

OWNERS MANUAL

SP SERIES™

Whole House Water Conditioner
With Triton Electronic Control Valve

*Activate your warranty by registering
your product at watertech.com or
call 469-521-1180.*



SCAN ME

WATER  **TECH™**
FILTRATION SYSTEMS



DEALER CONTACT AND PRODUCT INFORMATION

Dealer Name: _____

Dealer Phone Number: _____ Installation Date: _____

Model Number: _____ Serial Number: _____

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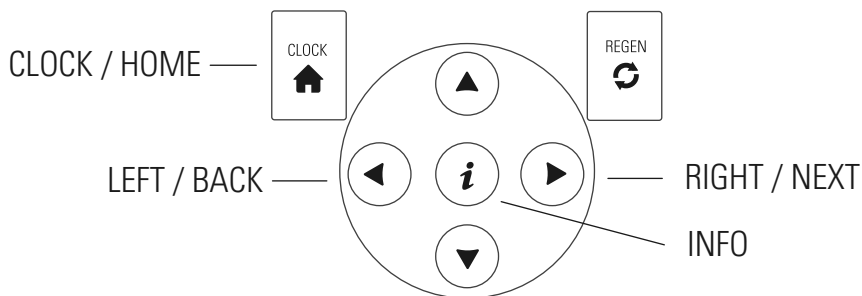


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469-521-1180.*

DO'S AND DON'T'S

- **DO ALWAYS** check your state and local regulations regarding plumbing and electrical connections and placement of the system before installation.
- **DO** install the system into the existing cold water supply line before the water heater and before any cold water outlet that requires treatment.
- **DO** bypass your system in the event of a water or plumbing related emergency.
- **DO** inspect the brine tank monthly, if applicable.
- **DO** contact your WaterTech Dealer if you have any questions about the operation of your system or water quality issues.
- **DO** enjoy all the benefits of your treated water!
- **DO NOT** hang or stack items on your equipment. This may cause an equipment imbalance or put a strain on plumbing and electrical connections.
- **DO NOT** disconnect or remove any part of the plumbing or electrical cord.
- **DO NOT** attempt to reprogram your system. Your system has been factory or field programmed specifically for your application.
- **DO NOT** allow your system and attached plumbing to be exposed to extreme temperatures (below 40° F or above 110° F).
- **DO NOT** use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

DISPLAYS & PROGRAMMING



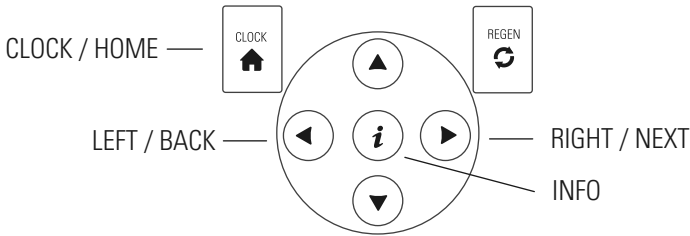
SET CLOCK

- Press CLOCK one time.
- The hours will begin to flash.
- Use \triangle or ∇ to adjust the hour. The hours will cycle through AM and PM.
- Once the hour is set correctly, press \triangleright one time to set the minutes.
- Once you see the minutes flashing, use \triangle or ∇ to adjust the minutes.
- Once time is set, press CLOCK.

SETTING HARDNESS (IF APPLICABLE)

- Enter the Installer Screens by pressing and holding $\triangleright + \triangle$ simultaneously for 3-5 seconds.
- Once the display changes, if the system is programmed to calculate grains of hardness, the first display in the installer screens will be "Water Hardness".
- Use \triangle or ∇ to increase or decrease the hardness level based on the customers raw water total hardness.
- Once the hardness level is set, you can advance to the next Installer Screen by pressing \triangleright OR you can return to the home display by pressing house icon

DISPLAYS & PROGRAMMING



SETTING REGENERATION TIME

- Enter the Installer Screens by pressing and holding $\triangleright + \triangle$ simultaneously for for 3-5 seconds.
- Once the display changes, press \triangleright until you reach the “Regeneration Time” display.
- When on the “Regeneration Time” display, use \triangle or ∇ to adjust the hour. The hours will cycle through AM and PM.
- Press \triangleright to move the cursor to adjust the minutes. Use \triangle or ∇ to adjust the minutes.
- Advance to the next Installer Screen by pressing \triangleright OR you can return to the home display by pressing 🏠

INITIATING MANUAL REGENERATION

- To manually regenerate the system at its pre-programmed regeneration time, tap the REGEN button. You will see the words “Regen Today” flash in the upper left of the display.
- To initiate an immediate manual regeneration, press and hold the REGEN button for 3-5 seconds until the system begins a manual regeneration.
- For diagnostic purposes, you can manually advance through the different stages of regeneration by pressing the REGEN button once the pistons have reached the intended position of each regeneration stage.

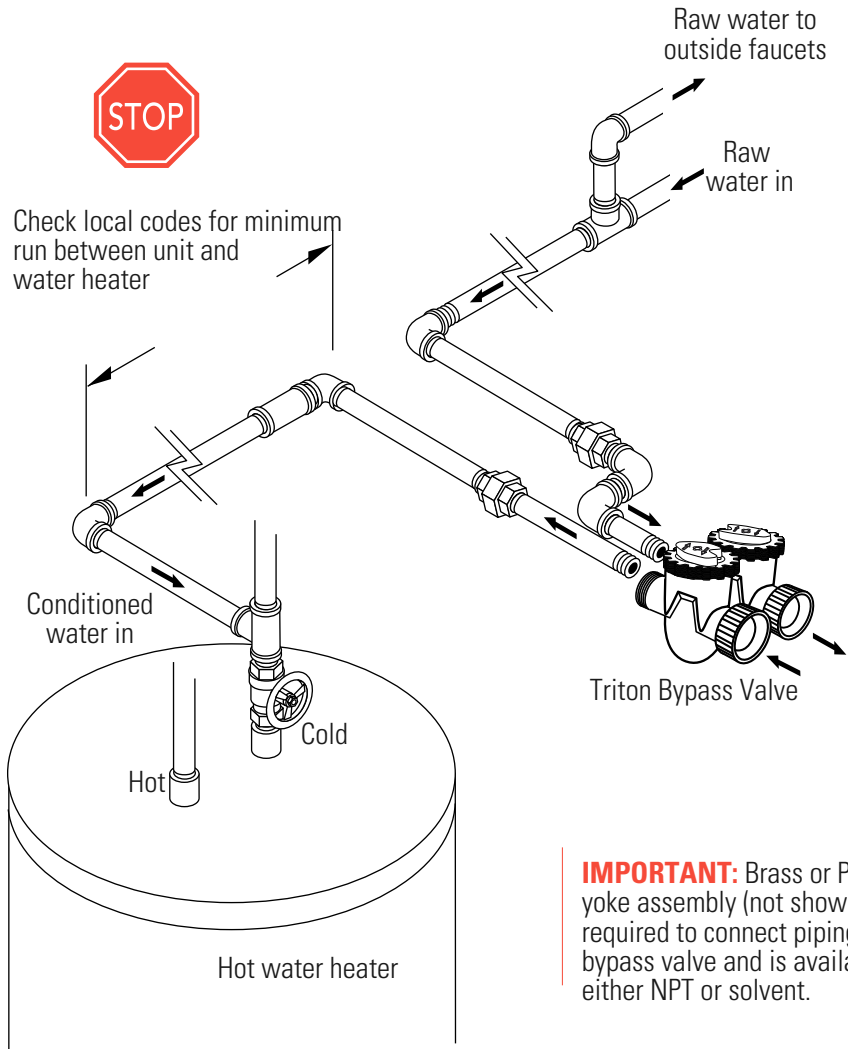
ERROR MESSAGE

error

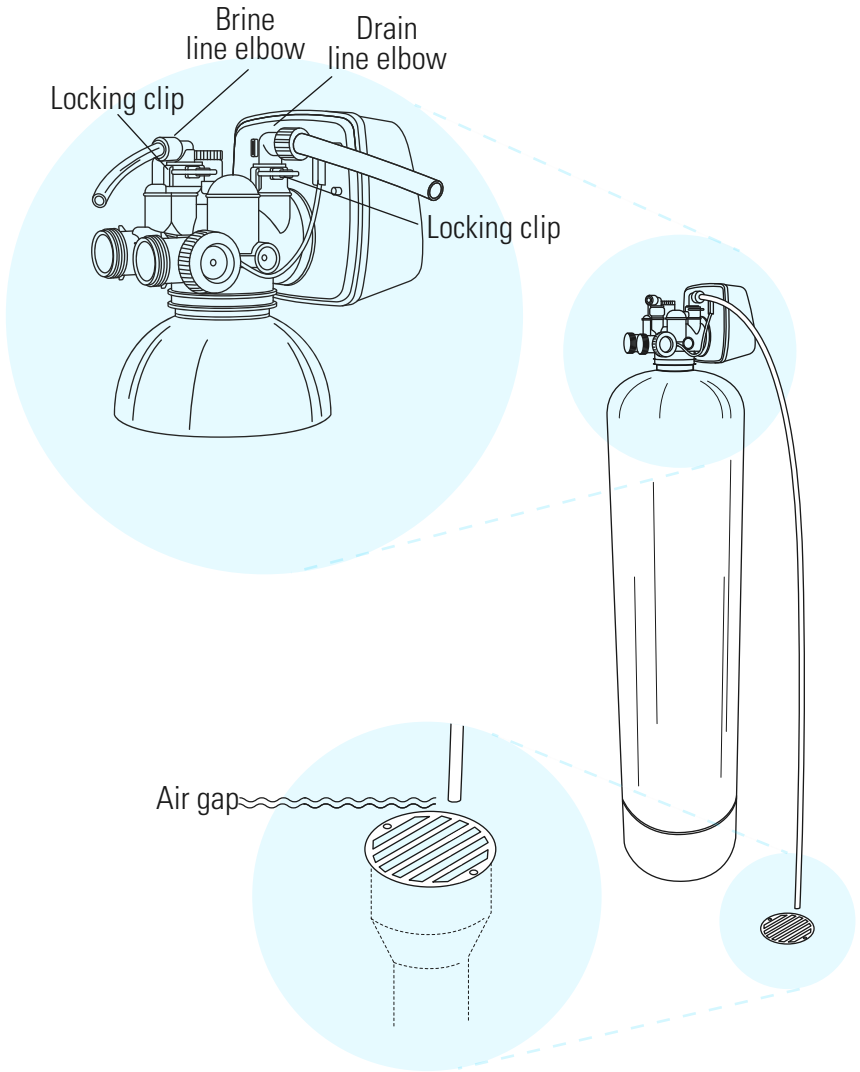
- SOFT RESET (to reset “ERROR” code)
Press and hold $\triangleright + \text{REGEN}$ simultaneously for 3-5 seconds until valve resets.
- If the word “ERROR” persists, after a soft reset, and a number is alternately flashing on the display, contact an authorized WaterTech dealer for service help. This indicates that the valve was not able to function properly. This is a rarely encountered malfunction.

PLUMBING CONNECTION

Typical plumbing installation



DRAIN LINE CONNECTION



CAUTION: Never connect drain line directly into drain, sewer line or trap. Always allow an air gap of at least 25mm (1 inch) or 2 pipe diameters between the drain line and waste water to prevent the possibility of sewage being back siphoned.

BYPASS VALVE OPERATION

The bypass valve is typically used to isolate the control valve from the plumbing system's water pressure in order to perform control valve repairs or maintenance. The 1" full flow bypass valve incorporates four positions including a diagnostic position that allows service personnel to work on a pressurized system while still providing untreated bypass water to the facility or residence. Its completely non-metallic, all plastic design allows for easy access and serviceability without the need for tools.

The bypass body and rotors are glass-filled Noryl and the nuts and caps are glass-filled polypropylene. All seals are self-lubricating EPDM to help prevent valve seizing after long periods of non-use. Internal o-rings can easily be replaced if service is required.

The bypass consists of two interchangeable plug valves that are operated independently by red arrow-shaped handles. The handles identify the flow direction of the water. The plug valves enable the bypass valve to operate in four positions.

Refer to corresponding Bypass Valve Instructions on the following page.

Figure 1. Normal Operation Position: The inlet and outlet handles point in the direction of flow indicated by the engraved arrows on the control valve. Water flows through the control valve during normal operation and this position also allows the control valve to isolate the media bed during the regeneration cycle.

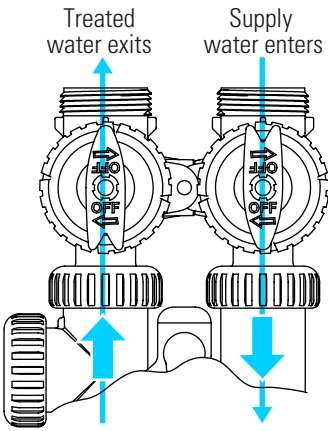
Figure 2. Bypass Position: The inlet and outlet handles point to the center of the bypass, the control valve is isolated from the water pressure contained in the plumbing system. Untreated water is supplied to the plumbing system.

Figure 3. Diagnostic Position: The inlet handle points in the direction of flow and the outlet handle points to the center of bypass valve, system water pressure is allowed to the control valve and the plumbing system while not allowing water to exit from the control valve to the plumbing.

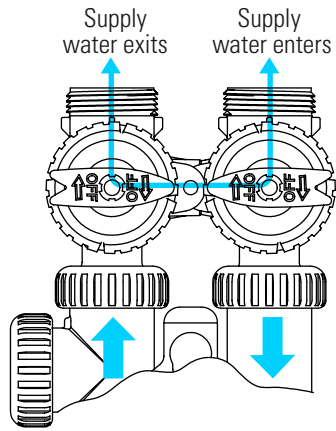
Figure 4. Shut Off Position: The inlet handle points to the center of the bypass valve and the outlet handle points in the direction of flow, the water is shut off to the plumbing system. If water is available, on the outlet side of the softener, it is an indication of water bypassing the system (i.e. a plumbing connection somewhere in the building bypasses the system).

BYPASS VALVE ILLUSTRATIONS

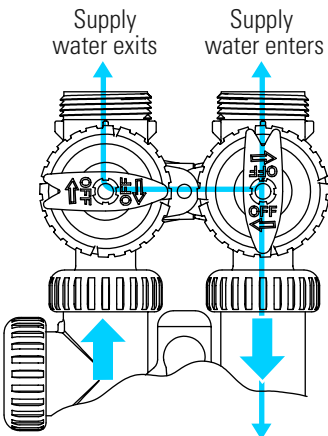
**FIGURE 1.
NORMAL OPERATION**



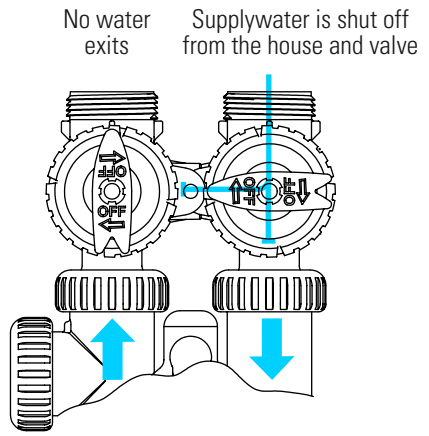
**FIGURE 2.
BYPASS OPERATION**



**FIGURE 3.
DIAGNOSTIC MODE**



**FIGURE 4.
SHUT OFF MODE POSITION**



***SYSTEM MAINTENANCE
AND PROGRAMMING***

**FERROMAX™
NITROMAX™**

PAGES 9-11

With minimal care, your system is designed to serve you for many years. While constant attention to your system is not necessary, the following suggestions will ensure your system's performance and your convenience and satisfaction.

MAINTENANCE

- Your system should be serviced every 1-2 years (or as needed) by a factory authorized service technician to ensure that all components and overall system are functioning properly.
- Salt in the brine tank is used as a resin 'cleaner' to remove contaminants during the regeneration process. Check the salt level of the brine tank on a regular basis to make sure your system is using salt. Your system will function properly whether the salt tank is near full or near empty, refill when necessary.
- Use only premium-grade regenerant salt that is designed specifically for use with water softeners and conditioners. Sodium (NaCl) salt may be used. Potassium (KCl) is recommended in most applications for superior taste, odor, aesthetic and environmental benefits.

SERVICE ISSUES

- If the Triton control valve system display does not appear, check to make sure the system is plugged in and that there is power at the receptacle. If the unit does not respond with power present, contact your WaterTech Dealer.
- The manual bypass valve (which is located at the rear of the unit) is designed to isolate the unit from the plumbing for servicing or to shut off the water supply to the unit in the event of a leak at the conditioner. Consult the bypass operating diagram on page 7 of this manual for instructions to position your bypass valve for either service or isolation.
- If you experience an extended power outage (over an hour in length), you may need to reset the time of day on the Triton control valve. The internal battery is designed to retain the time of day for up to 24 hours. There is no need to reset any other part of the program as this is kept in non-volatile, permanent memory. Consult the programming instructions on page 2 of this manual for instructions to set the electronic time clock of the Triton control valve.
- If you experience a change in water quality:
 - First check to see if your brine tank is empty. If necessary, add regenerant salt.
 - Check to see if your system has power.
 - Check to see if your system is in bypass (see Bypass Illustrations on page 7)
 - Check to see if the drain line has a kink that may be restricting flow during regeneration. Correct, if necessary, or contact your WaterTech Dealer.
 - Place system in manual regeneration (see Displays and Programming on page 3)
 - Contact your local WaterTech Dealer.

STARTING UP THE SYSTEM

Flushing, Conditioning and Sanitizing



Did you connect the drain line securely to the valve?
Did you connect the brine line securely to the valve?

Step 1.

- Make sure the system is in the "Bypass" position before turning the main water back on. See Bypass Illustrations on page 7.
- Make sure the drain line provided is connected securely to the control valve and is properly located over a drain.
- It is recommended that a separate drain line, not provided, is connected to the overflow elbow on the brine tank and is properly located over a drain.
- Make sure the brine line is connected to both the air check in the brine well and the control valve.
- Make sure the control valve is plugged into an operating outlet with the correct voltage and is properly grounded.

Step 2.

- Press and Hold the REGEN button on the Triton until you hear the motor engage. This will initiate an immediate manual regeneration of the system.
- Turn the bypass valve to "diagnostic" mode position (see figure 3 on page 7). (You should hear water entering the system.) Wait a few minutes to ensure the control valve can draw water and does not leak.
- Valve screen should read FILL with a countdown started. Look inside brine tank to see water filling the tank above the brine grid at the bottom of the tank. Allow to complete fill cycle.
- The system will automatically advance to the SOFTENING cycle with a countdown on the screen. Press REGEN to advance to next cycle.
- System will now BACKWASH. Allow the system to backwash until the water going to drain is clear. If everything is working, press and release the REGEN button.
- You will hear the motor engage and move the piston into the DRAW position. Check the brine line for leaks or suction. You should hear the valve drawing brine. Look inside the brine tank to confirm water level is going down. Once confirmed, press REGEN.

STARTING UP THE SYSTEM

- Continue to press REGEN (wait for the motor to stop before pressing REGEN again) until you reach the SOFTENING position.
- Fill the brine tank with salt. Ensure that salt used is intended for water softeners.

Step 3.

- To ensure sanitary conditions in the mineral and brine tanks, pour 1.5 ounces common household bleach into the brine well (4" diameter tube in brine tank). Press and hold the REGEN button for 3 seconds to begin REGEN process. Allow the FILL cycle to complete. Once the screen indicates SOFTENING, press the REGEN button to move the control valve to the BACKWASH cycle and then press again to move to DRAW position. This cycle normally takes about 60 minutes, however 15 minutes should be sufficient to pull the chlorine from the brine tank. After 15 minutes, press the REGEN button to move the control valve to the BACKWASH 2 position. Let the valve complete this cycle and advance to the RINSE cycle.
- Once the valve has completed the RINSE cycle it will automatically return to service. In step 5 you will set the valve to REGEN TODAY so that it will regen tonight at the specified time. If there is any residual chlorine, it will be removed tonight.

Step 4.

- Make sure that the bypass valve is completely set in the "Normal Operation" position. Let the water in the taps of the building run for several minutes to purge the unconditioned water out of the pipes. After several minutes, take a water sample and test for hardness from the running tap. If a hardness test reads "soft" water, the installation is correct.

Step 5.

- Press and release the REGEN button. You should see REGEN TODAY appear on the LCD screen. This will instruct the control valve to regenerate tonight at the specified time (usually 1:00 am).

Step 6.

- Drain hot water heater and let it refill with conditioned water. We suggest draining the hot water by turning on the hot water taps in the house.

YOUR SYSTEM IS READY FOR OPERATION

**SYSTEM MAINTENANCE
AND PROGRAMMING**

OXIMAXAIR™
SORBMAXAIR™

PAGES 13-15

With minimal care, your system is designed to serve you for many years. While constant attention to your system is not necessary, the following suggestions will ensure your system's performance and your convenience and satisfaction.

MAINTENANCE

- Your system should be serviced every 1-2 years (or as needed) by a factory authorized service technician to ensure that all components and overall system are functioning properly.

SERVICE ISSUES

- If the Triton control valve system display does not appear, check to make sure the system is plugged in and that there is power at the receptacle. If the unit does not respond with power present, contact your WaterTech Dealer.
- The manual bypass valve (which is located at the rear of the unit) is designed to isolate the unit from the plumbing for servicing or to shut off the water supply to the unit in the event of a leak at the conditioner. Consult the bypass operating diagram on page 7 of this manual for instructions to position your bypass valve for either service or isolation.
- If you experience an extended power outage (over an hour in length), you may need to reset the time of day on the Triton control valve. The internal battery is designed to retain the time of day for up to 24 hours. There is no need to reset any other part of the program as this is kept in non-volatile, permanent memory. Consult the programming instructions on page 2 of this manual for instructions to set the electronic time clock of the Triton control valve.
- If you experience a change in water quality:
 - Check to see if your system has power.
 - Check to make sure your Brine elbow is in place and able to draw air.
 - Check to see if your system is in bypass (see Bypass Illustrations on page 7)
 - Check to see if the drain line has a kink that may be restricting flow during regeneration.
 - Place system in manual regeneration (see Displays and Programming on page 3)
 - Contact your local WaterTech Dealer.

STARTING UP THE SYSTEM

Flushing, Conditioning and Sanitizing



Did you connect the drain line securely to the valve?

Did you confirm the brine elbow is securely in place with air filter on end of tubing?

Step 1.

- Make sure the system is in the "Bypass" position before turning the main water back on. Bypass Illustrations on page 7.
- Make sure the drain line provided is connected securely to the control valve and is properly located over a drain.
- Make sure the control valve is plugged into an operating outlet with the correct voltage and is properly grounded.
- Make sure the air intake filter and tube connected to the brine elbow is in place and secure.

Step 2.

- Press and Hold the REGEN button on the Triton until you hear the motor engage. This will initiate an immediate manual regeneration of the system.
- Turn the bypass valve to "diagnostic" mode position (see figure 3 on page 7). (You should hear water entering the system.) Wait a few minutes to ensure the control valve can draw water and does not leak.
- The valve will immediately go into BACKWASH. Allow the system to backwash until the water going to drain is clear. If everything is working, press and release the REGEN button.
- You will hear the motor engage and move the piston into the DRAW position. You should hear the valve drawing air. Once confirmed that the valve is drawing air, allow to run for 10+ min. in this cycle then press REGEN.
- The valve will advance to the FILTERING position.
- If you have confirmed all connections are not leaking, the system is ready for service.

STARTING UP THE SYSTEM

Step 3.

- Make sure that the bypass valve is completely set in the “Normal Operation” position. Let the water in the taps of the building run for several minutes to purge the unconditioned water out of the pipes.

Step 4.

- Press and release the REGEN button. You should see REGEN TODAY appear on the LCD screen. This will instruct the control valve to regenerate tonight at the specified time (usually 1:00 am).

Step 5.

- Drain hot water heater and let it refill with conditioned water. We suggest draining the hot water by turning on the hot water taps in the house.

YOUR SYSTEM IS READY FOR OPERATION

SYSTEM MAINTENANCE AND PROGRAMMING

DEEPMAX™

NEUMAX™

SORBMAX™

PAGES 17-18

MAINTENANCE

With minimal care, your system is designed to serve you for many years. While constant attention to your system is not necessary, the following suggestions will ensure your system's performance and your convenience and satisfaction.

MAINTENANCE

- Your system should be serviced every 1-2 years (or as needed) by a factory authorized service technician to ensure that all components and overall system are functioning properly.

SERVICE ISSUES

- If the Triton control valve system display does not appear, check to make sure the system is plugged in and that there is power at the receptacle. If the unit does not respond with power present, contact your WaterTech Dealer.
- The manual bypass valve (which is located at the rear of the unit) is designed to isolate the unit from the plumbing for servicing or to shut off the water supply to the unit in the event of a leak at the conditioner. Consult the operating diagram on page 7 of this manual for instructions to position your bypass valve for either service or isolation.
- If you experience an extended power outage (over an hour in length), you may need to reset the time of day on the Triton control valve. The internal battery is designed to retain the time of day for up to 24 hours. There is no need to reset any other part of the program as this is kept in non-volatile, permanent memory. Consult the programming instructions on page 2 of this manual for instructions to set the electronic time clock of the Triton control valve.
- If you experience a change in water quality:
 - Check to see if your system has power.
 - Check to see if your system is in bypass (see Bypass Illustrations on page 7)
 - Check to see if the drain line has a kink that may be restricting flow during regeneration.
 - Place system in manual regeneration (see Displays and Programming on page 3)
 - Contact your local WaterTech Dealer.

STARTING UP THE SYSTEM

Flushing and Conditioning



Did you connect the drain line securely to the valve?

Step 1.

- Make sure the system is in the "Bypass" position before turning the main water back on. See page 7.
- Make sure the drain line provided is connected securely to the control valve and is properly located over a drain.
- Make sure the control valve is plugged into an operating outlet with the correct voltage and is properly grounded.

Step 2.

- Press and hold the REGEN button on the Triton Valve until you hear the motor engage. This will initiate an immediate manual regeneration of the system. Turn the bypass valve to "diagnostic" mode position (see figure 3 on page 7). The screen will indicate "BACKWASH". You should hear water entering the system. Wait a few minutes to ensure the control valve can draw water and does not leak. Let the tank fill and begin to push water out the drainline. Allow the system to backwash until the water going to drain is clear. If everything is working, press and release the REGEN button. You will hear the motor engage and move the piston into the "RINSE" position. Again, check for leaks anywhere on the tank/valve or connections. Allow valve to continue pushing water to the drainline until the water coming out of drainline is clear. After a few minutes, you will hear the motor engage and move the piston into the "SERVICE" position. If the water coming out of the drainline is not clear by the end of the above cycles, repeat Step 2 above with bypass in "diagnostic" position.

Step 3.

- If water to drain is completely clear, turn bypass valve to "normal" operation position (see figure 1 on page 7). Let the water in the taps of the building run for several minutes to purge the unconditioned water out of the pipes.

YOUR SYSTEM IS READY FOR OPERATION

WaterTech Industries MAX Residential Series 5/10 Year Warranty

Applicable to: DEEPMAX, FERROMAX, NEUMAX, NITROMAX, OXIMAX Air, SORBMAX, SORBMAX Air

WaterTech Industries (WTI) hereby warrants said equipment, only to the original purchaser at the original installation location.

THIS WARRANTY PERIOD BEGINS at the time of initial installation and use. The warranty becomes valid upon registration of the equipment.

10-YEAR WARRANTY ON CONDITIONER TANK AND 5-YEAR WARRANTY ON BRINE TANK — WaterTech Industries will replace or repair (at WTI option) any conditioner tank OR brine tank that becomes unusable because of leakage, corrosion or rupture due to manufacturers defect. All internal mechanical components are warranted for a period of five (5) years from date of installation.

5-YEAR WARRANTY ON CONTROL VALVE — Your water system has been equipped with the highest quality water conditioning control valves available. If, upon factory inspection, the control valve body or PC board is found to be defective, WaterTech Industries will furnish repair or replacement (at WTI option) of the control valve body and/or the PC board. All internal mechanical components are warranted from manufacturers defect for a period of five (5) years from the date of installation.

EXCLUSIONS AND LIMITATION OF LIABILITY — WaterTech Industries' liability for special, incidental, or consequential damages is expressly disclaimed. In no event shall WaterTech Industries' liability exceed the obligation of repairing or replacing any part that becomes defective under valid warranty coverage as described above. Cosmetic damage that does not affect the process functionality of the equipment is not covered. WaterTech Industries makes every effort to ensure that all illustrations and specifications are correct. However, these do not imply a warranty that the product is merchantable or fit for a particular purpose, or that the product may not vary from the illustrations and specifications.

The warranty contained herein is in lieu of all other warranties, expressed or inferred, including any implied warranty of fitness for a particular purpose. Labor and transportation costs incidental to the delivery or replacement of parts other than WTI factory repairs are not covered under this warranty. In the event of a warranty replacement or repair, WTI will cover the cost of shipping the covered

components. This warranty expressly excludes any system which has been damaged by accident, fire, flood, Act of God, abuse, neglect, freezing, excessive temperature (below 40° F or above 110° F.), inappropriate pressure (below 20 psi or above 100 psi), misuse, alteration of product in any way by owner or installing company, product identification tampering, misapplication, installation or operation not consistent with WTI instructions and installation outside of applicable plumbing codes and local regulations. Furthermore, this warranty expressly excludes any system which has been out of service for more than 90 days continuously. Fulfillment of the warranty coverage by WTI is contingent on proper execution of the procedures set forth in the WTI Warranty RGA policy. No person or representative is authorized to assume for WaterTech Industries any liability on its behalf, or in its name, except to refer the purchaser to this warranty. This warranty gives you specific legal rights, you may also have other rights which vary from state to state.

WHAT MUST YOU DO TO OBTAIN WARRANTY SERVICE — The warranty registration (via phone or website) must be completed and returned to WaterTech Industries within Ninety (90) days of installation to validate the Warranty. Repair work should be performed by an authorized WaterTech Dealer. In the event that authorized dealer service is not available, defective components may be returned directly to WaterTech Industries for warranty service. The registered owner must contact WaterTech for return instructions and return the defective component, freight prepaid, with proof-of-purchase, within the applicable warranty period.

Warranty 17-03-010

***PRODUCT MUST BE REGISTERED TO ACTIVATE WARRANTY
VISIT WWW.WATERTECH.COM OR CALL 469-521-1180***