank should be routinely monitored and explain how to reset the clock if necessary.