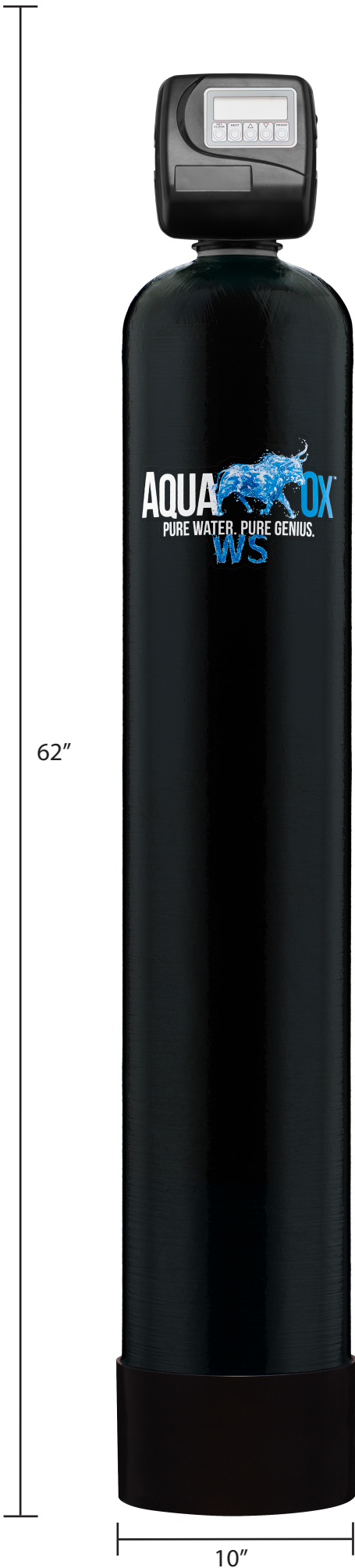




Clack Head C Series (WS1) Quick Start Manual



Brine Tank Dimensions
14" wide x 17" deep x 38" tall

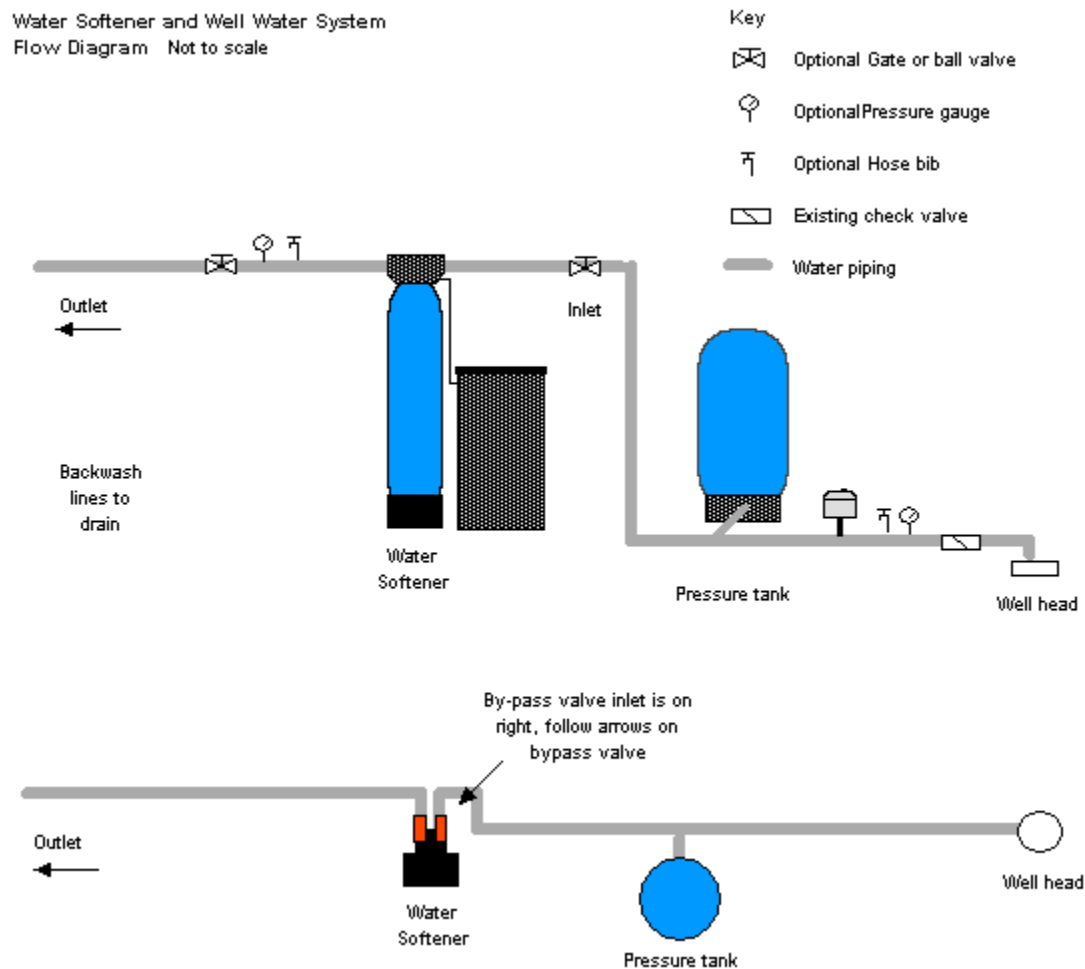
Pre-Installation

1. Review your packing list and make sure you have received all the parts before beginning installation.
2. If you are going to be turning off the water to the house and you have an electric water heater, shut off the power to the water heater before beginning installation in case water heater is accidentally drained.
3. Pick a suitable location for your filter system on a dry level spot where it won't be exposed to freezing temperatures. A minimum of 20 PSI is required. Maximum pressure is 90 PSI.
4. Get all of your plumbing parts together before beginning installation. Installation typically takes 3 to 5 hours. However after installation the WS1 Water Softener must be allowed to run through a complete backwash and rinse cycle (also called 'regeneration'). This takes about 90 minutes.
5. After the system is installed and running, your water may be discolored, or full of sediment or rust, if you have older piping that has been exposed to sediment, iron or manganese for some time. Typically this clears up over a day or two, but can persist for weeks if the pipe is old galvanized iron pipe that is corroded.

Best Practices for Piping & Drain Installation

1. See typical installation (see Fig 1). The water softener is installed after the pressure tank.
2. Make sure to connect the inlet pipe to the WS1 Softener inlet and the outlet to the outlet (see Fig 2). You can see the in and out arrows on the bypass valve which is where the pipes are connected.
3. Make sure there is a working gate or ball valve before the water softener and also one after as shown in the diagram. If you are installing multiple filter systems (such as iron filter then water softener) you do not need a valve in between each system. The pressure gauges are optional and not necessary but a hose bib (which is a faucet that you can attach a garden hose to) is strongly recommended after the water softener before the second ball valve. This makes it easy to rinse your new softener on start-up and gives you a place to test the water before it enters your household plumbing.
4. If you will be using copper piping, do not sweat the copper pipe directly to the plastic bypass valve. Avoid heating up the bypass valve with the torch.

Fig 1 Typical installation for well water systems



5. You do not need unions to install your water softener. If you need to remove it, the Clack WS1 softener has union couplings on the bypass valve that make it easy to put the water softener on by-pass and remove the filter system from the piping.
6. The drain line tubing (not supplied) is connected to a drain from the drain outlet using flexible $\frac{1}{2}$ " ID tubing. Note that the drain can run up above the WS1 softener and into a drain, it does not have to drain down, as the filter backwashes under line pressure from your well pump. Most plumbing codes require an air-gap connection, so that if your sewer or septic tank backs up, it cannot cross connect with the drain tubing.
7. Usually you do not want to water the garden or irrigate your landscaping with softened water. This will require more salt than usual to be used and in some cases the sodium can build-up in the soil causing some problems to sensitive plants. It is often not difficult to run hard water (not-softened lines) to the irrigation thereby bypassing the water softener.

8. If you do want to irrigate with soft water we recommend the use of potassium chloride salt (widely available) instead of regular sodium chloride (water softener rock salt). Any type of salt though can be used in the water softener.

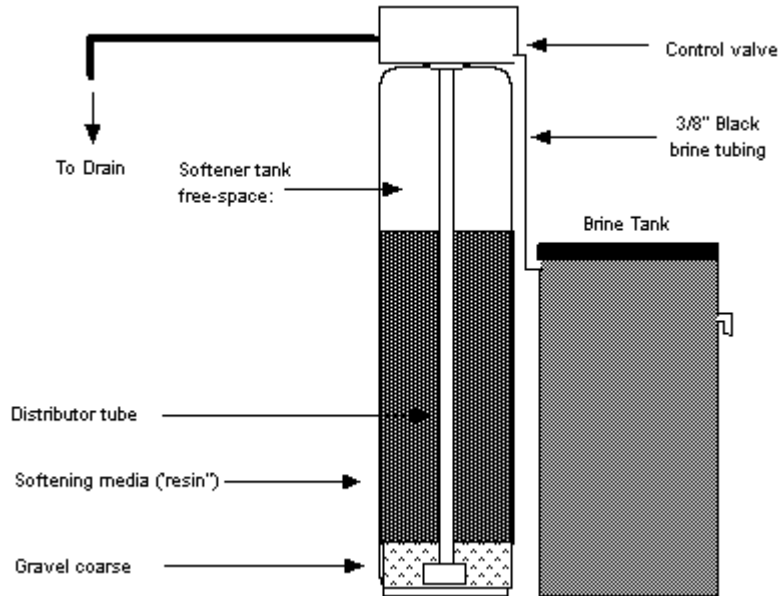
Fig 2 Clack WS1 Softener Control



Adding Softener Media & Installation Instructions

1. Unscrew by hand the Clack WS1 control valve from top of the tanks if it was shipped screwed on. Place distributor tubes in tank if not already inside tanks. If not already done, make sure blue cap is on top of distributor tube, or wrap the top of distributor tube with electrical or duct tape. The idea is you do not want gravel or resin to go down the distributor tube when you are adding media.
2. Add filter gravel supplied first, using the funnel sent with the water softener.
3. Next add softener resin media. Tank will be approximately 2/3 to the 3/4 full.
4. Remove cap or tape from top of distributor tube. Be careful not to pull up distributor tube when removing cap or tape.

Fig 3 Filter diagram showing cut-away of media



5. If possible at this point, fill tank completely with water. This will allow the softener resin to settle and eliminate the need of "purging" the air out of the tank later.
6. Add a small amount of vegetable cooking oil to the tank threads and screw on the WS1 control valve carefully. Alternatively you can use silicone grease, but do not use pipe-joint compound, Teflon tape, or Vaseline or other petroleum greases to lubricate tank threads.
7. See how the piping connects to the bypass valve. There are in and out arrows on the bypass valve for the inlet and outlet pipe. Install inlet and outlet piping, drain tubing and brine line tubing. The brine line tube is included and is shipped inside the brine tank.
8. Note that the over-flow fitting on the side of the brine tank does not need to be connected, unless the softener is installed in a closet or somewhere where overflowing salt water could cause a problem. Water rarely overflows the brine tank however.
9. Add approximately 5 gallons of water to brine tank, then fill brine tank with salt, about 300 lbs, or 6 50-lb bags. It is OK to use any kind of water softening salt; however we find that extra coarse salt works better than the pellets. You do not have to add water to the brine tank again after this first time during the start-up.
10. Close the valve after the water softener. Connect a garden hose to the hose bib after the softener and open hose bib. Turn on the water to the softener and allow the water to run out the garden hose until the water is clear.

11. See the Clack WS1 Service Manual for instructions on how to program and set softener. Your softener is already programmed for the size tank you have, but you do need to set the current time of day and program the water softener with your water hardness. When programming add 2 or 3 grains of hardness to your water hardness as a safety measure if you have iron in the water.
12. Start a manual backwash by pressing and holding the REGEN button for 5 seconds. After softener has been regenerating for 20 minutes, look inside the brine tank, and you should see that it has sucked out the brine. At the end of the regeneration (90 minutes) check to make sure that the softener has added water to the bottom of the brine tank to make brine for the next regeneration cycle.

Maintaining Your WS1 Softener System

WS1 Softeners require little maintenance. The primary task is to add salt to the brine tank a couple of times a year. You can fill the salt tank to the top if wish and then wait until the brine tank is near empty before adding salt again. Or you can add salt whenever you notice that the salt is low enough to add more bags. If you fail to add to salt the water will turn hard again, and you will notice that there is water in the bottom of the brine tank. This is normal, and you can add salt and press the manual regeneration REGEN button for several seconds to regenerate the softener manually and have soft water again.

Your softener can use any kind of salt, including extra coarse softening salt, or pellets. It also works with potassium chloride, sometimes sold as K-Life or Potassium Salt.



Limited Warranty

We warrant the AquaOx WS, when installed inline after the main AquaOx water filter and according to factory recommendations, to be free from defects in materials and workmanship as follows:

Limited Warranty

This water softener unit is assembled from the finest industry components available. Each individual component used in the assembly of our equipment is covered by the original equipment manufacturer's warranty. All components, except those specifically listed below, are warranted for a period of ten (10) years from date of purchase to the original purchaser to be free of defects in materials and workmanship subject to the manufacturer's conditions and/or the conditions shown below.

Mineral Tanks

The fiberglass, polyglass or composite mineral tanks used in the assembly of this unit are warranted to be free of defects in materials and workmanship for a period of ten (10) years on filtration applications, subject to the original manufacturer's conditions and/or the conditions shown below. Warranty does not cover sandblasting of tank caused by faulty distribution systems, fractures caused by external impact and exposure to vacuum.

Control Valves

The control valve (if used in the assembly of the unit) is warranted to be free of defects in materials and workmanship for a period of ten (10) years subject to the original manufacturer's conditions and/or the additional conditions shown below.

Conditions

1. This warranty only covers the AquaOx WS installed for residential use and inline after the AquaOx. Water conditioners installed for commercial or industrial applications are guaranteed for one (1) year from the date of installation.
2. Installation must be made in accordance with legal or local codes and manufacturer's recommendations and guidelines.
3. Failure must not result from misuse, alteration, fire, lighting, power surges, damage from freezing or neglect.
4. Water pressure must not exceed 100 p.s.i. and water temperature must not exceed 100 degrees.
5. Damage or failure of a Product or Part caused by friction, wear, chemical attack, or debris build-up on wear parts. "Wear Parts" include, but not limited to: pistons, piston rods, seals spacers, end cap quad rings and brine valve on all piston operated valves, as well as valve disk flappers on Autotrol valves, and parts requiring replacement under recommended maintenance procedures, such as filter housing o-rings and gaskets.

Subject to the above terms and conditions we will replace and/or repair, at our option, any parts of the water conditioner found defective in materials and workmanship. Defective parts must be returned, freight pre-paid, by the purchaser. This warranty does not cover labor, shipping charges, damages caused by delays of consequential damages or other causes beyond our control.

This warranty is to the original purchaser and is not transferable after the third year to any subsequent owner(s).

No other guarantee or warranty, expressed or implied, is applicable to our product. No repair or replacement made under the terms of the warranty shall extend this warranty.

INSTALLATION DATE: _____

720 Old Clemson Rd Suite L, Columbia, SC 29229
www.aquaoxfilters.com



1 Year Money Back Guarantee

We guarantee this water conditioner, when installed according to factory recommendations, to be free from defects in materials, workmanship and operation as follows:

Limited Guarantee

This water conditioner unit is assembled from the finest industry components available. Each individual component used in the assembly of our equipment is covered by the original equipment manufacturer's warranty. All components, except those specifically listed below, are guaranteed for a period of one (1) year from date of purchase to the original purchaser to be free of defects in materials, workmanship and 100% operational subject to the manufacturer's conditions and/or the conditions shown below.

Mineral Tanks

The fiberglass, polyglass or composite mineral tanks used in the assembly of this unit are guaranteed to be free of defects in materials and workmanship for a period of one (1) year on filtration applications, subject to the original manufacturer's conditions and/or the conditions shown below. The Money Back Guarantee does not cover sandblasting of tank caused by faulty distribution systems, fractures caused by external impact and exposure to vacuum.

Control Valves

The control valve (if used in the assembly of the unit) is guaranteed to be free of defects in materials and workmanship for a period of one (1) year subject to the original manufacturer's conditions and/or the additional conditions shown below.

Conditions

1. This Money Back Guarantee only covers water conditioners installed for residential, commercial and industrial use one (1) year from the date of installation.
2. Installation must be made in accordance with legal or local codes and manufacturer's recommendations or guidelines.
3. Failure must not result from misuse, alteration, fire, lighting, power surges, damage from freezing or neglect.
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This guarantee is to the original purchaser and is not transferable to any subsequent owner(s).

No other guarantee, expressed or implied, is applicable to our product. No repair or replacement made under the terms of the guarantee shall extend this guarantee.

INSTALLATION DATE: _____ 720 Old Clemson Rd Suite L, Columbia, SC 29229 | aquaowaterfilters.com