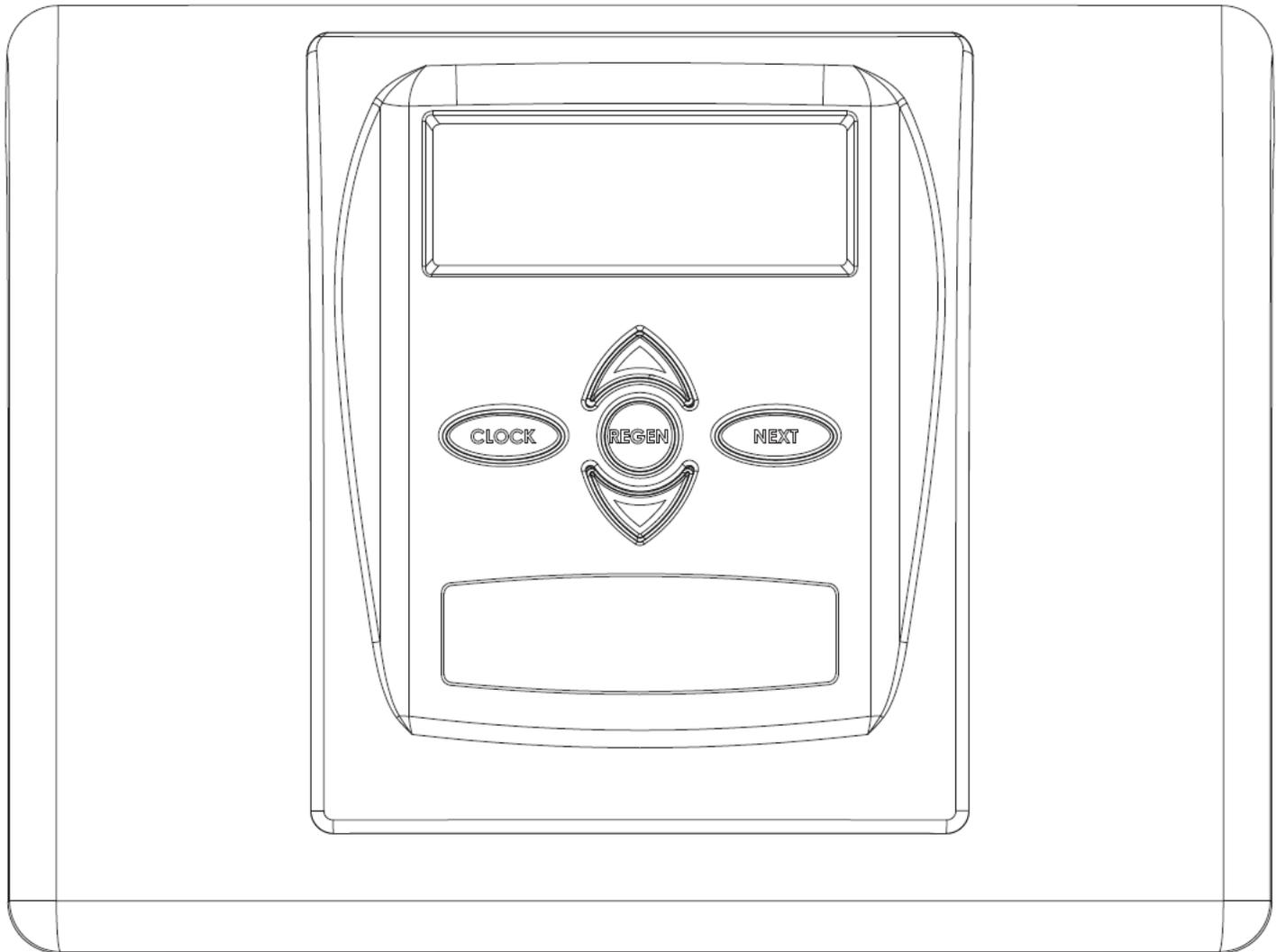


# ALASKA WATER CONDITIONING, INC.

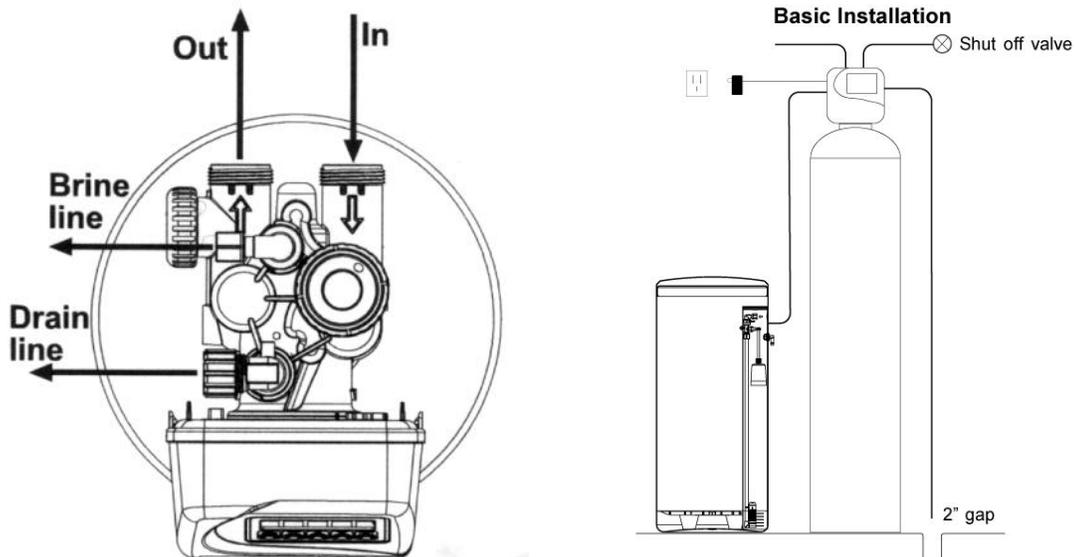


ALASKA WATER CONDITIONING, INC. ALASKAN TURBO-CLEAN LEGEND SERIES- WATER SOFTENER INSTALLATION & START-UP

907-376-8822

WWW.AKWATER.NET

## BASIC INSTALLATION



### General installation & Guide

The control valve, fittings and/or bypass are designed to accommodate minor plumbing misalignments but are not designed to support the weight of a system or the plumbing.

**Do not** use Vaseline, oils, other hydrocarbon lubricants or spray silicone anywhere. A silicone lubricant may be used on black o-rings but is not necessary. Avoid any type of lubricants, including silicone on red or clear lip seals.

**Do not** use pipe dope or other sealants on threads. Teflon tape must be used on the plumbing threads of the 1" connection and on the threads for the drain line connection only- that are having plumbing fittings threaded on to them. Teflon tape is not necessary on the nut connections or cap because o-rings seals are used. The nuts and caps are designed to be tightened by hand or with the special plastic service wrench, #V3193-XXX. If necessary a pliers can be used to unscrew the nut or cap. **Do not** use a pipe wrench. **Do not** place screwdriver in slots on caps and/or tap with a hammer.

1. The distance between the drain and the water softener should be as short as possible. Drain tube/pipe should be a minimum of 5/8" size.
2. All plumbing should be done in accordance with local plumbing codes.
3. Do not install any Water Softener with less than 10 feet of piping between its outlet and the inlet of a water heater.
4. Do not locate unit where it or its connections (including the drain and overflow lines) will ever be subjected to room temperatures under 34F.
5. Inlet/outlet plumbing: connect to a supply line and install an inlet shutoff valve.
6. Drain line: Be sure that the drain can handle the backwash rate of the system and install a flexible plastic tube to the Drain Line Assembly.

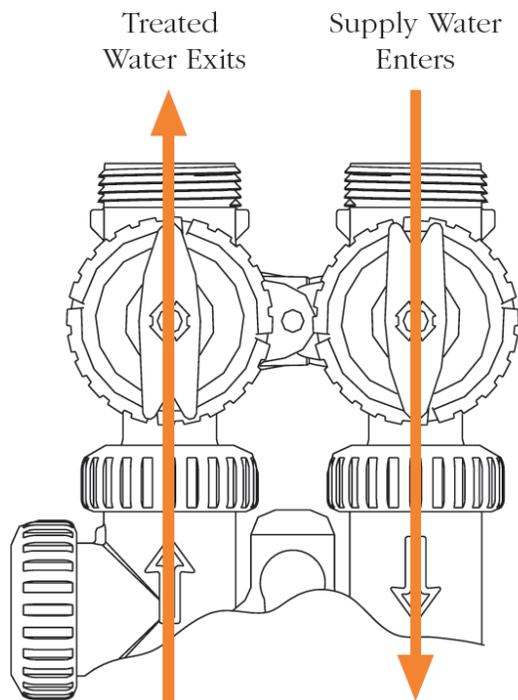
## Bypass Valve

The bypass valve is used to isolate the control valve from the plumbing system in order to perform valve repairs or maintenance.

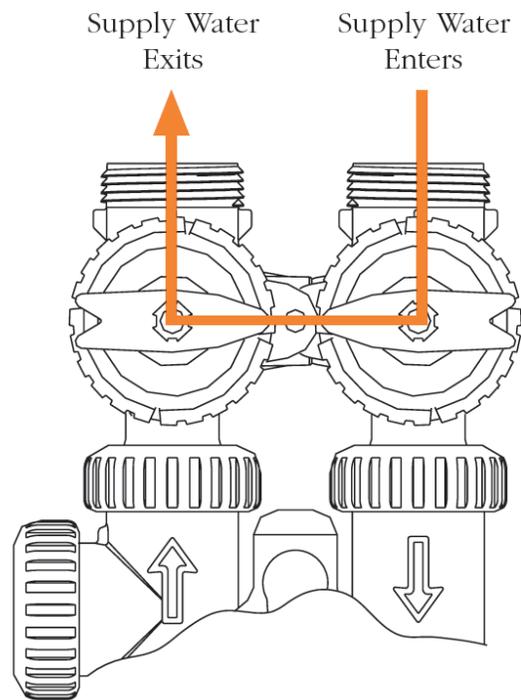
1. **Normal Operation Position:** The inlet and outlet handles point in the direction of flow indicated by the engraved arrows on the control valve.
2. **Bypass Position:** The inlet and outlet handles point to the center of the bypass. Untreated water is supplied to the plumbing system.

To **shut-off water** to the system, please position arrow handles as shown in the **bypass operation** diagram below. If your valve doesn't look like the diagram below, contact your service technician for instructions on how to shut-off water.

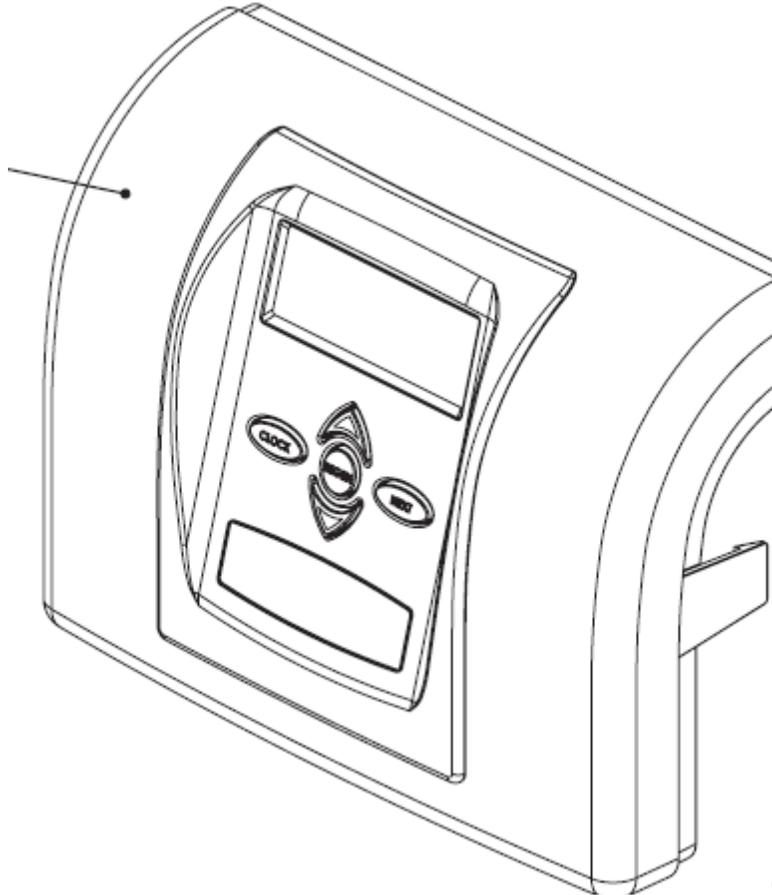
### NORMAL OPERATION



### BYPASS OPERATION

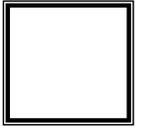


## Start-up Instructions:



- After installation is completed rotate the bypass handles on the water softener to the bypass position.
  - Fully open a cold water faucet in the home & turn water supply back on in the home.
  - Allow water to run until clear to ride pipes of debris, which may have occurred during installation.
  
  - **The system is now ready for start-up:**
    1. Press and hold the “REGEN” button for five seconds until the drive motor starts. Wait until the motor stops running and the display reads “BACKWASH”
    2. Open the inlet handle of the bypass valve very slowly, ½ way open, allowing water to fill the tank slowly in order to expel air.
    3. When the water is flowing steadily to the drain without the presence of air, fully open the inlet bypass valve handle & let the water flow to drain for 5 minutes.
    4. Press the “REGEN” button again to advance the control to the next position. Once the motor stops running the display will read BRINE DRAW.. Press the REGEN button again & release.
    5. The Display will not read “2<sup>nd</sup> BACKWASH”. Let the system backwash for another 2 to 3 minutes- or until water is clean at the drain, then press the REGEN button again & release.
    6. The Display will now read RINSE. Allow water to run to drain for 3 minutes, then press the REGEN button again & release.
    7. The display will not read “FILL”. Allow the system to fill the brine/salt tank on its own. Once the FILL cycle is complete, the system will automatically return to the home/service position.
    8. Once your system is displaying time of day, slowly open the outlet bypass handle to the fully open position.
    9. Your system is now operational and servicing the home.
    10. **\*\*Note\*\*** Manually, put 2” of water into the empty salt/brine tank during start-up. This will prime the salt tank for the first regeneration. Everything will be automatic after initial start-up.
    11. **\*\*Note\*\*** Now add salt to the salt/brine tank. **\*\*Note:** Always keep the salt/brine tank at least half way full of salt.
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## Setting the Time of day:



### Set Time of Day

The user can also set the time of day. Time of day should only need to be set if the battery has been depleted because of extended power outages or when daylight saving time begins or ends. If an extended power outage occurs, the time of day will flash on and off which indicates the time of day should be reset. The non rechargeable battery should also be replaced.

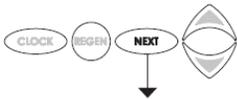
#### **STEP 1U**

**STEP 1U** – Press CLOCK.



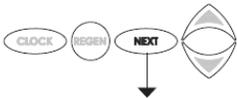
#### **STEP 2U**

**STEP 2U** - Current Time (hour): Set the hour of the day using ▼ or ▲ buttons. AM/PM toggles after 12. Press NEXT to go to Step 3U.



#### **STEP 3U**

**STEP 3U** - Current Time (minutes): Set the minutes of the day using ▼ or ▲ buttons. Press NEXT to exit Set Time of Day. Press REGEN to return to previous step.



**RETURN TO NORMAL MODE**

### Power Loss

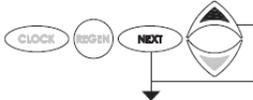
If the power goes out the system will keep time until the battery is depleted. If an extended power outage occurs, the time of day will flash on and off which indicates the time of day should be reset and the non rechargeable battery replaced. The system will remember the rest.



## Setting the Hardness Setting, Calendar Override Day & Regeneration time:

### Installer Display Settings

#### STEP 1I

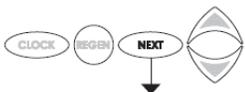


**STEP 1I** - Press NEXT and ▲ simultaneously for 3 seconds.

#### STEP 2I



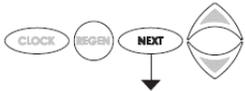
**STEP 2I** – Hardness: Set the amount of hardness in grains of hardness as calcium carbonate per gallon using the ▲ or ▼ buttons. The default is 20 with value ranges from 1 to 150 in 1 grain increments. Note: The grains per gallon can be increased if soluble iron needs to be reduced. This display will not show if “FILTER” is selected in Step 2F or if ‘AUTO’ is not selected in Set Volume Capacity in OEM Softener System Setup. Press NEXT to go to step 3I. Press REGEN to exit Installer Display Settings.



#### STEP 3I



**STEP 3I** – Day Override: When volume capacity is set to “OFF”, sets the number of days between regenerations. When volume capacity is set to AUTO or to a number, sets the maximum number of days between regenerations. If value set to “OFF”, regeneration initiation is based solely on volume used. If value is set as a number (allowable range from 1 to 28) a regeneration initiation will be called for on that day even if sufficient volume of water were not used to call for a regeneration. Set Day Override using ▲ or ▼ buttons:



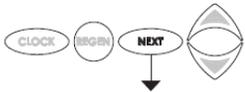
- number of days between regeneration (1 to 28); or
- “OFF”.

See Setting Options Table for more detail on setup. Press NEXT to go to step 4I. Press REGEN to return to previous step.

#### STEP 4I



**STEP 4I** – Next Regeneration Time (hour): Set the hour of day for regeneration using ▲ or ▼ buttons. AM/PM toggles after 12. The default time is 2:00 AM. This display will show “REGEN IMMEDIATE ON ZERO GAL” if “IMMEDIATE” is selected in Set Regeneration Time Option in OEM Softener System Setup Step 9S. Press NEXT to go to Step 5I. Press REGEN to return to previous step.

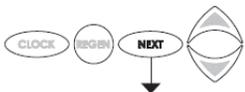


When Step 6CS is set to a value of two to four, additional regeneration time settings will be viewed. These displays are used to set additional times of day where a regeneration cycle may be initiated by the control as needed. When this feature is active a number (#1 - #4) will be added to the upper right corner of this display to indicate which of the additional regeneration time settings is currently being viewed.

#### STEP 5I



**STEP 5I** – Next Regeneration Time (minutes): Set the minutes of day for regeneration using ▲ or ▼ buttons. This display will not be shown if “IMMEDIATE” is selected in Set Regeneration Time Option in OEM Softener System Setup Step 9S. Press NEXT to go to Step 6I. Press REGEN to return to previous step. When this feature is active a number (#1 - #4) will be added to the upper right corner of this display to indicate which of the additional regeneration time settings is currently being viewed.



**RETURN TO NORMAL MODE**

## **Regeneration Mode**

Typically a system is set to regenerate at a time of low water usage. An example of a time with low water usage is when a household is asleep. If there is a demand for water when the system is regenerating, untreated water will be used.

When the system begins to regenerate, the display will change to include information about the step of the regeneration process and the time remaining for that step to be completed. The current cycle display will alternate with the regen time remaining screen. The system runs through the steps automatically and will reset itself to provide treated water when the regeneration has been completed.

## **Manual Regeneration**

Sometimes there is a need to regenerate the system sooner than when the system calls for it, usually referred to as manual regeneration. There may be a period of heavy water usage because of guests or a heavy laundry day.

To initiate a manual regeneration immediately, press and hold the “REGEN” button for three seconds. The system will begin to regenerate immediately. The request cannot be cancelled.

## User Display Settings

### General Operation

When the system is operating, one of six displays may be shown. Pressing NEXT will alternate between the displays. One of the displays is always the current time of day. The second display is one of the following: days remaining or volume remaining. Days remaining is the number of days left before the system goes through a regeneration cycle. Capacity remaining is the gallons that will be treated before the system goes through a regeneration cycle. Pressing the ▼ button while in the Capacity Remaining or Days Remaining displays will decrease the capacity remaining in 10 gallon increments or the Days Remaining in 1 day increments, and will also increase the volume used impacting the recorded values in Diagnostics Steps 3D, 4D and 5D and Valve History, Step 4VH.

The third display shows the current treated water flow rate through the system. The fourth display will display contact screen information, if it was edited. The fifth display will show either dP or hold if the dP switch is closed. The sixth display indicates the user should call for service. The service display will not appear if OFF is selected in Step 12S of OEM Softener System Setup. To clear the Service Call reminder, press the ▲ and ▼ buttons simultaneously while the number and banner text screen is displayed.

If the system has called for a regeneration that will occur at the preset time of regeneration, the words REGEN TODAY will alternate with the header on the display.

If a water meter is installed, the water drop flashes on the display when water is being treated (i.e. water is flowing through the system).

