

Overview

This installation guide gives a step-by-step, start to finish procedure for installing your whole house water conditioner.

Your new system from the Ohio Pure Water Company also comes with a Fleck Service manual, which, along with these instructions, will help explain the necessary details required for successful installation and operation of your system.

Please refer to these instructions and the Fleck service manual supplied with your system during installation and programming.

All steps provided herein are for typical installations only. If you require additional plumbing to install your system, simply contact a friend, relative or plumber who is knowledgeable in residential plumbing or have a local plumbing company help you install, or will install the system for you.

There is a bit of “over-kill” in our instructions, but please bear with us as we want to ensure that you, our customer, fully understand the instructions and are completely satisfied with your installation!

We also recommend that you take a few minutes and look at the Fleck service/parts manual for your particular model valve, to help you better understand your new system.

Take your time and carefully read all instructions.

Get all of your plumbing parts together before you start, and have an assistant available to help you, if possible. Typical installation should take no more than a few hours.

If you are going to turn the water off to your house while installing the system, we recommend that you turn off the electricity to your electric water heater during this installation. After the system is installed with water running through it, turn on a single cold-water faucet, and let it run, which will help expel any trapped air from your plumbing lines, then turn the electricity back on to your water heater.

Our systems can safely handle a pressure range of 35-95 psi. However, as with most residential plumbing and for best operation causing the least wear on critical parts, we recommend an operating range of 40-65psi. All you have to do is basically plumb in the system, plug it in and set the current time of day!

Pre Installation for Fleck 5600 - 12 Day Timer Valves

Your system should be located in a protected, dry, level and non-freezing area.

We recommend draining the regenerate water, to a 1½” drain if possible, (similar to a washing machine type drain), or a sump pit, or to a drain outside the house such as a downspout gutter drain. This drain should be no farther than 15 feet from where the new system is installed.

You will need to purchase the flexible ½” I.D. (Inside Diameter), plastic tubing from a local hardware or building supply store. This flexible drain tubing will run from your Fleck valve, to the drain.

This flexible line can also be routed overhead, from your Fleck valve, in order to gain access to the drain. Be sure to make long radius, sweeping turns in the flexible line, so there are no “Kinks” in the drain line, which would restrict drain line water flow during regeneration.

If you need to run the valve drain line over 15 feet, we recommend increasing the drain line size coming from your Fleck valve to 1”.

You will need a standard 3-prong, 120V, grounded outlet that is not controlled by an on/off switch. Our Fleck valves have a 5’ power cord, but you can use an extension cord if an outlet is not nearby. Please follow any local building/safety codes if you decide to use an extension cord.

IMPORTANT NOTE! IF you have a water softener and decide to set the brine tank in your garage and the softener unit inside the house or basement, remember that the brine water inside the brine tank will not freeze readily, but the fresh water in the small 3/8” plastic water line running from the Fleck valve to the brine tank will. Make certain the garage is warm enough to prevent this 3/8” line from freezing!

Make a list of all the plumbing fittings you will need to completely install the system to make it ready for operation. Assemble all tools needed to install the system, and start your installation!

Loading the Media

Loading your Ohio Pure Water Company Greensand Unit is simple, and interesting!

Please follow the step-by-step loading instructions below.

Loading the unit should only take about 15 - 20 minutes.

NOTICE:

All our Greensand units will include a small box of gravel.

Please put the gravel inside the mineral tank around the riser tube first, and then add the media on top of the gravel.

Look inside your media tank, (the tank that is tall and slender with a 2 ½” hole in the top of it), and there will be a 1” plastic tube inside. This is the “Riser Tube” that delivers conditioned water into your home through the Fleck valve. It should be the same height as the media tank...and have a plastic plug on the top end of it, so nothing can fall down inside the tube while you are loading the media. (See **Fig. 1**)



Figure 1

If there is not a plastic plug in the top of the riser tube, simply put a piece of tape over it, to keep the media from falling inside 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 again. The boot will move and be easily adjusted, so the media tank will stand up straight.

Put the media funnel we supply with every complete order, 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 plastic plug or some tape over the end of it to keep media out!

Next, fill the Media tank about 1 /4 full of water first, before pouring any gravel or media inside the tank.

Again, be sure to install the gravel into the tank first...

As you put the gravel inside the media tank.... be sure to keep a finger on top of the riser tube holding it down and in place, as the force of the gravel dropping down inside the tank, can sometimes get under the plastic riser tube, forcing it up and out of the tank.

Next, scoop or slowly pour the media into the funnel, allowing it to fall down inside the media tank around the riser tube. (See Fig. 2)



Figure 2

When you have installed all of the media into the media tank, the tank will be approximately 1 /2 to 3 /4 full of media.

NEXT... BE SURE To REMOVE THE PLASTIC PLUG OR TAPE, FROM THE TOP OF THE RISER TUBE, BEFORE INSTALLING THE 5600 VALVE ON TOP OF THE MEDIA TANK!!

Brush any loose media off the top opening of the tank, and apply a light coat of regular cooking vegetable/olive oil 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.

(See Fig. 3)



Figure 3

DO NOT use any oils or grease that are petroleum based!

Also, DO NOT apply anything to the threads of the 5600 valve or to the inside of the Media tank threads!

Once all the Media is inside the Media tank, fill it water until it is about 5-6" from the top opening of the tank. This will make it so there is very little air left in the tank that will be forced out into your home plumbing lines, when you put the unit into service position.

Inside the bottom of the control valve, you will also see a 1" opening with a couple of "O" rings inside. When positioning the control valve over on top of the media tank, make sure the top of the riser tube inserts through this opening in the bottom of the valve.

Have someone hold the media tank, as you slowly turn the control valve in a clockwise direction into the top opening of the tank.

As the control valve screws into the opening of the media tank, it will soon stop turning as it finally makes contact with the top of the tank opening.

***** IMPORTANT*****

Once the control valve makes contact with the top opening of the tank, make a small "Witness Mark" somewhere on the bottom edge of the control valve and the top of the tank.

You need to then tighten the control valve at least another 90 degrees further ...but no more than 180 degrees past this mark.

Be sure to grasp the body of the valve..... Not the control head, as you tighten it onto the tank.

Your unit is now ready to install!

Fleck Yoke & Bypass Installation Guide

For the 5600 - 3 /4” Valve

Turn off the main water shutoff valve.

Next, open all plumbing fixtures in the house including all outside faucets in order to drain the lines of all water possible.

Cut and remove a section of the main incoming water line near where the system is to be installed. Allow this line to drain thoroughly. On well applications, this cut will be made in the plumbing line located immediately after the well pressure tank.

Remove the yoke or bypass valve from the back of the Fleck valve by loosening the two small stainless steel clamps on either side of the valve assembly, which holds it in place. Next, simply pull it off the back of the valve body.

Now that you have the yoke or bypass valve removed, follow the directions below to make them ready to install on the valve.

Instructions for installing a Noryl Yoke, a Stainless Steel Yoke, or a Stainless Steel Bypass Valve

If you have a Noryl Yoke, it will have two 3/4” or1” male thread nipples on the yoke. You will need to buy two 3/4” or1” Female thread adapters to whatever type and size of piping you are plumbing the system to.

If you have a Stainless Steel Yoke, it will have two 3/4” or1” Female thread openings in the yoke, (one inlet & one outlet). You will need to buy two 3/4” or1” Male thread adapters, to whatever type and size of piping you are plumbing the system to.

If you have a Stainless Steel Bypass Valve, it will have two 3/4” or1” Female thread openings in the yoke, (one inlet & one outlet). You will need to buy two 3/4” or1” Male thread adapters, to whatever type and size of piping you are plumbing the system to.

If you are using copper adapters to connect to any of these connections, we strongly recommend that you first solder a 3” piece of copper pipe into each of the two copper pipe adapters, away from the yoke or bypass valve, **and let the adapters cool off completely before connecting them to the yoke or bypass valve.**

See Figures 4 & 5 below



Figure 4

&



Figure 5

After the adapters have cooled off, apply a high quality, plumber's pipe joint compound to both the threads of the yoke, bypass and/or plumbing adapters. (See Fig. 6)



Figure 6

We do not recommend using Teflon Tape on these coarse Yoke or Bypass thread connections...

We strongly recommend securing the yoke or bypass valve, in a vise or other secure means, so the plumbing adapters can be properly tightened & secured onto the Yoke or Bypass valve.

Remember to complete this step before you re-attach the yoke or bypass valve onto the Fleck valve/meter body assembly.

WE DO NOT recommend connecting plumbing adapters to either the yoke or bypass valve, while the yoke or bypass valve is connected to the Fleck Valve assembly! You may exert too much pressure on the valve while securing the adapters, causing damage to the valve body!

After all soldering is finished and the adapters are cooled off and securely threaded onto either the yoke or the bypass valve assembly, then attach the yoke or bypass valve back onto the valve assembly and secure it with the two small stainless steel clamps.

Do not over tighten the small screws onto the stainless steel clamps. Once the screw heads contact the SS clips, the screw is tight enough.

Now position your conditioning system in place for the final water line installation.

Remember; if you are using the Fleck bypass valve, make certain the bypass valve is set in the “Service” position, while soldering the pipes connecting the unit to the house plumbing.

Return the Bypass valve to the “Bypass” position before turning your water back on to the house.

Measure and cut the lengths of plumbing pipe you need, to plumb the main hard water line into your system. Then do the same for the conditioned water line that will exit from the system, back out into the house.

NOTE As you look directly into the two holes on the Fleck valve, the hard water line will always enter the hole on the LEFT SIDE of the yoke or bypass valve assembly. The valve body also has an arrow stamped into each side, showing the direction of flow.

If you use the Fleck bypass valve, arrows indicating water flow direction are also printed on the top of the bypass valve assembly.

5600 Pot/Perm Tank and Line Installation

Locate the 4' piece of plastic, 3/8" diameter Pot/Perm tube, normally shipped inside the Pot/Perm tank. Next, as you stand in front of the 5600 valve, locate the Brass injector nut on the lower, Right hand side of the valve body.

Remove this nut, and it should have a white plastic compression ring inside the nut. (See Fig 7)

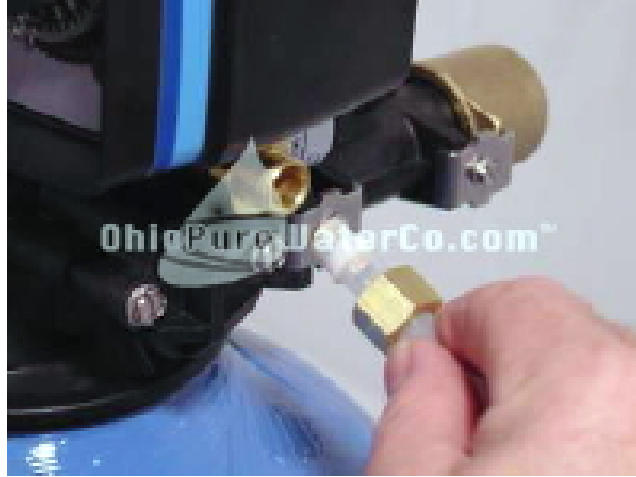


Figure 7

Slide the Brine Injector Nut over the end of the brine tube first, with the threads facing the end of the tube. Then slide the white compression ring on the tube with the tapered end of the ring towards the end of the tubing.

Insert the end of the tube fully into the opening on the Fleck valve where the Brine Injector Nut was located, then slide the compression ring and nut up the tube, threading the nut back onto the threads.

Tighten the nut carefully, but snugly, with a small wrench

Look inside your Pot/Perm tank and you will see a 3" diameter "Brine Well" tube. Remove the lid off the top of the Brine well and look inside this tube.

Here you will find the Safety Float Assembly. The float assembly works similar to a toilet tank float, shutting the water off inside the Pot/Perm tank should the level of water get too high. (See Fig. 8)



Figure 8

The slotted "Air Check" located at the bottom of the Safety Float Assembly, simply keeps the valve from sucking air into the unit, when the water level inside the Pot/Perm tank gets close to the bottom of the Pot/Perm tank....

On top of the float assembly, you will see an elbow with a plastic nut. Carefully remove the nut and you will find two small compression rings inside the nut, one clear/black and one white. These small pieces help seal the end of the 3/8" tube that connects the Pot/Perm tank with the Fleck valve. (See Fig. 9)



Figure 9

Next, insert one end of the 3/8" tubing through the hole in the side of the Pot/Perm tank and Pot/Perm well, and slide the nut onto the tube with the threads facing the end of the tube. Then, slide the two small compression rings onto the tube, the clear/black piece first, then the white piece making sure the flat edges of both rings are together. (See Fig. 10)



Figure 10

Now insert the end of the tube into the black elbow as far as it will go. Hold it there as you thread the nut onto the plastic elbow, securely tightening it finger tight and then tighten it about 1/16 turn more, which will tighten it just pas finger tight. This will compress the two rings inside the nut onto the tubing.

Replace the lid on the top of the Pot/Perm well!

Filling the Pot/Perm Tank.....

Before adding any Pot/Perm powder to the Pot/Perm tank, be sure to pour water into the Pot/Perm tank first, until the water is about 1” above the white pad that is on top of the plastic grid, in the bottom of the tank.

After adding the water to your Pot/Perm Tank...then add about 3 lbs of Potassium Permanganate powder and securely put the cover back on top of the tank.

Your Pot/Perm tank is now finished and ready for use!

Notice the plastic elbow that is located on the side of your Pot/Perm tank. This is a "Safety Overflow Gravity Drain", and will use the same size drain line that is used on the valve drain (1/2" ID flexible plastic line). This drain line will not be under pressure, so it must be directed to a drain that will drain by gravity. (See Fig. 11)

NEVER connect the drain line coming from the Fleck valve...to the Pot/Perm tank safety overflow.....!! Each drain line must run separately to your house drain.



Figure 11

Installing the Drain Line on the 5600 Valve

The 5600 Fleck valve has a drain hose barb, located on the back, right side of the valve, which is screwed into a Drain Line Flow Control Housing.

(See Page # 6 ...part # 52 of the 5600 Service Manual)... (See Fig. 12)



Figure 12

First, check to make certain this drain hose barb is securely threaded into the Drain Line Flow Control Housing, and that the threads have been sealed with **Teflon tape**.

Once the drain hose barb is installed properly into the Drain Line Flow Control Housing, carefully push the ½" ID plastic drain hose completely over the barbed end of the fitting, and then attach a small hose clamp so the line cannot work loose over time.

Run the opposite end of this drain line, to the drain in your home plumbing system.

Remember to leave a small air gap at the end of the hose going to the house drain. (Follow local plumbing codes), and secure it there.

(To make an "Air Gap" at the end of the drain line, basically means that you don't let the end of the drain line touch any standing water that is in the drain. Simply leave a small air gap space between the end of the drain line and any water standing in the drain you are using.)

When the system is in the regeneration mode, water will flow out of this drain line with a fair amount of pressure, especially during the "rapid rinse phases" of the process, and the line may sometimes "jump" a little when changing cycles, **so it is important to make sure the end of the hose is secured to your drain, so it can't accidentally come out of the house drain.**

Turning the Water Back On to Your Home

INSTRUCTIONS FOR USING A FLECK YOKE

If you are using the Noryl or Stainless Steel yoke with no bypass, turn all faucets in the house to the off position, except one faucet, (preferably an outside faucet, a laundry sink or bathtub).

Next, turn your water back on slowly, letting this one faucet run open for several minutes, allowing the water to rinse the inside of your new media tank out and settle the media.

Sometimes you may experience some light color rinsing off the new media... This is normal...and should only last a short time. This is why we suggest running the water through one faucet initially, to clear the softener of this colored water and any small particles.

After a few minutes, when the water is running clear...turn the faucet off and start opening each faucet in the house one by one until all the air is out of the water lines.

You now have conditioned water on your cold side! The hot water will take a couple of days to be conditioned, as your water heater is full of raw untreated water.

INSTRUCTIONS FOR USING A FLECK BYPASS VALVE

If you are using a bypass valve, make sure your new bypass valve is in the "BYPASS" position.

Turn your water back on slowly, leaving all your faucets in the house open until water starts coming out of them. After they are all running steady and the air has been expelled out of the water lines, turn them all off one by one. The raw water will be bypassing your new conditioner system at this time.

Next, open one cold-water faucet about half way open, (preferably an outside faucet, a laundry sink or bathtub with no aerator). Allowing the water run out of it until you have the new unit turned completely to the "Service" position.

With the one cold water faucet running half open...Slowly open your bypass valve very slowly from bypass position, to full service position. Your water will now be running through the new conditioner unit, and out the one cold-water faucet you left running open half way.

Sometimes you may experience some color rinsing off the new media... This is normal...and should only last a short while. This is why we suggest running the water through only one faucet, to clear the new unit of this colored water and any small particles from the new media bed. Once the water is running clear.....turn the faucet off.

Your plumbing system will now pressurize as all faucets are closed. You now have conditioned water on your cold-water side throughout the house.

5600 Fleck Valve Post Installation

(Setting the 12 Day Timer & Time of Day)

To set the day of each regeneration, simply push the small metal tab towards the outer edge of the 12-Day timer Dial.

(Example: For every 4th day regeneration you would push the small metal tabs out on numbers 4, - 8, - & 12...) (See Fig. 13)



Figure 13

After setting the number of days you want the filter to regeneration at, set the current time of day in the little “Time of Day” window...located at the bottom, of the large knob in the front, center on the front of the 5600 valve. With the current time of day set in the “Time of Day” window, the Filter will automatically Regeneration around 2:00am.

Next, run your Fleck 5600 valve through a manual regeneration cycle by simply turning the large, “Manual Regen” dial located on the front, center of your 5600 valve, clockwise.

Start with the notch located on the outer edge of the Manual Regen dial, where you can see the words “In Service”. (Should be located to the right side of the knob, at the 9:00 position)

Slowly turn the dial clockwise until the notch is pointing straight up towards the top of the valve (12:00 position)...stopping here for about 30 - 60 seconds, to help expel any residual air out of the media tank and valve.

Next, run your Fleck 5600 valve through a manual regeneration cycle by simply turning the large, “Manual Regen” dial located on the front, center of your 5600 valve.

Start with the notch located on the outer edge of the Manual Regen dial, where you can see the words “In Service”. (It will be located on the right side of the dial at the 9:00 position) (See Fig. 14)



Figure 14

Slowly turn the dial clockwise until the notch is pointing straight up towards the top of the valve (12:00 position)...stopping here for about 30 - 60 seconds, to help expel any residual air out of the media tank and valve. (See Fig. 15)



Figure 15

Next turn the dial to where the notch is located, pointing toward the right (at the 3:00 position), also stopping here for about 30 - 60 seconds... (See Fig. 16)



Figure 16

Then turn the dial again to where the notch is pointing down, towards the media tank (6:00 position)... also stopping here for about 30 - 60 seconds.... (See Fig. 17)



Figure 17

And finally turn the dial until the notch is back on "In Service"... At the 9:00 position)...

Even though it takes about 2 hours for this center knob to complete one revolution, the Regeneration/regeneration cycle of your unit, will be about 90 minutes long, depending on the size and type system your valve is operating.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line, and the regeneration is complete.

Once you have completed turning the “Regen” knob one complete revolution and it is set back to the “Service” position, the system is now ready for use!

<<<We recommend that you regenerate your new Greensand unit>>>

The Greensand media should be regenerated with a fresh charge of Potassium Permanganate, as soon as the unit has been installed, to help the Greensand media work better.

Check all connections for leaks.

The installation is now complete and you now have filtered water!

Final Notes

Remember...Even though you now have conditioned water in your cold water lines, your water heater is still full of raw water. Through normal water use, this raw water will be replaced with conditioned water in about 2 to 3 days.

We supply a toll free number (**888-644-6426**), to all of our customers to use, in case they don't understand something contained in our installation instructions.

Please give us a call if you are not sure about anything to do with your new unit!
We are glad to help you get the unit installed right and operating properly!

Be sure to follow your local plumbing, building and safety codes when installing any of our systems.

Also, email us a picture of your installed system!! Let us see how good of a job you did on the installation.

Thanks again, to have the opportunity for your business!!