

Iron Filter Filling & Installation Guide

Read all instructions before starting!

Filter Filling Guide

Some unit's ship without the media loaded due to shipping guidelines and restrictions. If shipped by UPS, you will probably be loading the filter media in the tank using instructions below. Loading your system is very easy following these instructions and will not take very long at all. The advantage to loading your own system besides saving a lot on shipping charges over shipping by truck is that it is easy to move the unit and components to the install location before loading it. If your system is already loaded, (most shipped by truck are loaded already) skip down to installation guidelines just below these filling instructions. If your system is not loaded please follow the step-by-step instructions for loading below. Loading the units should only take about 10-15 minutes.

The number of packages you receive can vary depending on the unit you order and how it is packaged for shipping. In general, the following is what to expect:

For Iron filters, ph filters, carbon filters, & turbidity filters:

You will have: one (1) tall slender tank (resin tank) 48" – 54" in height with an opening on the top, one (1) control head either shipped in place on the tank already or in a separate box, one (1) small box of gravel about 15-20 lbs., and one (1) or more boxes with the filter media (greensand, Birm, Pyrolox, Filox, calcite, Corosex, carbon, or Filter-Ag) that is used inside the tank and does the actual filtering.

Water softeners:

You will have one (1) tall slender tank (resin tank) 48" – 54" in height with an opening at the top, one (1) control head either shipped in place on the tank or in a separate box, one (1) brine tank (your salt holding tank, resembles a trash can, usually 3' – 4' tall, round or square with a plastic lid), one (1) or more bags of water softening resin (small amber colored beads, the actual filtering part of your system). Some units come with one (1) or more full bags of resin and then a partial bag of the same resin that is sometimes packaged in a different type bag. Most water softeners (i.e. standard residential softeners 64k and below) do not need and are not shipped with gravel. Combination softeners such as the Water Pro or Iron Pro systems do require gravel for efficient filtering. Even if your water softener does not require gravel, if your unit was shipped with gravel, go ahead and use it.

Dual alternating water softeners 9000 or 9100 control head:

You will have two (2) tall slender tanks (resin tanks) 48" – 54" tall with openings at the top, one (1) control head shipped in a separate box with a connection for second tank, one (1) brine tank brine tank (your salt holding tank, resembles a trash can, usually 3' – 4' tall, round or square with a plastic lid) and bags of water softening resin (small amber colored beads, the actual filtering part of your system). You will divide the softening resin between the two tanks.

Filling your Tank

Look inside your resin tank (if the control head is already on the tank, simply un-screw the head counter-clockwise) and there will be a 1" plastic tube inside. This is your "Riser Tube" that delivers treated water into your home through the valve. It may have a plastic plug on the top end of it (most do not) so nothing can fall down inside the tank while you are loading the media. Pull out the riser tube to inspect it to make sure it is intact and



without damage. These are very durable and would rarely ever be damaged. Place the riser tube back into the tank and center it at the bottom before filling. The riser tube sits in a depression at the bottom of the tank and extends to the top; ensure that it is no more than ¼” above the top of the tank. If higher than ¼”, use a sharp knife or similar tool to cut it flush with the top of the tank. **DO NOT CUT THE RISER TUBE TOO SHORT!** If your riser tube is too short it will not seal inside the control head properly and your system will not work properly. If the top of the tube does not have a plug in it, simply put a piece of tape over the end, or plastic and rubber band, (35mm film cases work perfectly!) to keep the media from falling down into the tube.

Next, stand back and look at your media tank, and make sure it is standing straight up and not tilted to one side. Sometimes during shipment, the black “Boot” on the bottom of the tank will get knocked out of alignment and you will need to straighten it out before filling the tank with media. If your tank is a bit tilted, simply pick the tank up 2 – 3 inches off the floor and drop it gently but firmly down, favoring the side of the boot that needs to be adjusted to make the tank stand straight up again. **TIP: By adding 10” – 12” of water at the bottom of your tank before filling you can help buffer the media as you fill your tank.** You can use a funnel with a large opening for the media or just fill by using a cup. If you do not have a large funnel to fit, the best thing to use is your household blender pitcher. Take the bottom blade section off of your blender and the pitcher will screw directly into your mineral tank making a perfect funnel. You will load the media in the top of the media tank with the riser tube still inside the media tank. Make sure the top of the tube has a plug of tape over the end of it to keep media out! Gravel and filter media load fairly easily, softener resin sometimes clings to itself and it is easier to pour in a little at a time to work it down around the riser into the tank. Most filter systems come with gravel, while most residential water softeners do not use gravel. If your system came with gravel load it into the resin tank first. Next, scoop the media into the funnel, slowly letting it fall down inside the media tank around the riser tube, keeping the riser tube as centered as possible. If you have multiple media types in your system, the order is not important, as long as the gravel goes in first. Small amounts of media (under 10 lbs.) should be added last. If you have a twin alternating water softener using the Fleck 9000 or 9100 head, divide the media equally between the two media tanks. When you have scooped all of the media into the media tank it will not be completely full. Some systems like the Pyrolox may be a less than half full due to the density of the media. Water softeners are sized to be filled to about 2/3. Just make sure the unit is not filled past ¾ full to leave room for backwashing. Remove the media funnel and take the cover off the end of the riser tube. Inspect the top edge of the media tank. Make sure there are no deep scratches or cuts. This is where the O-ring seals against the top of the tank. If there are deep scratches, use sand paper to smooth out before connecting the control head.

NOTE: Now is the best time to fill the tank with water. Filling the tank now before putting the control head on helps decrease the air in the system that will need to be worked out later. On iron filters such as the Pyrolox, putting water in now will also help with clearing up the water later. Use a hose or bucket and fill with water up to within a couple inches of the opening on the tank. Water can and will fill the riser tube at this point.

Remove any loose media and dry any water off the top opening of the tank. Apply a silicone lubricant or very, very light coat of regular cooking vegetable oil (**DO NOT USE PETROLIUM BASED LUBRICANTS**) to the top surface of the media tank with your finger. This will help lubricate the large O-ring on the bottom of the valve. Look at the bottom of your control valve and you will see a 1” opening with an O-ring inside. Make sure to lubricate this O-ring as well. **DO NOT apply anything to the threads on the control valve or the resin tank!** If your unit came with an upper basket (see picture) the larger end will fit inside the bottom of your control valve, with the smaller end sliding over the riser tube pointing down into the tank. Tilt the valve over on top of the resin tank making sure the top of the riser tube slips inside the opening in the bottom of the



valve. Screw the valve down onto the resin tank. Have someone hold the tank as you snugly tighten the valve onto the tank. Be sure to hold the valve close to the solid body of the valve as you tighten it onto the tank. Tighten the control valve a little past snug, and then stop! Do not try to over tighten the valve onto the tank. The large O-ring will seal itself, and you will not be able to turn it any further. Your unit is ready to install!

Greensand Installation Instructions

These instructions are a step-by-step guide to installing your new Abundant Flow Water system. These are general guideline instructions for typical installations and are not designed to cover every possible application. Most systems come with a service manual that include tips on installation, be sure to refer to your service manual for additional assistance. To identify the type of control valve you have, please refer to your sales receipt. **(Please note:** Control valves are designed for a number of different systems, if your service manual refers to something not on your system, such as a brine tank, this is why.) Always check your local plumbing codes and follow any codes that apply. If you are uncertain about something during the installation of your system contact someone who is more knowledgeable for help, such as a knowledgeable friend or a plumber. We at Abundant Flow Water Follow can answer your questions about your system and water treatment, we are not, however, plumbers, so please contact your local plumber for any plumbing related questions.

Many homeowners install their own water systems with basic plumbing skills; if you are not comfortable with projects like this, please get help from a friend or a professional plumber. Abundant Flow Water systems will not be responsible for mistakes, damage or injury caused by improper installation. By making your purchase, you agree to these terms.

Read over all instructions prior to installation, and have all parts and components gathered and readily accessible. Have someone available to help you in case you need it. If you have to shut the water off to your house, be sure and turn your electric water heater off to prevent burning out the element. Once your system is installed and water is back on, open a faucet for a few minutes to help purge air out of the system before turning your water heater back on.

There are many materials that can be used for installing your new system. Copper, PVC, CPVC, and PEX are the most popular. Galvanized iron can be used but is labor intensive and requires tools that most people don't have. Flexible connectors are also used by some that don't have any interest in soldering. **BE SURE TO CHECK LOCAL PLUMBING CODES FOR ANY RESTRICTIONS ON MATERIAL THAT YOU CAN USE!** A simple hot water tank installation kit available at most Home Depot or Lowes stores will do just fine if you have 3/4" (7/8" OD) copper or CPVC. These kits include compression fittings that will attach to the filter's inlet & outlet, and to the main line. Whichever material you choose, it's a good idea to set the system in the desired location and try to estimate the number of fittings and pipe you will need. Some prefer not to soften the water spigots that go outside used for irrigation or sprinkler systems. You will have to plan the job so that you cut in the water line **AFTER** these spigots. Installing your filter after the pressure tank on a well water system is the preferred location. If you have a pH or sediment filter, your iron filter will be installed after it. If you have a water softener, the iron filter goes in before the water softener unit. Refer to your service manual for additional help with getting your system setup. Service manuals are also available for download from our website if needed at www.abundantflowwater.com. If you have questions on setting up your control head or identifying a part, email us at support@abundantflowwater.com and include the name of the person the order was placed under.

Let's Get Started!

Make sure your chosen location will be fairly level, dry, and protected from possible freezing conditions. The plastic base of the media tank is slightly adjustable to non-even floors. If shimming is needed, you can make shims from small, flattened pieces of copper pipe, or some other non corrosive material. Do not use wood or make-shift platforms as they are not very sturdy and can cause damage the tank, injury to people, or damage to property. You will need a standard 3-prong 120V outlet to plug your control valve into. We recommend using a GFI (ground fault interrupter) within 5' of your system. (Be sure to follow any local building codes) **DO NOT USE AN EXTENSION CORD!** Use of an extension cord can create a fire hazard and may void your warranty. You will need a drain or drain pipe to run your drain line to, preferable within 15 ft of your system. (Your drain line can be ran to an overhead drain pipe) You will need 1/2" I.D. (inside diameter) flexible tubing for your drain line, which can be readily found at your local hardware store. If you will be running your drain line farther than 15', use 1" tubing instead. Make sure to give yourself room to run your drain line, and do not make any sharp turns in the tubing as this will cause kinking and will prevent your system from regenerating effectively.

Installing the bypass valve:

Your unit comes with a stainless steel bypass valve. Locate it and note the direction of flow as indicated by the arrows. **IT IS IMPORTANT NOT TO INSTALL THE BYPASS VALVE BACKWARDS; DOING SO WILL RESULT IN FILTER MEDIA BEING THROWN INTO YOUR HOME'S PLUMBING SYSTEM CAUSING DAMAGE TO IT AS WELL AS THE CONTROL HEAD.** The bypass valve has either 3/4" or 1" female threads, you will need to get an adapter at your local plumbing supply store to fit your personal plumbing type. (If you are using copper adapters to connect to the bypass valve, we recommend that you first solder a 3" piece of copper pipe into each of the two copper pipe adapters, away from the bypass valve, and let the adapters cool off completely before connecting them to the bypass valve. *This simple step will ensure that you are not applying any excess heat as you solder pipe into the adapters.*) Once you are ready to connect your adapters to the bypass valve, apply a high quality plumber's pipe joint compound (Teflon tape is NOT recommended) to the threads on the adapters and on your bypass valve. Screw the adapters into the bypass valve good and tight. (A vise is an excellent tool to hold the bypass valve as you ensure the adapters are tightened securely.) **DO NOT tighten the adapters into the bypass valve while it is connected to the control valve, as this may damage the control valve and may prevent you from tightening the adapters properly.** Once your adapters



are connected to the bypass valve, connect your bypass valve to your control head. Ensure the arrows on the bypass valve line up with the arrows molded on the control valve. Use a small amount of silicone lubricant or vegetable oil on the O-rings of the control valve, and then slip the bypass valve on. Use the clips on the control valve to secure the bypass valve to the control head (see picture). Tighten the screws that hold the clips in place, but **DO NOT** over tighten them, as this will crack the control valve and cause leaks.



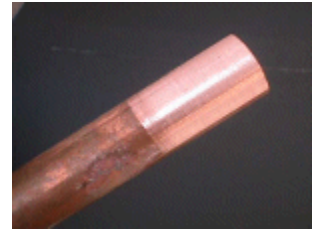
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Plumbing in your filter unit

PLEASE READ ALL INSTRUCTIONS FIRST BEFORE STARTING, THIS WILL HELP WITH ANY CONCERNS OR QUESTIONS YOU COME UP WITH LATER!

If you have private well, turn the power off to the pump then shut off the main water shut off valve. If you have municipal water, simply shut off the main valve. Go to a faucet, (preferably on the lowest floor of the house) turn on the cold water until all pressure is relieved and the flow of water stops. If your hot water tank is electric, turn off the power to it to avoid damage to the element in the tank.

Locate the media tank with control valve installed in the desired location; left of a vertical main line is ideal. This way the inlet can be easily ran to the main line, then the outlet a few inches higher. If you're installing a unit with a bypass valve, notice that these assemblies will travel slightly up and down. This is normal because of the O-ring seals at each end. You may need to support this into a level position with a temporary brace until the pipes are soldered, or glued together, and all pipe straps are installed for a neater, straighter job. When installing take care not to exert too much force on the bypass valve. Take the bypass off when installing fittings if need be. If you plan to solder the connections, remember the pipes must be clean, shiny (see picture), and DRY. **DO NOT** try to stuff bread into a pipe to stop water from dripping into your fittings. If a shut off valve leaks some water slightly or the pipes above keep dripping, try to install a new valve, or drain down the house's plumbing further by opening more taps and or removing some water from the bottom of the hot water tank with power and/or gas off. Use a high quality soldering flux and solder used for making plumbing connections, not electric wire. Always wear safety glasses. A fire extinguisher nearby is also a good idea for novice plumbers to have handy.....just in case. Soldering will cause some smoke detectors to go off if located in close proximity.



Mark your "cut in point" on the main line with a pencil. Cut your line on this mark. Cut the line again about 2 to 4 inches above the first mark, then remove the section of line just cut. Clean the cut ends, flux (if copper) and wait for any water to drain completely out. You may also want to siphon some water out of the main line, just enough so the water level standing in the pipe is lower than where you will attaching the fitting. Measure pieces of pipe, clean, flux and complete the inlet connection to the main line. This will be the connection that carries the untreated water to your system. **(When soldering ensure that the bypass valve is in the "Service" position (see picture) to help avoid heat damage and open a nearby faucet to allow steam to release. Failure to do so can cause poor solder joints and can lead to leaks.)** Do the same for the outlet, the connection that carries treated water back to your home. Once you are finished, give the connections time to set, (time varies according to material used and method of sealing), then place the bypass valve in the "Bypass" position (see picture). Make sure a faucet is open somewhere and that any aerator is removed to avoid clogging from loosened scale in the pipes. Turn the main valve on slightly all the time watching for leaks. Leave the bypass valve in the bypassed position and slowly turn the main shutoff valve on all the way. If you have no leaks, proceed to the next steps. If leaks are discovered, turn main water supply off and correct before moving on.



Connecting your drain line:

Your drain line connection should be attached the back of your control head already (see picture). Check to ensure that it has been properly sealed into the control valve, if not, remove from control head and wrap with Teflon tape. Replace in control valve and tighten down. Use a hose clamp to connect your drain line to the drain barb fitting. Drain line is not usually included with the unit since it is part of your plumbing and every application is different. You will need some 1/2" inner diameter flexible tubing you can get from any hardware store to use. If running your drain line more than 15', you will need to use 1" tubing instead. Run your drain line to a nearby drain or drain pipe. It can be ran up overhead or down along the floor. Please follow your local health department codes for where to run filter discharge water. **NEVER MAKE A DIRECT CONNECTION INTO A WASTE WATER DRAIN. A PHYSICAL AIR GAP OF AT LEAST 3" SHOULD**



BE USED TO AVOID BACTERIA AND WASTEWATER TRAVELING BACK THROUGH THE DRAIN LINE INTO THE FILTER. Using a simple P-trap or a standpipe of at least 1-1/2" on your homes drain line to connect to is always best.

Connecting the chemical tank

Before connecting the potassium tank to the system, you need to take the chemical float valve assembly out of the potassium tank and **remove the rubber band from the bottom of the assembly**. The float valve should be set at 3/4" above the felt pad level to maintain the correct mixture of potassium for your system. You just have to estimate the float level at this time. Next, connect your potassium tank to your system. One end of the 3/8" brine line tubing will be connected to your potassium tank and the opposite end needs to be connected to your control valve. This connects to the fitting on the side of the control head (see picture) with the brass nut,



ferrule, and brass insert as shown (see picture). **Note: Some systems come with only an insert, a ferrule, and the nut. These parts are usually located with the service manual.** Do the same thing to connect the other end to the brine tank. If your system came with a mesh screen insert, it will go inside the brass insert on the end of the line that connects to the chemical tank. (Parts for the chemical tank are usually inside the chemical tank. Be careful not to over tighten and cause leaks.

Note: If you already filled your tank with water before placing the control head on the unit, skip the next paragraph! Ensure that all faucets in the house are closed, leaving just one open, preferably an outside line (if connected to the filter) a laundry sink or bathtub. **NOTE:** If you have a water softener or any other filter system installed inline after the greensand system, put that second unit in bypass to keep the black dust from the iron filter from filling up that second unit or water softener. This will not damage your water softener but just takes longer to clear out the black dust from your plumbing and system tanks. This is only needed for the initial running of water until clear. Turn the bypass valve slightly to allow water to run into the unit. You want water to initially fill the tank slowly. This prevents media from being pushed up into the control head by the initial surge of water going in. Once the tank is full of water you should start to see water flowing from the open faucet. It may look discolored at first. This is normal. If the media tank is overfilled, some media may come out the drain at first. This is ok as long as it is just a slight amount. Once the water is free from air pockets, go ahead and turn the bypass valve into the "service position". You should have a full flow from the open faucet at this point. Leave the faucet on until the water runs clear, then close it and go around opening the other faucets in your house one by one until the air is out of all of them.

For greensand iron filter units and other iron filters, it is best to let the unit stand with the water in it for 12-24 hours before running water through the unit. You can keep the bypass valve in the "bypass position" and leave the control valve unplugged to keep water running in your home. Letting the water tank stand with the water inside allows air to work itself out of the filter media and helps to clean the media fines that collect during shipping. **NOTE:** If you have a water softener or any other filter system installed inline after the greensand system, put that second unit in bypass to keep the black dust from the iron filter from filling up that second unit or water softener. This will not damage your water softener but just takes longer to clear out the black dust from your plumbing and system tanks. This is only needed for the initial running of water until clear.

System Start-up

After the tank has been standing with water for 12-24 hours, open a faucet that is near the system, a laundry sink or outside faucet (if it will be treated by the system) is ideal. Slowly open up the bypass valve to the full open service position. Let water run out of a close by faucet for 30 minutes to an hour. The water may be discolored, this is normal! Once it clears up (which can take up to 2 hours) move on to the next step.

You will need to make sure the float on the potassium tank is adjusted to the correct level before adding potassium permanganate. See the service manual for advancing the control head to the different positions. As you advance the control head by turning the knob clockwise to each position, allow a minute or two in each position before advancing to the next to give time for the motor to move the piston (make sure unit is plugged in at this point). The 1st position will be backwash, 2nd is brine draw where it pulls water out of the potassium tank, 3rd is another backwash, and 4th is brine refill. This is where it puts water in the potassium tank. This is the step you want to stop on and let it run through. This will put water in the potassium tank. Once the water hits the float level, the water will stop entering the potassium tank. The cycle will continue until it times out, but the float valve stops the water from entering. After the water flow stops, check the level of the water in the potassium tank. Make sure it is about ¾" above the felt pad level. If too high, lower the flow as needed, if too low, raise the float as needed. The float valve is adjustable by using the rubber grommets on the rod that is part of the float valve.

Once the float is set properly, you can pour potassium permanganate into the chemical tank. **WARNING! Potassium permanganate is a very strong oxidant and can damage skin, eyes, and can be fatal in large doses. It is very similar to bleach in its chemical makeup and how it works. Make sure to wear gloves and goggles when using the chemical.** You can pour in part of a bottle or a whole bottle if you want. About 1.5 ounces will dissolve into the amount of water you have in that tank determined by the float valve. This will give a mixture ready to use by the unit when it regenerates. You will need to check the level of potassium in the tank once every month or so and add more as needed. Potassium permanganate can be ordered through us on our website at www.abundantflowwater.com by the case which will last a year or so.

The amount of Potassium permanganate is used to regenerate the greensand media then the excess washed off down the drain. There is a residual left in the water in your home but is in the safe limits range similar to chlorine in city water. If you see your water turn a pink or purple color, then the float is set too high and dissolving too much potassium permanganate. For safety, you can install a carbon filter (we recommend a 20" "Big Blue" carbon filter) in line after the greensand unit to eliminate all traces of the potassium permanganate from your water after the unit. This gives you the safest water for use in your home if the chemicals in your water is a concern. Some people prefer to use an RO system or carbon filter under the sink to clean only the cooking and drinking water. Any of these types of filters can be ordered from our website at www.abundantflowwater.com

Note: You may get a lot of discoloration in your water the first few days. After the first few regeneration cycles, you may get a few minutes of discolored water coming out the faucet. This clears up as the unit is used and regenerated and after the first week or two, the water will be clear.

Note: You will be using the timer control head on an iron filter system so refer to the settings for the timer model. For an iron filter, you want to set the regeneration cycle to regenerate a minimum of every 3 days. For heavy iron, at least every 2 days is preferred. See the manual for setting the days of regeneration.

When the filter media is new, the water will be treated as soon as raw water flows through the tank so regenerating is not required unless you just want to observe the regeneration process to check for leaks. Regenerating right away does help to clean the media and is a good idea to do within the first day after installing a pyrolox system. Remember that the first few days you can have some discolored water. It is a good idea to let the water run through a close by faucet for a couple hours after install before a regeneration to help

flush air and dust from the media. You may also see some discolored water after the first few regeneration cycles initially.

When installing an iron filter, it is a good idea to chlorinate your well and system. You can do this by pouring a couple gallons of bleach into your well, turning on water in the home until you smell chlorine, and then let it stand not being used for a few hours. Then run to flush out. You can do a regeneration on the iron filter at this point too. The Iron filter media is actually rejuvenated by using chlorine helping the media to last longer. Chlorinating helps to remove iron sulfur build up from your plumbing and hot water tank that has been building up. It is a good idea to do this once or twice a year.

Pyrolox media and iron filter media will last on average about 4-5 years before needing changed out. This can vary depending on the actual amounts of iron and sulfur in your water and other water chemistry. If you have problems, make sure to get a complete laboratory test of your water. Such things as pH, hardness, iron levels, etc can all make a difference on how well this particular unit will work. In some cases the filter media may need changed every couple years for severe iron and sulfur.

In severe sulfur cases, you may need to put a carbon filter inline after the iron filter unit. A 20" big blue carbon block filter is usually fine in removing the small residual amount of sulfur that may get through after a pyrolox system. These can be ordered from us or on our website. You can also use a back flushing tank system such as the catalytic carbon system. These can be helpful in extreme sulfur cases when the levels are too high for the pyrolox. This is rarely needed, but an option.

Pyrolox media and gravel can be ordered from our website when needed for replacement. www.abundantflowwater.com You just put the unit in bypass to keep water going in your home, disconnect the bypass valve from the control head using the 2 screws on the side. Unscrew control head, siphon or pump out water, dump out old filter media. Then put in new gravel and filter media following instructions for loading above.