



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 to 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 annually or as conditions require. Tank is $\frac{1}{2}$ to $\frac{2}{3}$ full to allow room for media to lift during backwash.
- 10 Softener backwash control. One end of salt tank hose connection attaches to brine valve fitting.
- 11 Softener tank, contains ion-exchange resin. Tank is $\frac{1}{2}$ to $\frac{2}{3}$ full to allow room for media to lift during backwash. Softener resin does not usually wear out. 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 circuit. 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 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 or 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.