Operation & Maintenance Well Water Treatment System

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This is only a general guide for most systems that use the chlorination/dechlorination and ion-exchange softening method of water treatment. Consult your manufacturers' instructions for details.

Notice to consumer. Operational. maintenance and replacement requirements are essential for water treatment devices to perform as sold.

Caution – Using a home water system for irrigation, swimming pools, agriculture or other non-domestic use will result in operational difficulties and poor water quality.

<u>Weekly</u>

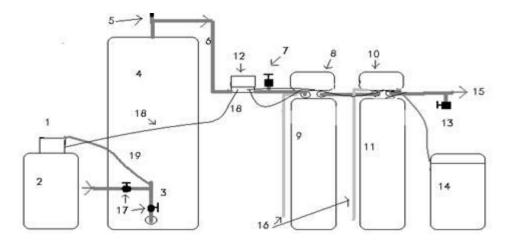
- Measure chlorine residual at filter inlet. Adjust for 1.0 to 4.0 mg/L.
- Check that clocks are on correct time of day.
- Check salt level. Add salt when water is visible. Add water to solidified salt as needed.
- Check chlorine level. Maintain a proper mixture of chlorine.
- Check that drains are unobstructed.
- Check all associated equipment for normal operation.

<u>Monthly</u>

- Perform weekly tasks.
- Flush drain on retention tank until water runs clear.
- Drain and flush tank if heavy deposits are observed. Be sure to allow air into the tank while draining and release the air while the tank is filling.
- Disassemble, clean and inspect the chlorine injection check valve. See manufacturer's instructions.
- Manually operate filter and softener controllers through their cycles. Service the controller if any difficulties are observed.
- Inspect system for leaks.
- Measure chlorine residual at spigot near system outlet. Any residual detected means chlorine has passed through filter. Replace the filter media.
- Check well pump for leaks and unusual sounds. Repair promptly.
- Analyze well water and treated water to monitor system performance.

Annually

- Empty and clean salt and chlorine tanks.
- Inspect chlorine pump, hoses and injection check valve. Clean as required. Replace worn parts as needed. See manufacturers instructions.
- Disassemble and clean softener brine screen, brine valve and injector. See manual for details.
- Disassemble and clean filer and softener controllers. Replace worn parts as needed.
- Drain water from system until pressure gauge reads zero. Measure check air pressure in the pressure tank. Adjust to 2 p.s.i. below pump cut-on pressure, or as recommended by manufacturer.
- Analyze source water and note changes in quality.



Caution: Follow all applicable building, plumbing and electrical codes and ordinances. Caution: Using a residential water treatment system for any purpose other than domestic potable water will result in operational difficulties and poor water quality. If you require assistance with irrigation or swimming pool water, please consult an appropriately qualified professional.

- 1 The chlorine pump moves chlorine solution from barrel to injector at point where water from the well enters the retention tank
- 2 Chlorine solution barrel. Usually 35 gallons. Typical mixture is 1 or more gallons of chlorine in a barrel of water. Use liquid pool chlorine, 10% sodium hypochlorite.
- 3 Water from the well enters the bottom of the retention tank
- 4 Retention tank. Chlorine reacts with water here. Chlorine kills bacteria, oxidizes sulfur and iron. Oxidized solids settle to the bottom. Water flows out through the top fitting through pipe to filter tank. Settled solids should be flushed out through drain periodically, at least monthly, through the drain at the bottom. (Drain not shown)
- 5 Vacuum relief valve allows air to enter system in event of tanks being drained. Prevents collapse of tank liners. Required by warranty.
- 6 Pipe assembly carries water from retention tank to filter tank.
- 7 Spigot for testing chlorine content of water, should be 1 to 4 parts per million. Use a free chlorine test kit.
- 8 Automatic backwash control, backwashes filter to keep carbon clean.
- 9 Tank containing activated carbon. Purpose, to remove chlorine and solid particles from water. Carbon should be replaced as conditions require.
- 10 Softener backwash control. Regenerates the softener with brine.
- 11 Softener tank, contains ion-exchange resin. If resin bed is fouled with iron or sulfur, clean with resin cleaner.
- 12 Flow switch. Water flows through, turning on electrical circuit which activates the chlorine pump. Top receptacle is energized by water flow Plug chlorine pump into that outlet. Bottom receptacle constantly energized for plugging in filter and softener controllers. Plug the flow switch power cord only into an approved 120 volt outlet.
- 13 Spigot for testing finished water.
- 14 Salt or brine barrel. Contains softener salt. Usually has safety float to prevent overflow of water. Upon startup, put at least 6" water in and add salt. Empty and clean barrel at least annually. Add water as above when putting barrel back in service.
- 15 Pipeline to carry finished water to home.
- 16 Drains for backwash water. May be pipe or plastic tubing connection at softener and filter controller. Route pipes to safe area for drain water. Drain water from the softener contains salt. If routed outside, it may kill grass or plants. Filter drainwater may contain rust deposits. Use backflow prevention to eliminate the possibility of cross contamination. Consult a plumber if needed/.
- 17 Valves isolate chlorine injector for service and water shut-off.
- 18 Power cords, plugged into flow switch.

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