



Clean Water Made Easy

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Pro-OX 5700-E Iron Filter Installation & Start-Up Guide

Thank you for purchasing a Clean Water System! With proper installation and a little routine maintenance your system will be providing iron free water for many years.

Please review this start-up guide entirely before beginning to install your system, and follow the steps outlined for best results.

PRO-OX MEDIA CONTAINS DUST.

USE PAPER MASK AND VENTILATE AREA TO AVOID BREATHING DUST DURING
INSTALLATION

Questions?

Call us toll-free: 1-888-600-5426 or 1-831-462-8500

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Packing List

0.75 Cubic Foot Size System

Quantity (1): CWS 5700-E control valve w/ bypass assembly and pipe connector kit (1" or 3/4")

Quantity (1): 8" x 44" standard filter tank with distributor tube

Blue media funnel for adding Pro-OX media

12 lbs. filter gravel

0.75 cubic foot of Pro-OX media

1.0 Cubic Foot Size System

Quantity (1): CWS 5700-E control valve w/ bypass assembly and pipe connector kit (1" or 3/4")

Quantity (1): 10" x 44" (or 9" x 48") standard filter tank with distributor tube

Blue media funnel for adding Pro-OX media

16 lbs. filter gravel

1.0 cubic foot of Pro-OX media

Carbon Filter 1.5 cubic foot size

Quantity (1): CWS 5700-E control valve w/ bypass assembly and pipe connector kit (1" or 3/4")

Quantity (1): 10" x 54" standard filter tank with distributor tube

Blue media funnel for adding Pro-OX media

16 lbs. Filter gravel

1.5 cubic foot of Pro-OX media

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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 turn off the water to your house and you have an electric water heater, shut off the power to the water heater before beginning installation in case the 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, though the Pro-OX 5700-E iron filter must also be allowed to run through a complete backwash and rinse cycle after installation.
5. Your water may be discolored or full of sediment and rust for a day or two after installing and running your system, particularly if you have older or corroded piping.

Best Practices for Piping & Drain Installation

1. See typical installation on page 5 (Fig. 2). The iron filter is installed after the pressure tank.
2. Make sure to connect to the IN pipe to the CWS 5700-E inlet and the OUT pipe to the outlet (See Fig. 3). If you face the control valve from the front, the water will enter on the right and exit on the left. From the back, the water enters on the left. The inlet and outlet are attached to the bypass valve, which is marked with arrows as well.
3. Make sure there is a working gate or ball valve before the iron filter and also one after as shown in Fig. 2. The pressure gauges are optional and perhaps not necessary but a hose bib (a faucet to which you can attach a garden hose) is strongly recommended after the iron filter and before the second ball valve. This makes it easy to rinse your new iron filter 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 on to the CWS 5700-E control valve, and avoid heating the valve's plastic with your torch.
5. If you have copper pipe before the iron filter and it is too difficult to replace, you may still experience some copper staining of fixtures and have a copper residual in your water, because the copper pipe will still have acidic water flowing through it. We recommend PEX or PVC pipe up to the iron filter and then copper after it, if you will use copper piping.
6. You do not need unions to install your CWS 5700-E control valve. It has quick-release couplings that make it easy to put the filter on bypass and remove it from your piping.

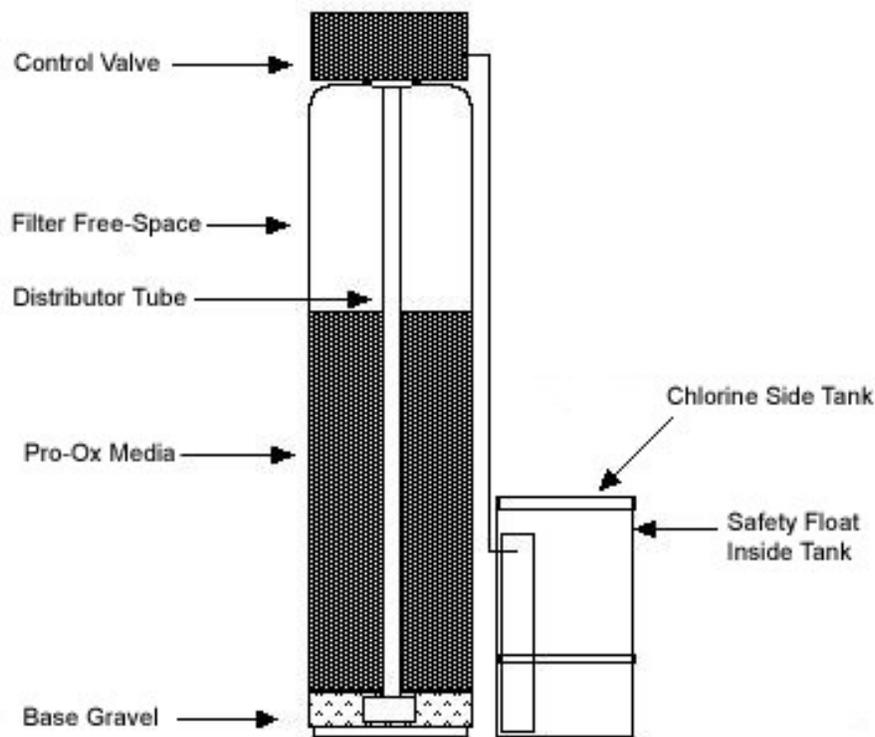
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- The drain line tubing (not supplied) is connected to a drain from the drain outlet using flexible 1/2" ID tubing. Note that the drain can run up above the CWS 5700-E control valve and into a drain—it does not have to drain down, as the filter backwashes 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.

How Your Iron Filter Works

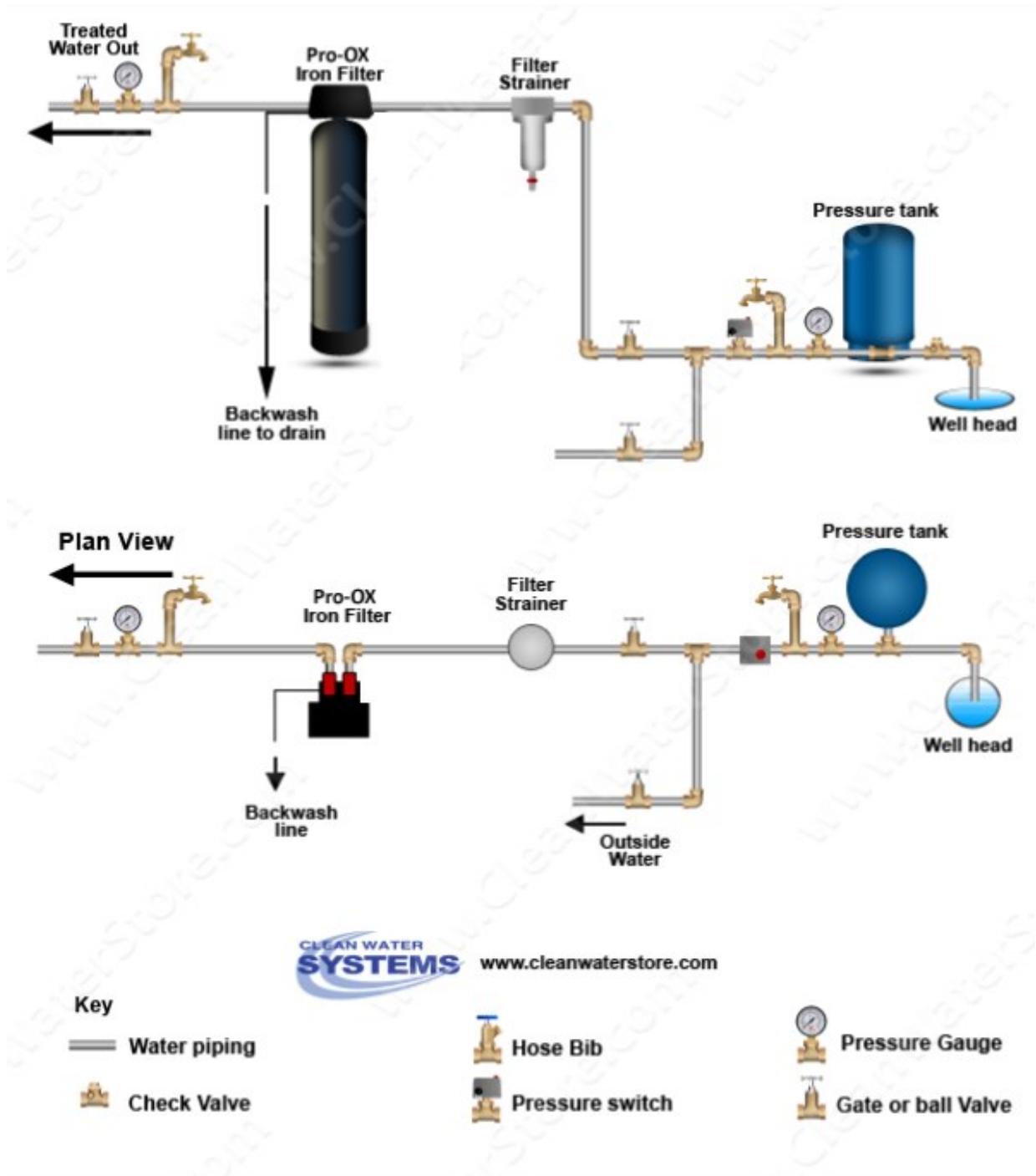
See Fig. 1 below. Water enters your iron filter through the top of the tank and flows down through the media and up the distributor tube. Downflow type filters remove sediment and can be backwashed to clean and reclassify the media inside, preventing channeling. During backwash the flow of water is reversed: water flows down the distributor tube and up through the media, lifting, expanding, and cleaning it.

Fig. 1—Iron filter cutaway diagram



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Fig. 2—Typical Pro-OX 5700-E iron filter piping installation with ball valve and hose bib after filter



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Fig 3—CWS 5700-E valve from the rear showing the inlet (left) and outlet (right) end-connector fittings (1" or 1-1/4" NPT in Noryl plastic). Brass end-connectors are also available for connecting to copper tubing.

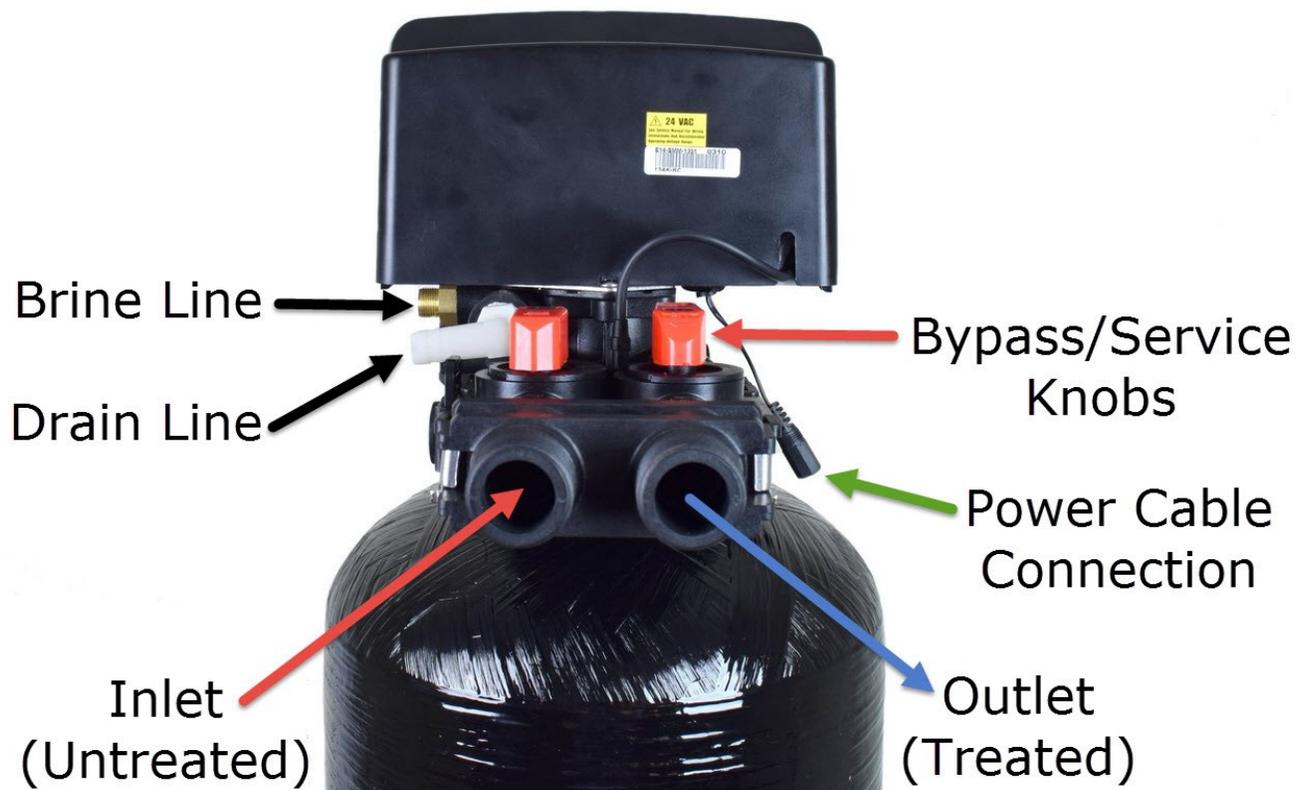
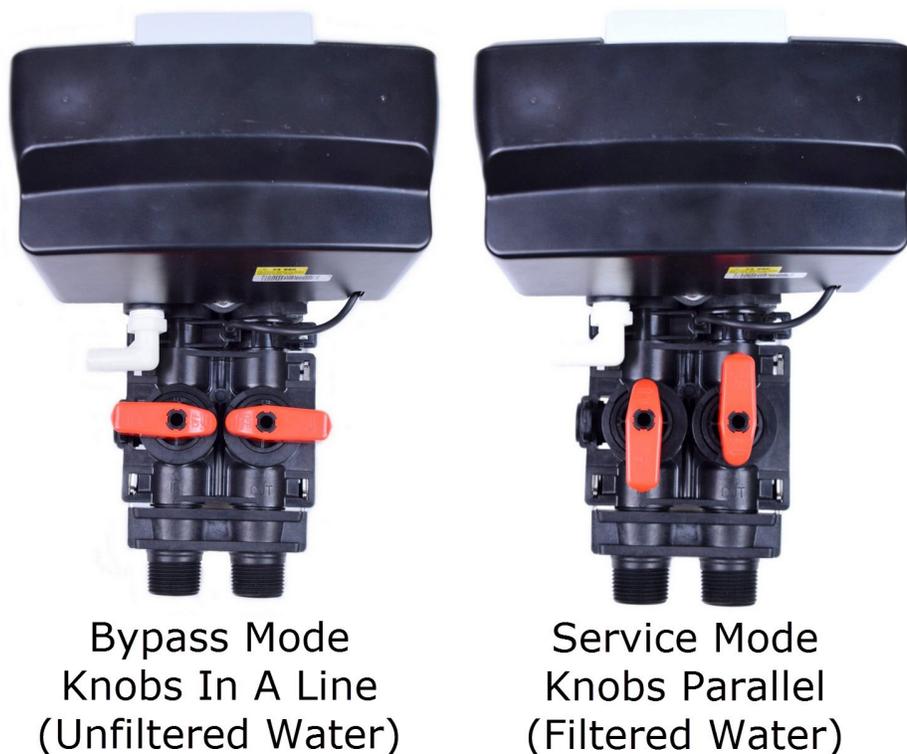


Fig 4—CWS 5700-E Bypass Assembly



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Assembly and Installation Instructions

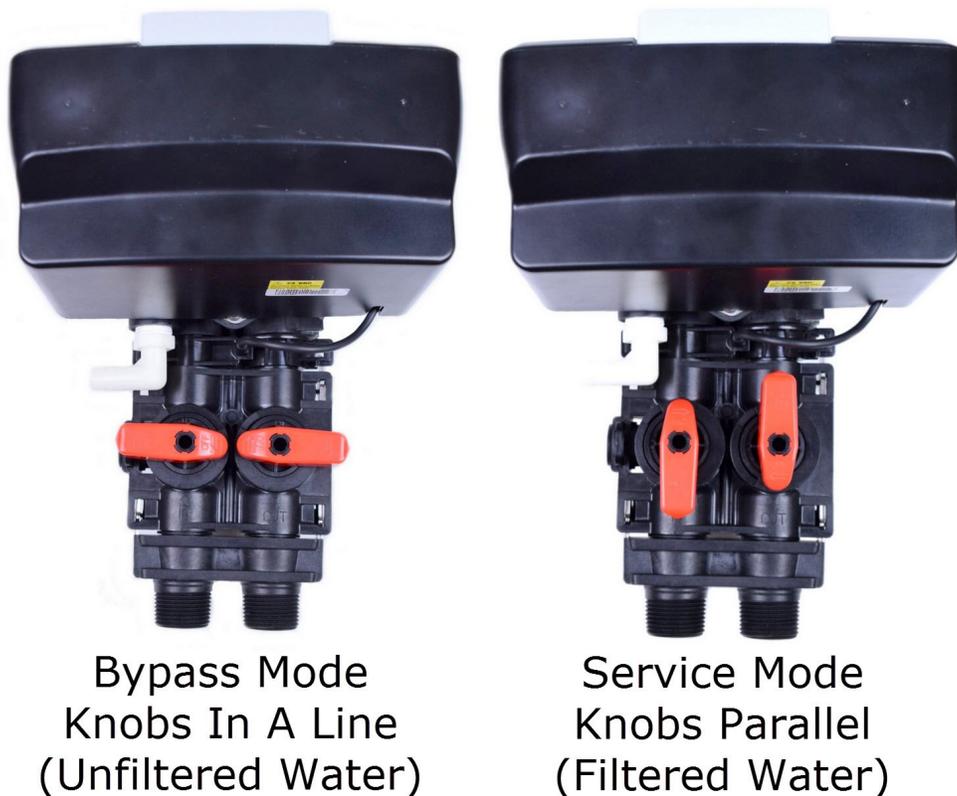
1. By hand, unscrew the entire CWS 5700-E control valve from top of tank if it was shipped screwed on. Place distributor tube in tank if not already inside. Make sure the tube is capped, or wrap the top of the tube with electrical or duct tape. This will prevent gravel and Pro-OX media from entering the distributor tube when you add them to your tank.



2. Add the filter gravel that came with your system. You want the gravel to cover the bottom distributor screen before adding the Pro-OX media. **Note: Be sure not to let any parts of the bag or other foreign materials enter the tank when you are adding media.**
3. Next add Pro-OX media. The tank should be about 2/3 full of media.
4. Remove cap or tape from distributor tube, being careful not to pull up on the tube.
5. Fill tank with water. Add 2 cups of household bleach into the tank. This bleach will activate and sanitize the Pro-OX media.
6. Add a small amount of silicone grease or vegetable cooking oil to the tank threads and screw on control valve carefully.
7. **Note regarding Teflon tape and pipe sealants:** It is okay to use Teflon tape and pipe sealant on the water pipe connector threads, where you attach your pipes or plumbing to the CWS 5700-E control valve. **DO NOT USE any Teflon tapes or pipe joint compound on the tank itself or on the threads where the CWS 5700-E threads into the tanks.** Also note that when installing the CWS 5700-E backwash control-timer valve on to the top of the filter tank, do not over-tighten. Tighten by hand; there is no need for a pipe wrench or other wrench.
9. See how the bypass assembly is connected. Note the pipe connectors in Fig. 5, while the other end is what gets attached to the control valve. Your CWS 5700-E valve is usually shipped in the bypass position.

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Fig. 5—CWS 5700-E Service and Bypass Knob Positions



10. Lubricate the bypass valve O-rings with some vegetable oil or silicone grease and connect the bypass assembly to the control valve by sliding the bypass valve firmly into its body.
11. Next, lubricate the end-connectors with some silicone grease or vegetable cooking oil and insert them into the bypass valve.
12. Make sure both knobs are in the bypass position.
13. Now install your water pipes to the bypass valve's end connectors. Make sure the inlet is installed to the IN pipe connector and the outlet to the OUT connector.
14. Connect some flexible tubing from the drain connection on the CWS 5700-E control valve to a suitable drain such as a septic tank or drain to a sewer. It is ok to run the drain line up and over the filter up to 4 feet above the tank. If the drain will be more than 20 feet, use larger diameter tubing such as 3/4" or 1". Note that is desirable to be able to run the drain line into a bucket in order to test the backwash flow rate in the future. This is why hard piping the drain line is discouraged. However, you may use hard PVC piping for the drain line if you are able to remove it and attach flexible tubing should you ever desire for testing purposes. Make sure the drain line tubing is firmly clamped to the barbed fitting with a hose clamp to prevent leaks.

Optional Side Tank Installation

Fig. 6: Optional Side Tank Installation



15. Insert 3/8" diameter tubing into the chlorine side tank connection. Screw the nut with the sleeve and Ferrell attached to prevent leaking.
16. Remove the rubber band and felt polypro pad from the tank and discard. Add 2 cups of non-perfumed household bleach to the tank, followed by 2 gallons of water. Note that the tank may not be used with solid chlorine pellets or powder, just liquid bleach.
17. Plug your CWS 5700-E control valve into an outlet. After being plugged in, the screen may display "WAITING PLEASE" while it finds the service position. By default, the control valve will be set to work like a water softener, which is obviously not correct for this application, so you'll need to program the system to work as an iron filter. There are a few settings that must be changed before the system can be put into service for this purpose.

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Normal Operation Programming:

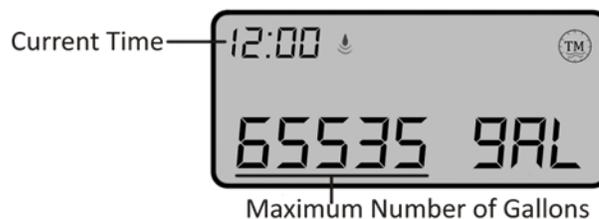
Time Mode: Home screen will display days and hours left until the unit regenerates.



Meter Mode: Meter mode tracks the number of gallons used instead of regenerating on a specific time. In this mode immediate regeneration will occur once the unit hits its target calculated number of gallons based on hardness settings.



Timed Meter Mode: Timed Meter Mode tracks the number gallons used, like the Meter Mode, but waits until its set time to regenerate instead of immediately. A buffer period is factored in to prevent you from running out of soft water. The water droplet to the right of Current Time signifies the unit tracking water flow.



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Meter & Timed Meter Menus:

The following menus will allow you to change the current time, unit hardness, and calendar day override settings within the Meter and Timed Meter Modes.

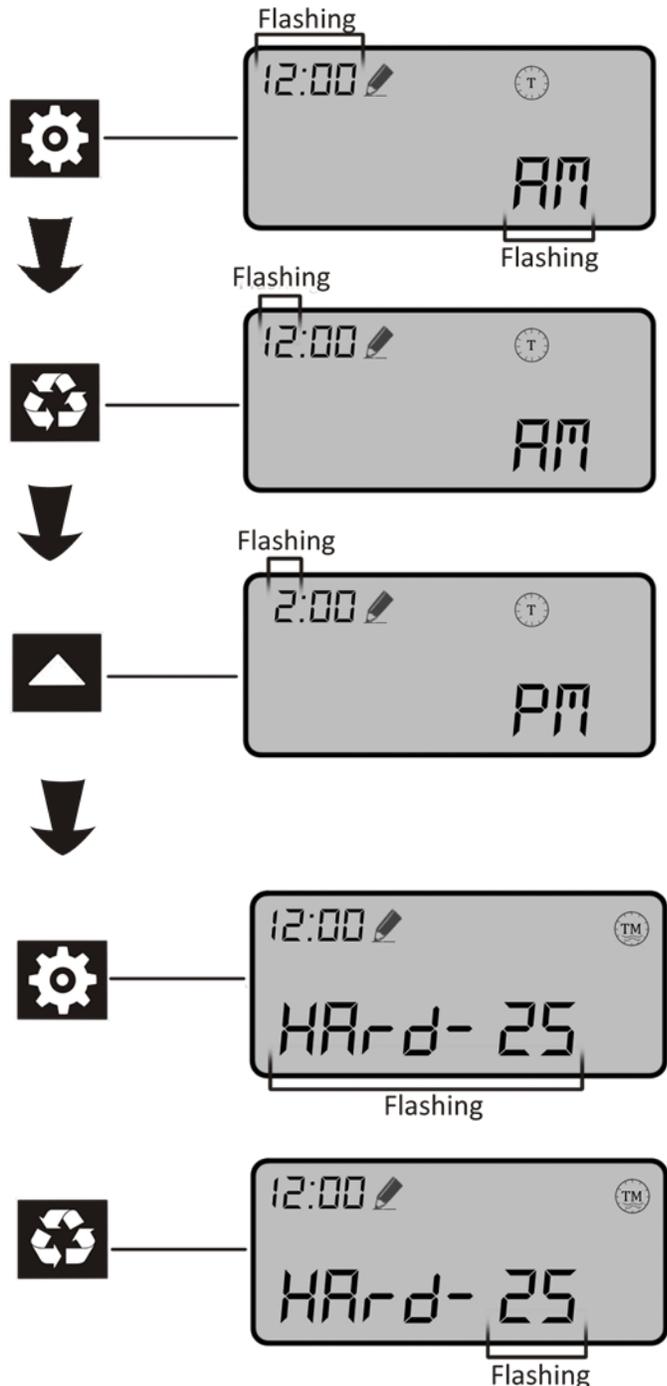
Current Time settings: Press the gear to begin menus. Current time and period of the day will be flashing.

After pressing the Regen button, only the hour portion will be flashing.

Use the up and down arrows to adjust the time. Press the gear again to switch to the minute portion. Note, once the timer passes a 12 hour period it will automatically change A.M. to P.M.

Unit Hardness settings: Hard-25 will be flashing.

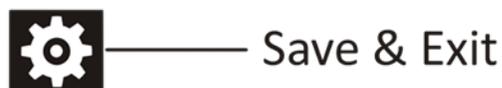
Pressing the Regen button will allow changes to hardness to be made. The unit has a range of 1-99 grains per gallon.



Meter and Time Meter Menus continued..

Calendar Day Override setting: Allows user to set a time to regenerate by if the unit hasn't met its set meter amount within that time period.

Pressing the Regen button allows you to change the days. Default setting is 0 days, but can range from 0-99 days.

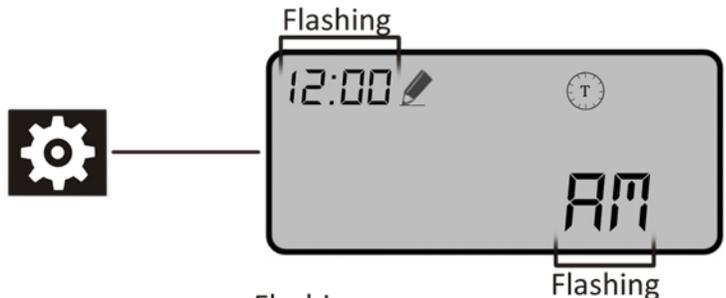


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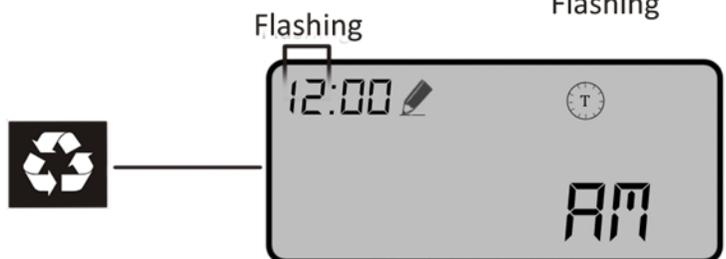
Time Menus

The following menus will let you change the Current Time and the Regeneration Day for Time Mode only.

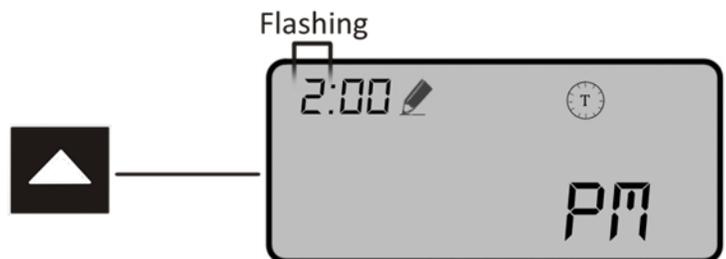
Current Time settings: Press gear to begin menus. Current time and period of the day will be flashing.



After pressing the Regen button, only the hour portion will be flashing.



Use the up and down arrows to adjust the time. Press the gear again to switch to the minute portion. Note, once the timer passes a 12 hour period it will automatically change A.M. to P.M.



Pressing the gear again brings you to the Regeneration day setting.



Time Menu Continued..

Using the up and down arrows, you can set the number of days you wish to have between regenerations. The unit has a range of 1-99 days. Default setting is 7 days.

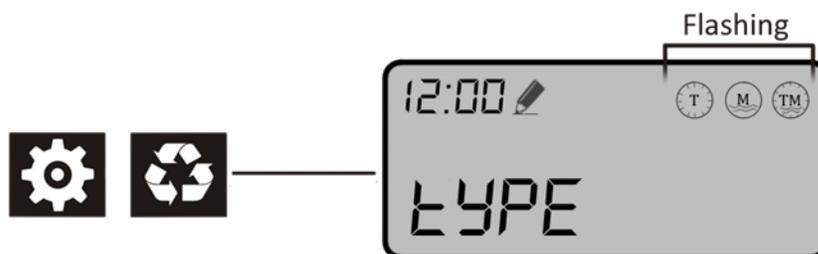


Save & Exit

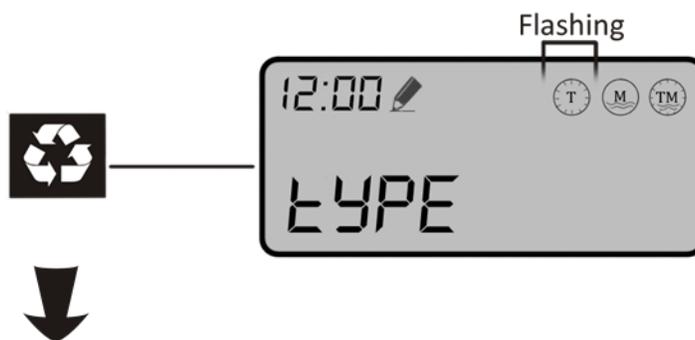
Advanced Menus

Within the Advance Menus the Regeneration Mode, Regeneration Cycle Period Lengths, and Unit Capacity are adjustable.

To enter, press both the Gear and Regen button at the same time. All mode types will be flashing.

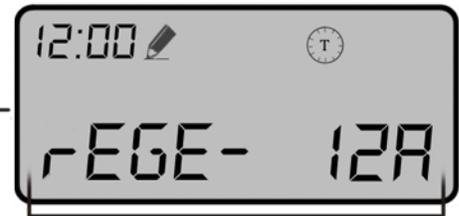


Press the Regen button again to select the mode type you wish to be in. Use the up and down arrow to scroll through the modes.



Advanced Menus Continued..

After selecting the mode, the time of day the unit is set to regenerate will appear.



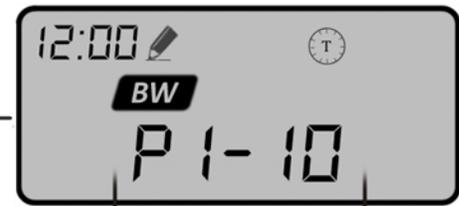
Flashing

Pressing the Regen button will allow the time to be changed. Use the up and down arrows to adjust the hours and A.M. and P.M. settings.



Flashing

Pressing the gear again will bring you to phase 1, Backwash. BW will be present and P1-10 will be flashing.



Flashing

Total minutes spent in backwash will be flashing. The unit can be programmed for 0-99 minutes. Generally, the recommended setting is for 10 minutes.



Flashing

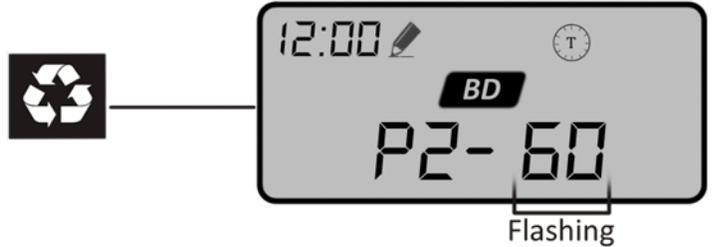
Next menu displays brine draw settings. BD will be present and P2-60 will be flashing.



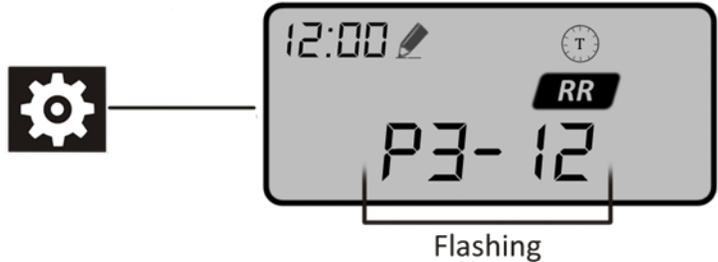
Flashing

Advanced Menus Continued..

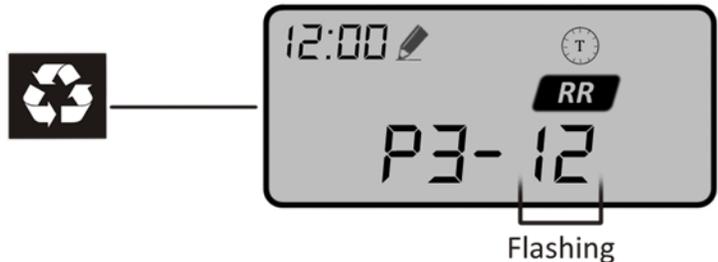
Total minutes the unit draws brine will be flashing. Unit can be set anywhere from 0-99 minutes. If you don't have the optional side tank, set to 0



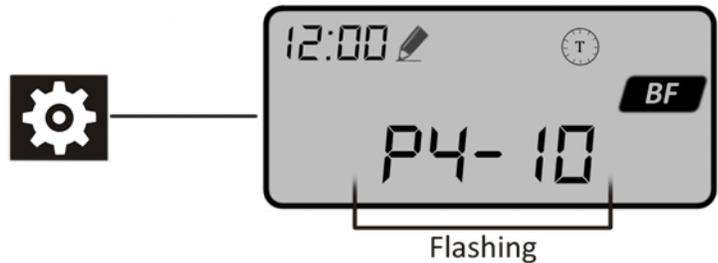
This menu displays Rapid Rinse settings. RR will be present and P3-12 will be flashing. If you don't have the optional side tank, set to 0



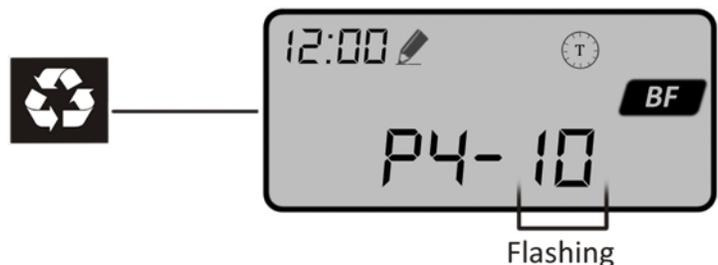
Total minutes the unit rinses will be flashing. Unit can be set anywhere from 0-99 minutes. Generally, the recommended setting is for 6 minutes.



This menu displays Brine Refill settings. BF will be present and P4-10 will be flashing.



Total minutes the unit fills the brine tank for will be flashing. Unit can be set anywhere from 0-99 minutes. If you don't have the optional side tank, set to 0

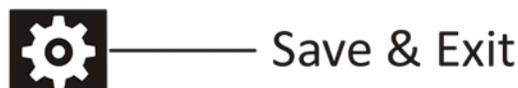
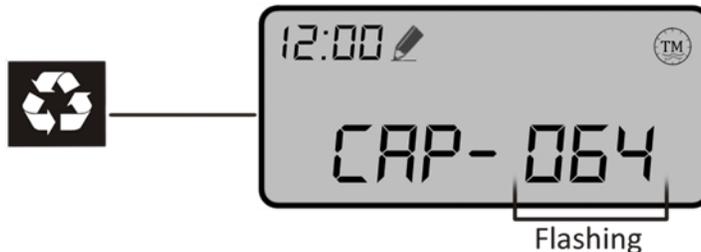
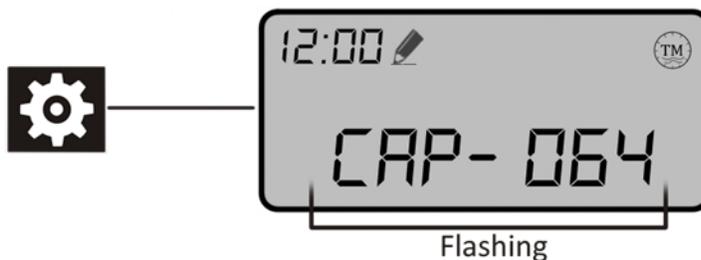


Advanced Menus Continued..

This last menu is to change the unit's capacity.

Unit has a range of 1-199 Capacity (for Meter and Timed Meter Modes only). Multiply capacity setting by 1000 to get grains.

Example: A setting of 064 is equal to 64,000 grain capacity.



*Gallons = (Capacity/Hardness) x .75 (Timed Meter Mode only)

*Gallons = (Capacity/Hardness) (Meter Mode only)

Immediate Regeneration

While in service position, hold the Regen button in for 5-6 second to initiate an immediate regeneration.

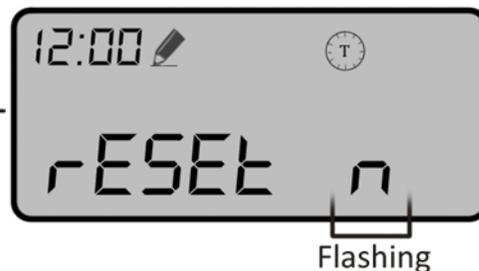
Pressing the Regen button again will jump to the next cycle phase. Holding the two arrow buttons together will terminate Immediate Regeneration and return the unit to service position.



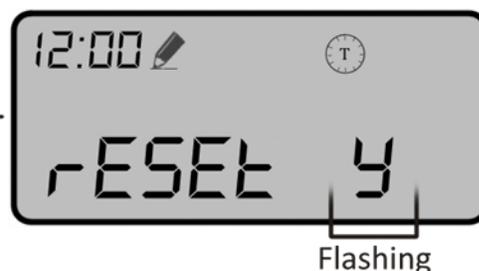
Restore Factory Settings

Hold the Regen button while plugging in the power supply to the unit. After the unit has powered up release Regen button.

Next press the Regen button again to select no next to reset.



Using the down arrow, scroll to yes.



Hitting the Gear will begin resetting the unit.



Power Outage Memory.

During a loss of power, all program settings will be stored in permanent memory. The current valve position, cycle step and time of day are all stored as well, but upon power up a reset of the current time will be necessary.

If the unit were to lose power during a regeneration stage, the valve will return back to its prior position when the outage occurred. *The unit will take 4 -5 minutes to reset back to that position.*

Troubleshooting the Pro-Ox 5700-E0 Iron Filter

Measure the backwash flow rate by putting the system into a backwash mode and putting the drain tube into a 5 gallon bucket and timing the flow rate. A 0.75 cubic foot system should flow at 5 gallons in one minute, so the 5 gallon bucket should fill in one minute. The 1.0 cubic foot system should flow at 7 GPM during backwash.

In some cases, the CWS 5700-E valve has simply been programmed incorrectly. Double-check your settings against those described above or consult your system's service manual for instructions. In some cases a nightly backwash is required for best results. Adjust backwash frequency to every 1 to 2 nights if necessary.

What To Do If Your Filter Tank Does Not Sit Level On the Floor

Your black filter tank base is not glued to the bottom of your tank. Occasionally tank bases will become crooked during shipment. If you find that that your tank does not sit level on the floor, you can easily adjust it by holding the empty tank and rapping it on a concrete or solid floor once or twice in order to level it.