

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 20-95 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!

Fleck Bypass Installation Guide

For the 7000 - 1-1/4" 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 Connector Assembly from the back of the Bypass valve by pulling the two plastic "H" Clips up, and out of the Bypass body. Then simply pull each of the Connectors out of the back of the Bypass Assembly. **(Fig. 1A & 1B)**



Figure 1A



Figure 1B

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

If you have a **1" Connector Assembly**, it will have...1" male thread nipples on the end where you will connect your plumbing pipe. You will need to buy two 1" Female thread adapters, to whatever type and size of piping you are plumbing the system to. **(Fig. 2)**

If you have a **1- 1/4" Connector Assembly**, it will have...1- 1/4" male thread nipples on the end where you will connect your plumbing pipe. You will need to buy two 1- 1/4" Female thread adapters, to whatever type and size and type of piping you are plumbing the system to. **(Fig. 2)**



Figure 2

If you have a **1- 1/4" Brass Sweat Connector Assembly**, it will have a 1- 1/4" opening, where you will connect your 1- 1/4" copper plumbing pipe directly into the Brass Connectors **(Fig. 3)**

If you are using the Brass Sweat Connectors, we recommend that you remove them from the Fleck Bypass valve, then remove the "O" Ring located on the end of the connector.

Next, solder a 2 - 3" piece of copper pipe into each of the two Brass Connectors, away from the plastic bypass, and **let the adapters cool off completely** before re-connecting them back onto the Plastic Bypass valve.



Figure 3

This simple step will ensure that you are not applying any excess heat to the plastic bypass, as you solder copper pipe into the connectors, before installing them back onto the plastic bypass assembly.

Once the copper nipples have been soldered into the Brass Connectors, and they are cool to the touch, re-install the “O” Rings onto the end of the Brass Connectors, and then re-install the connectors back into the Plastic Bypass.

Be sure the Brass Connectors are completely pushed into the Plastic Bypass Valve before putting the plastic “H” clips back in place. (Fig. 4)



Figure 4

Sometimes a slight twisting motion combined with firm pressure will insure the Connector assembly is fully seated into the bypass.

NEVER force an “H” clip into the slot where it should be installed.

If you have to apply force the “H” Clip.... the Connector is not fully seated into the bypass....

When you are ready to start soldering the copper fittings onto the other end of the copper nipples you installed earlier into the Brass Connectors, gently wrap a cloth soaked with water around each of the Brass Connector assemblies where the attach to the Plastic Bypass.

These wet cloths will help protect the plastic bypass valve by soaking up the excess heat that will be conducted back towards the plastic bypass valve, from the copper fitting.

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

Remember; if you are using the plastic 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 7000 Bypass valve to the "Bypass" position before turning your water back on to the house. (Fig. 5)



Figure 5

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 stand in the back of the valve...and 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 rear of the valve body also has arrows stamped into the top area of the inlet and outlet each side, showing the direction of flow. (Fig 6)

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



Figure 6

Loading the Media

Loading your whole house conditioner is simple, and interesting! Please follow the step-by-step loading instructions below. Loading the unit should only take about 15 - 20 minutes.

NOTICE:

You Manganese Greensand system 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 1/2" 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. (Fig. 7)

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!



Figure 7

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.

Fill the resin tank with about 12" of water first, before adding any gravel or resin to the tank.

This will help protect the basket riser tube from damage while filling the resin tank with gravel or media.

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!

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. **(Fig. 8)**

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



Figure 8

NEXT...REMOVE THE PLASTIC PLUG OR TAPE, FROM THE TOP OF THE RISER TUBE, BEFORE INSTALLING THE 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. **(Fig 9)**

DO NOT apply oils or grease that are petroleum based...

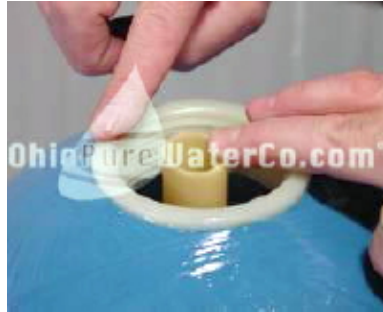


Figure 9

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

Fill the media tank with 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.

Included with most Fleck valves will be a Top Distributor Basket. This Top Basket helps to insure that the media remains in the tank during backwash, when the unit is subjected to higher than normal water pressures, (70-90 psi), which are present in a few areas of the US.

The basket looks similar to the one at the bottom of the distributor tube that you installed in the tank earlier. This basket has small tabs on the larger end, which will allow it to connect onto the bottom of the Fleck control valve.

Simply attach to the bottom of the valve by aligning the small tabs on the basket with the slots on the bottom of the Fleck valve and then twisting it a bit, to secure it there.

Inside the bottom of your Fleck valve, you will also see a 1" opening with a couple of "O" rings inside. When positioning the Fleck valve over on top of the media tank, make sure the top of the riser tube inserts through the bottom opening of the top distributor basket and then into the opening in the bottom of the valve.

Continually turn the valve head in a clockwise direction only, as you gently force the valve down onto the riser tube, and as the valve begins to screw into the top of the media tank.

By turning the Fleck valve in a continuous clockwise direction, you will insure the Top Basket you installed on the bottom of the valve body, will not twist off, but will remain connected to the bottom of the valve.

Have someone hold the media tank as you snugly tighten the valve onto the tank. Be sure to grasp the body of the valve... Not the control head, as you tighten it onto the tank.

Also, Do not 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. Tighten it snugly, then snug it a bit more and stop!

Your unit is now ready to install!

7000 Pot Perm Tank & Line Installation

Locate the 4' piece of plastic 3/8" tubing supplied inside the Pot Perm tank. Next, as you stand in front of the Fleck valve...locate the male thread Pot Perm line tube connection fitting located on the top, left hand side of the valve body.

This is where the 3/8" Pot Perm line attaches to the 7000 Valve. **(Fig. 10, 11, 12)**



Figure 10, 11, 12

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 Clear/Black compression ring on the tube with the tapered end of the ring towards the inside of the nut. Finally, slide the white compression ring onto the tubing with the small 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 with a small wrench, just past finger tightand stop.** (See Fig 11)



Figure 11

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 Brine 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 12)



Figure 12

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 13)**



Figure 13

Next, insert one end of the 3/8" tubing though the hole in the side of the Pot/Perm tank and Pot/Perm well, and slide the black 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 14)



Figure 14

Now insert the end of the tube into the black elbow as far as it will go. Hold it there as you thread the black nut onto the plastic elbow, securely tightening it finger tight and then tighten it about 1/8 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 15)

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 15

Installing the Drain Line on the 7000 Valve

The 7000 Fleck valve has a drain hose connection located on the upper, right side of the valve. **(Fig. 23)**

This Male thread will have an Adapter that will screw onto it, so you connect your 1 /2" ID Drain line to your 7000 valve. **(Fig 24)**

DO NOT over tighten the Adapter fitting onto the DLFC Connector Assembly.



Figure 23

&



Figure 24

The Drain Line Flow Control (DLFC) Assembly is connected into the drain opening on the valve body, by firmly pushing it into the drain opening and securing it there by the Drain Retainer Clip. **(Fig 25)**



Figure 25

Once the DLFC Assembly is installed properly into the valve body, connect your 1 /2" ID drain line to the barbed adapter, and [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 drain line 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 drain line is secured so the end of the pipe can't accidentally come out of the drain.**

Turning the Water Back On to Your Home

INSTRUCTIONS FOR USING A FLECK 7000 BYPASS VALVE.

If you are using a bypass valve, make sure your new bypass valve is in the "BYPASS" position. Use a screwdriver if needed to help rotate the bypass knobs located on each side of the bypass, to the "Bypass" position. **(Fig 26)**



Figure 26

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, leave one cold water faucet open 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...first open the [Inlet Side](#) of your bypass valve very slowly from bypass position, to full service position.

Secondly, slowly open the [Outlet Side](#) of your bypass, until it is in the full service position. (Fig. 27)

Your water will now be running through the new conditioner unit, and out the one cold-water faucet you left running open half way.



Figure 27

Sometimes you may experience some air in the lines and some color rinsing off the new resin or 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 resin/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.

It will take a couple of days for the hot water heater to become filled with conditioned water.

Fleck 7000 Post Installations

First, set your time by pushing the up and down arrows until you reach the current time of day. **(Fig. 28)**



Figure 28

Next, Follow the simple programming directions in your Fleck 7000 Service manual....

- 1.) All greensand units will use the "Timer Delayed" Regeneration programming.
- 2.) Most Backwashing type units will use the "Time Clock" Regeneration mode, as these type filters require that the media be backwashed on a timely, routinely schedule.

You will need to regenerate your new greensand unit, as the resin/media needs charging...!

Check all connections for leaks.

The installation is complete and you now have conditioned soft 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!!

