



# PRO-WELL SERIES INSTALLATION MANUAL



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# INSPECTION & PREPARATION



## IMPORTANT!

Before installing - Please read the entire manual and become familiar with instructions and parts needed before proceeding with the installation.

### System Inspection

Please take the system and all the components out of the box. Inspect the system and all the connection fittings carefully, make sure nothing was damaged during shipping. If any part is cracked or broken, please do not proceed with the installation and contact Pro+Aqua or your distributor for support.

### System Components Breakdown

1. 1/2" Drain Line Tube
2. 2 - 18" Flex Hoses
3. 1" Yoke
4. 2 - 1" Fittings
5. Stainless Steel Bypass Valve
6. Top Distributor
7. AC Power Supply
8. O-Ring Lubricant
9. 2 - Clips Screws
10. 2 - Metal Clips
11. Adapter Coupling
12. Electronic Valve Meter
13. Media Tank
14. Riser Tube & Bottom Distributor (Pre-installed)



# INSPECTION & PREPARATION CONT.

## Required Tool List for System Installation

- Channel Locks
- Adjustable Wrenches
- Screwdriver
- Teflon Tape
- Razor Knife



### IMPORTANT!

Additional tools may be required if modification to home plumbing is required.

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## II. System Operation Parameter and Installation checklist



### IMPORTANT!

The following condition for feed water supply must be met or warranty will be void and manufacturer assumes no responsibility for damage to system or property.

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### 1. Water Temperature Parameters

System must not be installed at an area where it is exposed to direct sunlight and must be protected against freezing and extreme heat.

- Maximum: 100° F (37.8° C)
- Minimum: 32° F (0° C)

### 2. Water Pressure Parameters

The maximum allowable inlet water pressure is 125 psi. If daytime pressure is over 80 psi, night time pressure may exceed the maximum allowed water pressure. Use a pressure reducing valve (PRV) to reduce the pressure if needed.

- Maximum: 125 PSI (8.78 kg/cm<sup>2</sup>)
- Minimum: 25 PSI (1.75 kg/cm<sup>2</sup>)

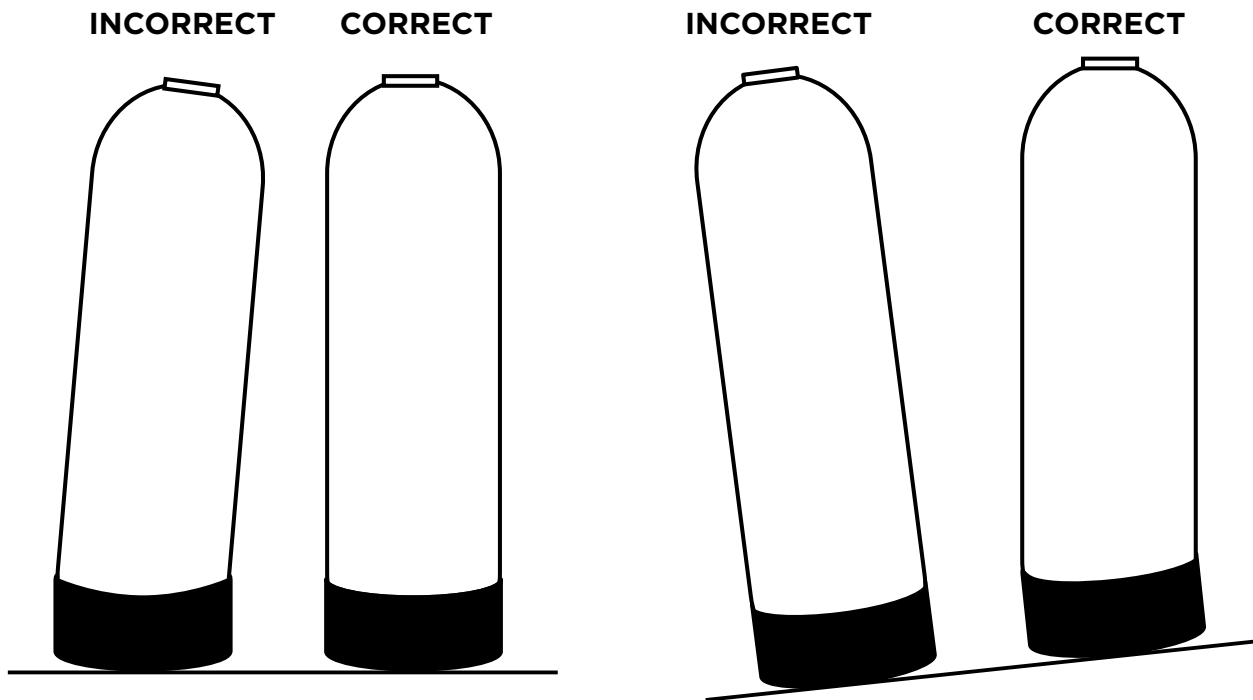
### 4. Pre-installation & environment checklist

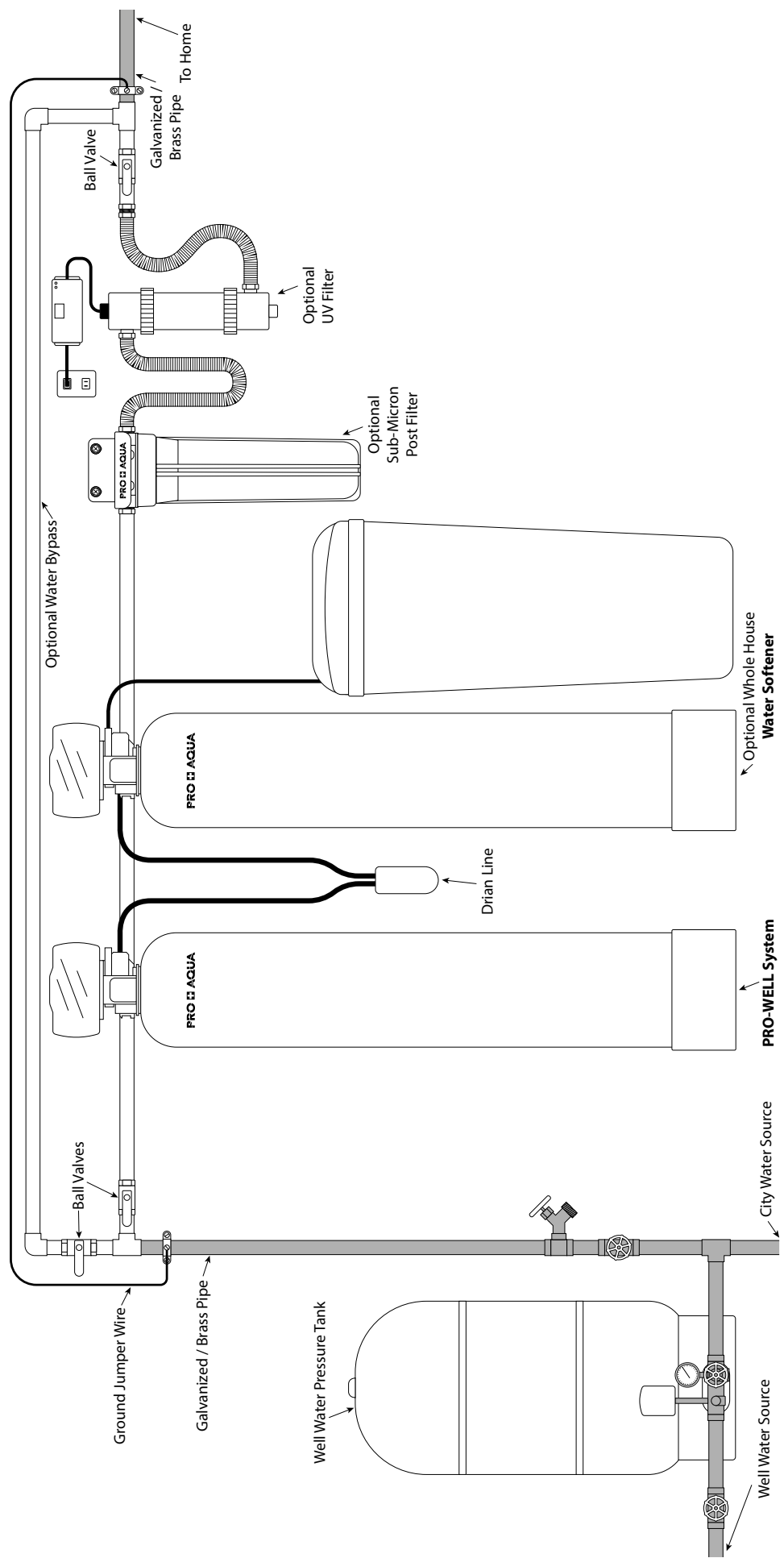
- Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
- Properly ground to conform with all governing code and ordinances. Use only lead-free solder and flux for all sweat-solder connections as required by state and federal codes. **DO NOT SOLDER WHILE SYSTEM IS CONNECTED.**
- Place the system as close as possible to the pressure tank (well system) or water meter (city water).
- Place the system as close as possible to a floor drain, or other acceptable drain point (laundry tub, sump, standpipe, etc.).
- Connect the system to the main water supply pipe before the water heater. Do not run hot water through the system. Temperature of water passing through the system must be less than 100° F.
- Place system in a place where water damage is least likely to occur if a leak develops.
- An electric outlet with 120 volt is needed within 6 feet of the system. The transformer has an attached 8 foot power cable. Be sure the electric outlet and transformer are protect from moisture and water.
- If installing in an outside location, necessary steps must be taken to assure the system, installation plumbing, wiring, etc., are protected from the elements and contamination sources.
- The system tank should be located close to a drain to prevent air breaks and back flow.
- System should be installed with a vacuum breaker to avoid damage to tank.

# INSPECTION & PREPARATION CONT.

## III. Installation Safety Guide

- Handle with care when moving the water filtration system. Do not turn upside down, drop, drag, or set on areas with sharp protrusions.
- The system works on standard 120v power plug only. Do not use any other transformer except the one that is included with the system
- Transformer must be plugged into an indoor 120 volt, grounded outlet only.
- All of tanks have level adjusting tank bases. These tanks are designed to work with a “floating” base. This allows the tank to be leveled on any surface. Some applications may not have level surface to place the tank. The floating base allows the tank to be leveled within the base and ensure proper operation. Sometimes the base can shift during shipping. It can be adjusted back by lifting the tank up no higher than 5” - 10”, and letting it drop to help level the base.





# INSTALLATION DIAGRAM

# VALVE SETUP



## IMPORTANT!

Locate and test the main water supply valve to the home before installing the system. If the main water supply valve fails to shut off the water completely during the test, we recommend contacting a licensed plumber to fix the valve before starting the installation.

## WARNING!

If the system is installed on a metal (Conductive) plumbing system, i.e.. copper or galvanized metal, the plastic components of the system will interrupt the continuity of the plumbing system. As a result, any errant electricity from improperly grounded appliances downstream or potential galvanic activity in the plumbing system can no longer ground through contiguous metal plumbing. Some homes may have been built in accordance with building codes, which actually encouraged the grounding of electrical appliances through plumbing. A grounded “jumper wire” bridging the equipment and reestablishing the contiguous conductive nature of the plumbing system must be installed prior to your system use (pg. 5).

## WARNING!

Electric Hot Water Tanks: Turn off the power to the unit first to avoid damage.

Well Water: Power off the well water pump and then shut off the main water supply valve.



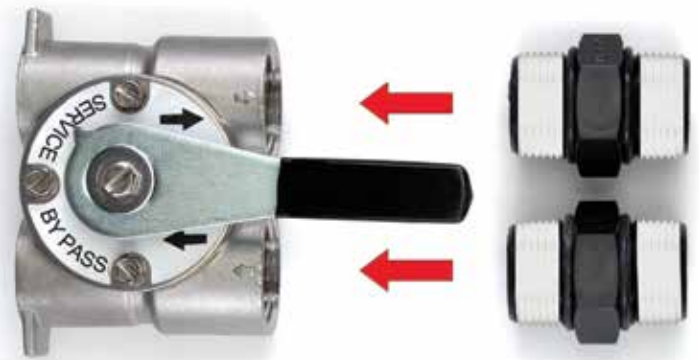
## Shut Off Main Water Supply

1. Locate the main water supply valve to the house and completely turn off by turning the handle clockwise.
2. Test to see if the water is completely shut off by turning on the cold water on the closest faucet. If the cold water cannot be shut off, please contact your local plumber to fix the valve before installing the system.



## Recommended Bypass Valve Assembly & Installation

1. Apply Teflon to the 1” Fittings (included) and install to the Bypass Valve using an adjustable wrench.





# VALVE SETUP CONT.

2. Lubricate the o-rings on the Adapter Couplings to avoid any leaks.
3. Attache the bypass valve onto the control head by pressing it onto the Adapter Couplings.
4. Secure the Bypass to the valve using the Screws and Metal Clips.



## 3 > Valve Preparation

1. Remove the tank from carton
2. Lubricate both O-rings on the bottom of the control valve (center and outer).



# SYSTEM INSTALLATION

3. Lubricate the riser tube located on the opening of the tank.



4. Install the upper basket on the bottom of the valve by lining up the tabs, pressing in, then turning the basket counterclockwise to lock it in place.



5. Place the upper basket over the distributor tube and push the valve down to the tank and thread the valve on the tank by turning it clockwise. Be sure not to cross-thread the valve on the tank. The valve should thread easily in the tank. If not, it may be cross-threaded.



6. Hand-tighten the valve then snug it further by lightly tapping it with the palm of your hand. DO NOT over-tighten or use tools to tighten the valve or damage could occur.



# SYSTEM INSTALLATION CONT.



## IMPORTANT!

On copper plumbing systems be sure to install a grounding wire between the inlet and outlet piping to maintain grounding (see diagram on pg. 5).

## WARNING!

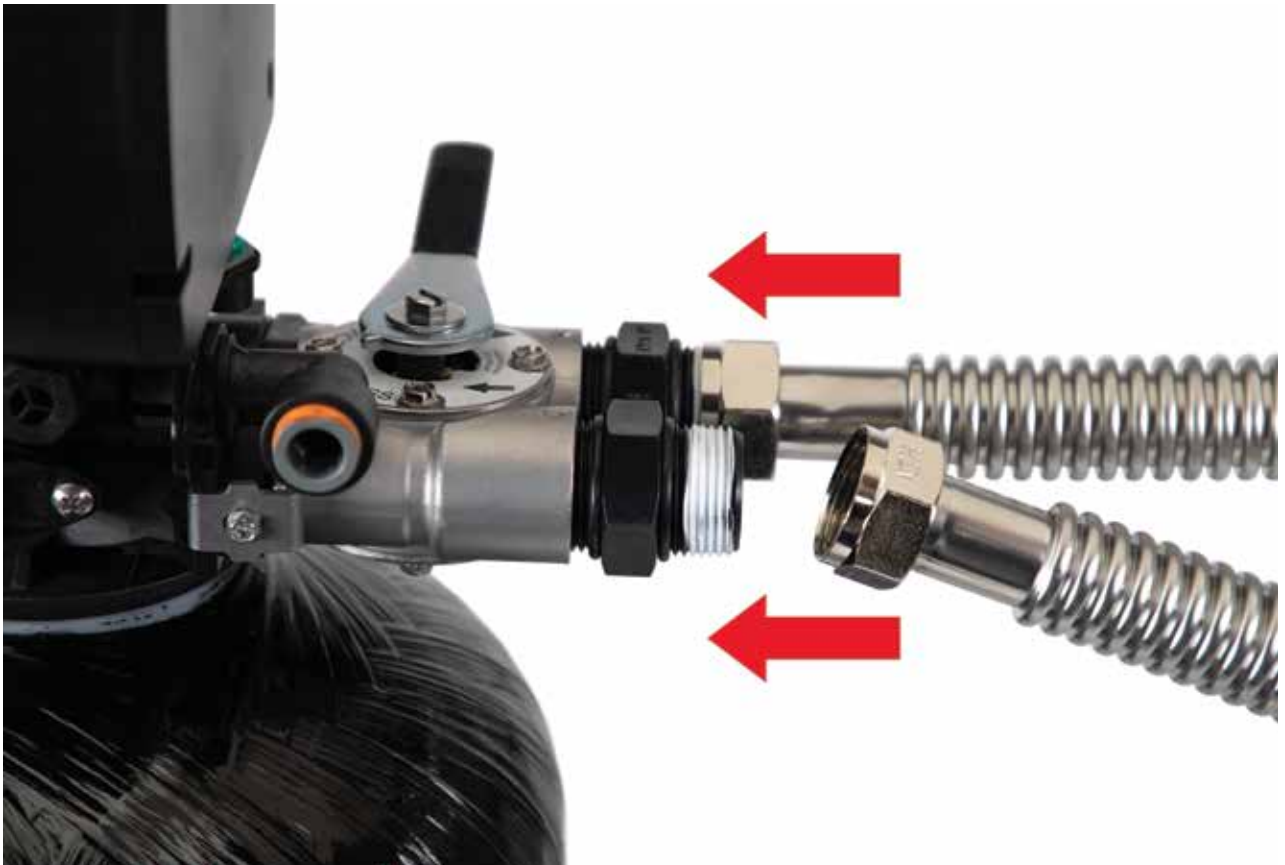
DO NOT SOLDER WHILE SYSTEM IS CONNECTED. Any solder joints being soldered near the valve must be done before connecting any piping to the valve. Failure to do this could cause unreparable damage to the valve.



## 4 Connecting the System

This system includes 1" male & female NPT connection options. Determine the best options for your installation. It is recommended that these connections be made using Teflon tape, plumbers putty can be used to prevent leaks. The inlet and outlet can be identified on the bypass valve by looking at the arrow directions on top of the bypass valve. The arrow pointing toward the valve is the inlet and the arrow pointing away from the valve is the outlet.

1. Apply Teflon tape onto the inlet and outlet fittings.
2. Connect the inlet and outlet of the system using included 18" Flex Lines.
3. Connect the "IN" Flex Line to your incoming water line. Connect the "OUT" Flex Line to your "IN" line for your home. All piping should be secured to prevent stress on the bypass valve and connectors.



# SYSTEM INSTALLATION CONT.

4. Locate the included drain hose. Using a sharpies, mark 1/2" from the end of the drain hose. Connect the marked end of the drain hose into the Quick Connect drain port on the valve until it reaches or passes the 1/2" mark (**Remove Locking Clip before pushing hose in**). Run the drain hose to the nearest laundry tub or drain. This can be ran up overhead or down along the floor. Drain hose should be a minimum of 1/2". If running the drain line more than 20 ft linear, it is recommended to increase the hose size to 3/4" and be sure there are no sags in the hose all the way to the drain destination.



## NOTE:

A direct connection into a waste drain is not recommended. A physical air gap of at least 1.5" Should be used to avoid bacteria and wastewater traveling back through the drain line into the system.

5. Place the unit in the Bypass Position.
6. Slowly turn on the main water supply to the system.
7. Locate and the nearest faucet to the system and remove the faucet screen or any fittings on the faucet spout.
8. Turn on the cold water for 10 minutes to flush air and foreign material resulting from the plumbing work.
9. Make sure there are no leaks in the plumbing system before proceeding. Close the water tap when water runs clear.

Bypass Position



Service Position

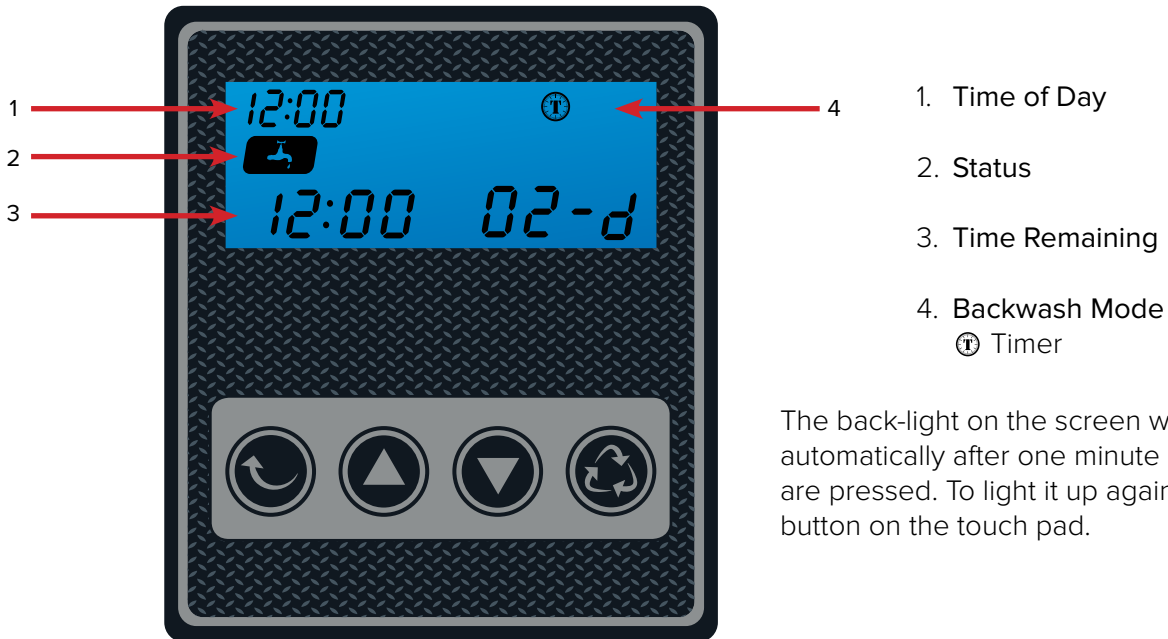


## IMPORTANT!

The system is not ready for service until you complete the **System Startup** section of this owner's manual

# VALVE PROGRAMING

## 5 > System Startup



The back-light on the screen will go off automatically after one minute if no buttons are pressed. To light it up again press any button on the touch pad.



### Setting Button

1. Enter into setting menu
2. Confirm the current setting, and enter into the next step
3. When used simultaneously with up button, it will enter into master programming



### Up / Down Buttons

1. Adjust current settings
2. Go one step forward or backward



### Cycle Button

1. Save the setting and return to service
2. Enter into queued Backwash mode
3. A long press for 5 - 6 seconds will initiate a immediate regenerate
4. Terminate the current Backwash step and goes to the next step

1. Plug the power transformer into an approved power source. Connect the power cord to the valve. When power is supplied to the control, the screen will display the time of day, time remaining and the mode.
2. Press and hold the “Cycle” button for 5-6 seconds. The valve will display “GOTO BW” and will continue to move until it reaches the backwash cycle.
3. Once the valve is in the backwash (BW) cycle the display will show a time value (15). Slowly open the Bypass Valve to “Service” position to allow water to enter the unit. Air from the tank will begin to push out of the control valve drain. Allow all air to escape from the unit before turning the bypass fully open. If there is a large “knocking” sound, the water is being fed too quickly and should be slowed. Once there is a steady stream of water coming from the system drain with no air coming out, allow water to run until the cycle completes.

# VALVE PROGRAMING CONT.

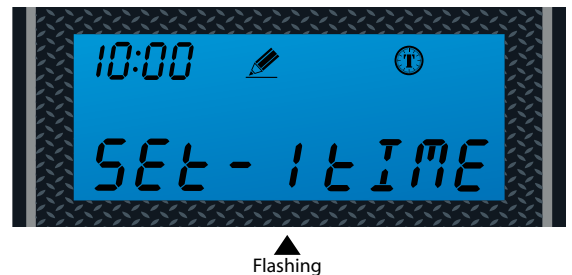
- When the backwash cycle is complete, the valve will advance to the brine draw (BD) position then to the (RR) position. The display will show the (Rapid Rinse) cycle, allow the water to run for the entire rinse cycle
- When the Rinse Cycle is complete, the valve will advance to the "BF" then the "SR" position.
- When the cycles complete, the valve will automatically advance to the SERVICE position. Open the nearest treated water spigot or faucet (remove faucet screen to prevent clogging) and allow the water to run until clear, close the tap and replace the faucet screen.

## 6 > Programing Unit

### 1. Setting Time of Day

Default setting 12:00 (24 hours)  
Press **Settings** button and **UP** button simultaneously to enter into Programing Mode

Press Simultaneously

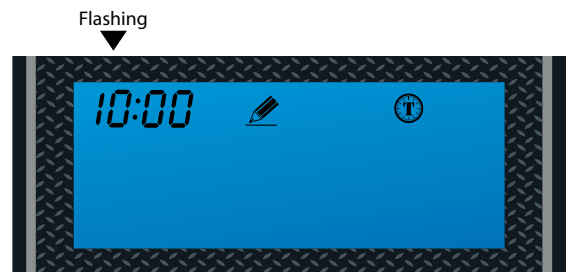


Set the hour

Press **UP** or **DOWN** buttons to change hours.



Press the **SETTINGS** Button to accept and continue.



Set the minutes

Press **UP** or **DOWN** buttons to change minutes.

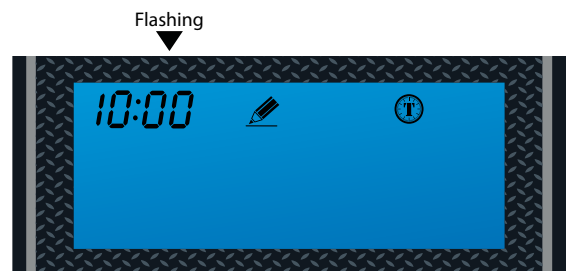


Press the **CYCLE** button to accept and complete the setup.



- Or -

Press the **SETTINGS** button to accept and continue to Advance Settings.



# CONGRATULATION!

Your system is ready for use. Please document the system installation date and maintain the system at its recommended interval.



**ADVANCE SETTINGS:**

The following settings have been pre-set from the factory and are only meant for special application that requires customized settings.

Continue only if you require customization of the following settings.

# ADVANCED SETTINGS

## 1. Setting the Valve Mode



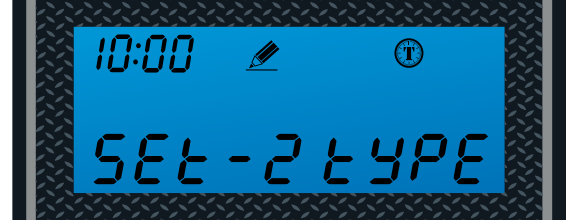
Default setting is "Timer"

**NOTE:**

Meter and Meter Delay options are not used, there is no need to set them.

Use the step below to set the Valve to **Timer** mode.

Set To Timer Mode (T)



▲  
Flashing



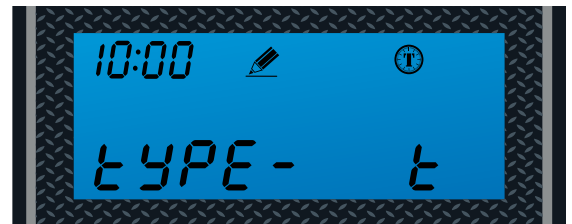
Press Up or Down buttons to change mode



Press the Settings Button to accept and continue.



**Timer (Default Setting)**  
This mode counts down.



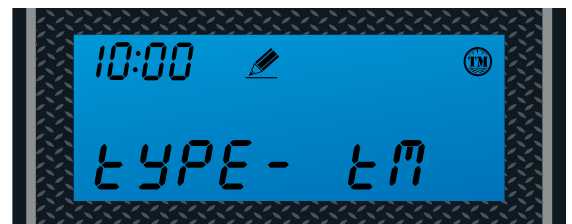
▲  
Flashing

**Meter (Not Used)**  
(Regenerate Immediately)  
This setting is not used.



▲  
Flashing

**Meter Delay (Not Used)**  
(Regenerate at 2 am night of reaching capacity.) This setting is not used.



▲  
Flashing



# ADVANCE SETTINGS CONT.

## 2. Backwash Time and Hours Override (Change only if needed)



Flashing

Timer Mode

Default: 2:00 AM every 072 hours.

Hours Override Range: 3, 4, 6, 8, 12 hours, then every 24 hours (24, 48, 76,...)

Use **UP** and **DOWN** buttons to adjust the Start Time



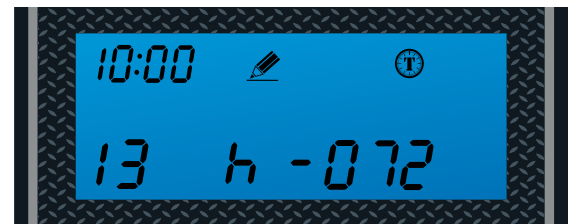
Flashing

Press **SET** to go to Hours

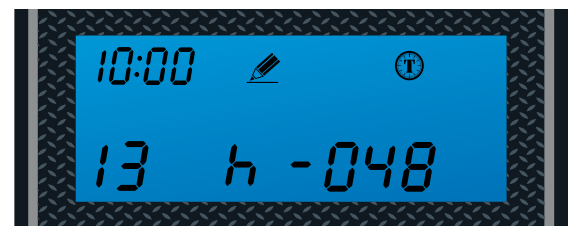


Flashing

Use **UP** and **DOWN** buttons to adjust Hours



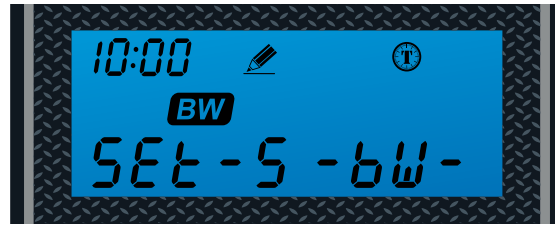
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Flashing

# ADVANCE SETTINGS CONT.

## 3. Setting the Back Wash Time



Flashing

Set the Time

Default setting is 015

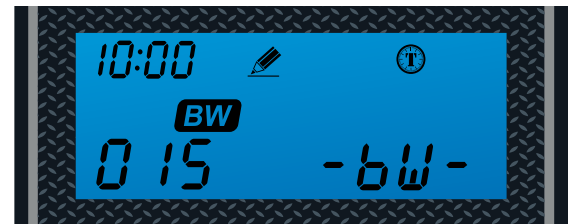
Press **UP** or **DOWN** buttons to change Back Wash time (Minutes)  
Range: 0 - 999



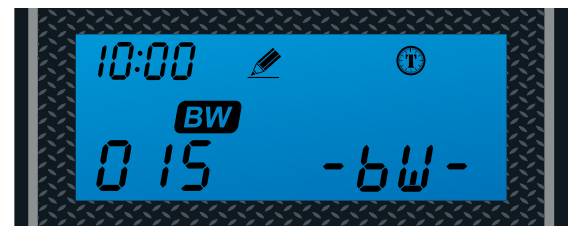
Press the **Settings** button to accept and continue to next digit



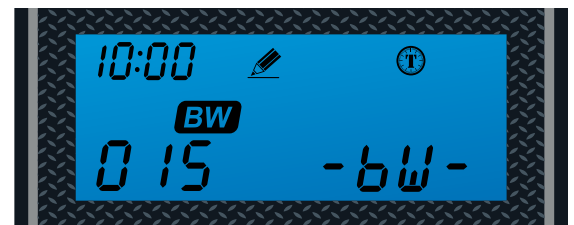
Press the **Settings** button to accept and continue.



Flashing



Flashing



Flashing

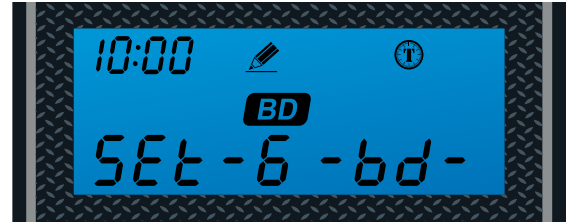
# ADVANCE SETTINGS CONT.

## 4. Setting the Brine Time (SKIP - This setting us not used)

Press the **UP** button to change to SET-7



Press the **Settings** button to accept and continue.



Flashing



Flashing

## 5. Setting the Rapid Rinse Time

Default setting is 010 Minutes

Press **UP** or **DOWN** buttons to change the Rapid Rinse time  
Range: 0 - 999



Press the **Settings** button to accept and continue to next digit



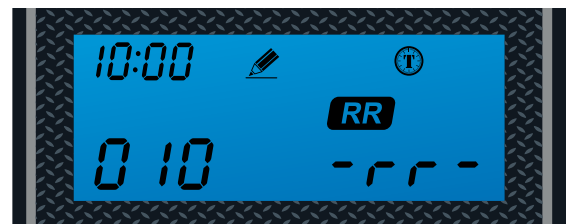
Press the **CYCLE** button to accept and complete the setup.



Flashing



Flashing



Flashing

# FEATURE & DISPLAYS

## 1. Memory During Power Failure

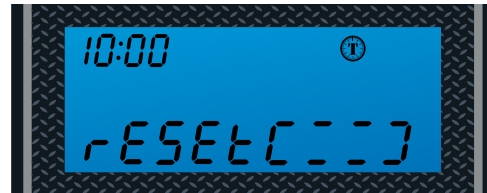
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All program settings are stored in permanent memory. Current valve position, cycle step elapsed, time of day are stored during the power failure. Reset the current time is necessity when power up.

If the valve stopped at a backwash stage when power failure, the valve will return to prior position when it powers up. It takes 4 to 5 minutes to reset to the position.



The display shows as: ►

The system will show this status after a power failure when finding the position.



## 2. Restore Factory Settings

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- 1) Pull out the power
- 2) Press the  button and plug in the power simultaneously
- 3) Release the  button

The system is now restored




## 3. Manual Queued Backwash

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When the valve is in service position press the  button to activate the queued backwash. The Faucet Icon will blink.

Queued Backwash means the system will initiate a backwash at the time set. If missed, it will initiate on the next day.

Press the  button once again to Cancel the queued Backwash. The Faucet Icon will blink.

The display shows the Queued Backwash

Flashing ►



# FEATURE & DISPLAYS CONT.

## 4. Manual Immediate Backwash

### Immediate Backwash


When the valve is in service position, press and hold the  button for 5-6 seconds, an immediate backwash will be initiated.

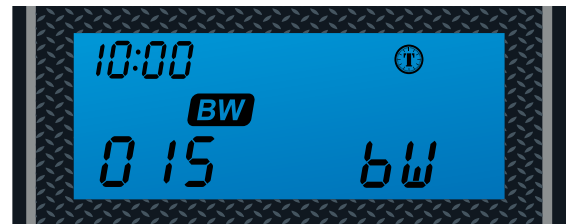
### Examples:

"BW" Flashing (ready to "Backwash"). The piston is moving to position.

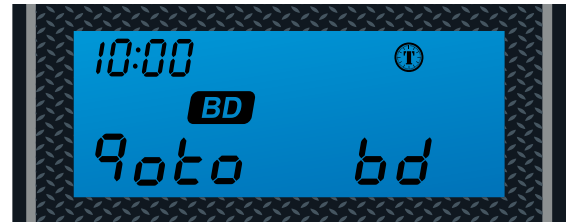


The piston is in "BW" position and the timer starts to count down.

Press the  button to force skip to next cycle.



"BD" Flashes, moving piston to "BD" position then skips to "RR" position.




The piston is in "RR" position and the timer starts to count down.

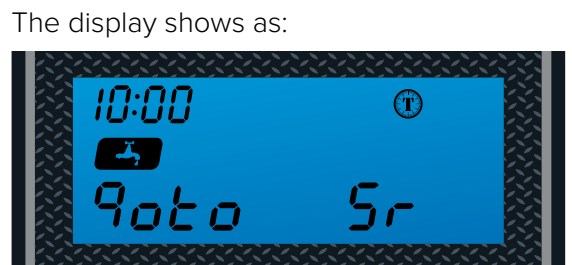
Press the  button to force-skip to next cycle.

The "BF" Cycle will skip back to "SR" (Service) position.



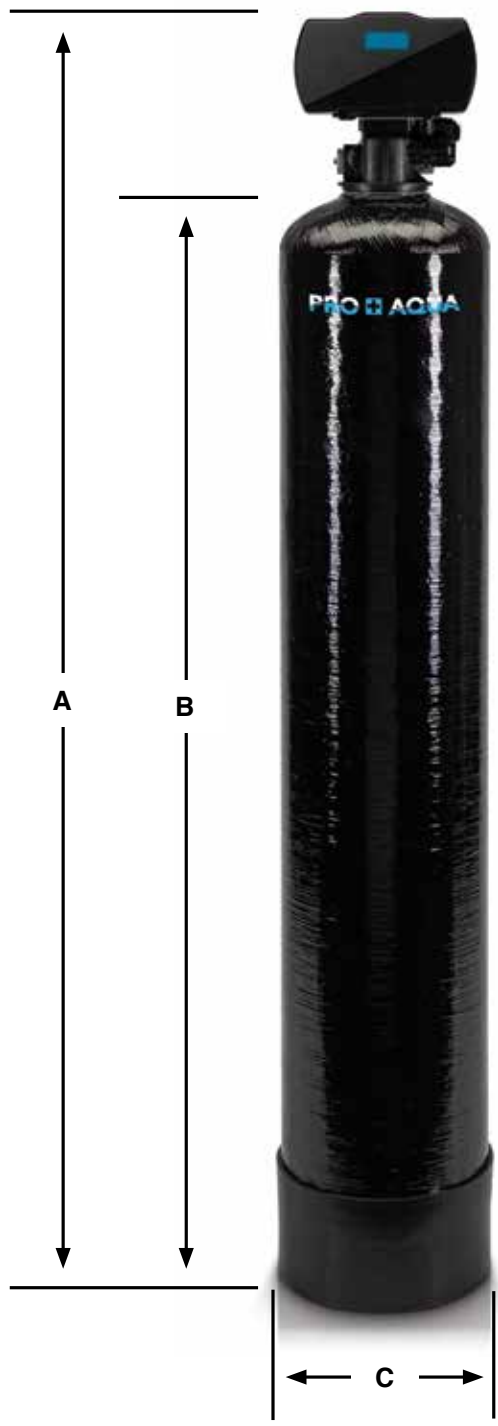
### Stop Backwash

When Backwashing, press the  simultaneously to stop backwashing, the display will return to the service position.



# PRODUCT DIMENSION

Pro+Aqua Water Softeners				
Model	Tank Size	A	B	C
PRO-S-80E	13"x54"	64"	54"	13"



# SYSTEM TROUBLESHOOT

Problem	Cause	Correction
1) The control fails to Backwash automatically	A) Transformer damaged	A) Replace the transformer
	B) Electronic controller or sensor damaged	B) Replace or repair
2) Backwash at wrong time	A) Timer improperly set, due to power failure	A) Reset timer
3) loss of capacity	A) Rinse fouling	A) Consolidate the rinse tank, clean the rinse and prevent future fouling
	B) Poor distribution, channeling (Uneven bed service)	B) Check distributors and backwash flow
	C) Internal control leak	C) Replace the spacer, seal or piston
	D) Loss of rinse	D) Check for correct bed depth. Broken distributors. Air or gas in bed
4) Poor water quality	A) Check items listed in Problem # 3	A) Check items listed in Correction # 3
	B) Bypass is open	B) Close the bypass
	C) Channeling	C) Check for too slow or high service flow
5) Loss of water pressure	A) Fouling of inlet pipe	A) Clean or replace the pipeline
	B) Fouled Media	B) Clean the Media. Pre-treat to prevent
	C) Improper backwash	C) Too many media fines. Reset the flow rate and time of backwash
6) Control cycles continuously	A) Faulty timer	A) Replace timer
7) Continuous flow to drain	A) Foreign material in the control	A) Call a service tech. Clean valve, rebuild unit
	B) Internal control leak	B) Same as above
	C) Piston jammed in back wash position	C) Same as above









# LIMITED PRODUCT WARRANTY

**PRO+AQUA** warrants that your new Well Water Filtration System is built of quality material and workmanship. When properly installed and maintained, it will give years of trouble free service.

## **Five Year Valve, Electronics and Tank Guarantee**

PRO+AQUA will replace any part on the valve or electronics which fails or the media within (5) five years from date of manufacture, as indicated by the serial number, provided the failure is due to a defect in material or workmanship. The only exception shall be when proof of purchase or installation is provided. The warranty period shall be from the date of purchase. Media and internal control valve parts will not be covered for systems with excessive iron, manganese or with very high chlorine concentrated feed waters. We highly recommend having a pre-treatment system placed before the water system to further protect your investment.

PRO+AQUA will provide a replacement tank to any original equipment purchaser in possession of the PRO+AQUA water softener that fails within (5) five years after the date of purchase, provided that it is at all times operated in accordance with specifications and not subject to freezing, sunlight or installed outdoors without proper covering.

## **General Provisions**

PRO+AQUA assumes no responsibility for consequential damage, labor or expense incurred as a result of a defect or for failure to meet the terms of these guarantees because of circumstances beyond our control. Installation workmanship failure is not covered under warranty. Damage caused by environmental conditions such as, lightening strikes, humidity or heat will not be covered under warranty. External uncovered installations are not covered by this warranty. System must be installed in a covered insulated area.

These warranties are in lieu of all other warranties expressed or implied, and we do not authorize any person to assume for us any other obligation on the sale of this water filtration system. No responsibility is assumed for delays or failure to meet these warranties caused by strike, government regulations or other circumstances beyond the control of Pro+Aqua.

## **Obtaining Warranty Coverage or General Inquiries**

If coverage is available, you may obtain coverage under this Limited Product Warranty by providing PRO+AQUA with proof of original purchase, and that you are the original purchaser. In making the claim, please provide the order number, your name, address, phone number, a description of the product involved, an explanation of the defect and photos/video.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. THIS WARRANTY MAY BE TRANSFERRED TO A SUBSEQUENT OWNER WITH WRITTEN APPROVAL FROM PRO+AQUA AND PAYMENT OF STANDARD TRANSFER FEE.

