

TO SET CURRENT TIME OF DAY:

NOTE: "SET HOUR" IS NOW "SET"

PRESS SET HOUR AND USING UP OR DOWN ARROW BUTTONS, ADJUST TO CURRENT HOUR.

PRESS SET HOUR AND USING UP OR DOWN ARROW BUTTONS, ADJUST TO CURRENT MINUTES TO THE HOUR.

PRESS: SET HOUR BUTTON TO RETURN TO NORMAL SERVICE MODE.

TO BACKWASH IMMEDIATELY:

PRESS UP AND DOWN ARROW BUTTONS TOGETHER AND HOLD FOR 3 SECONDS - BACKWASH WILL START IMMEDIATELY.

TO BACKWASH WITHIN 24 HOURS AT THE PRESET TIME OF DAY:

PRESS UP AND DOWN ARROW BUTTONS TOGETHER AND RELEASE - BACKWASH WILL START AT THE PREPROGRAMMED TIME.

TO ENTER BASIC PROGRAMMING MODE:

PRESS: SET HOUR & UP ARROW BUTTONS TOGETHER FOR 3 SECONDS

USE UP OR DOWN ARROW BUTTONS TO SET THE PREFERRED HOUR FOR THE START OF BACKWASH (DEFAULT = 2:00 AM)

PRESS: SET HOUR BUTTON

USE UP OR DOWN ARROW BUTTONS TO SET THE PREFERRED MINUTE FOR THE START OF BACKWASH (DEFAULT= 2:00 AM)

PRESS SET HOUR BUTTON: USE UP OR DOWN ARROW BUTTONS TO SELECT THE FREQUENCY BETWEEN BACKWASHES IN DAYS. (DEFAULT = 7 DAYS)

TO ENTER MASTER PROGRAMMING MODE:

PRESS: SET HOUR & UP ARROW BUTTONS TOGETHER FOR 3 SECONDS AND RELEASE

PRESS: SET HOUR & UP ARROW BUTTONS TOGETHER AGAIN FOR 3 SECONDS

USE UP OR DOWN ARROW BUTTONS TO CHOOSE:

P7: MINIMAL BACKWASH

P8: STANDARD BACKWASH (DEFAULT SETTING)

P9: EXTENDED BACKWASH

PRESS: SET HOUR BUTTON; CHOOSE "99"

PRESS: SET HOUR BUTTON; CHOOSE "60"

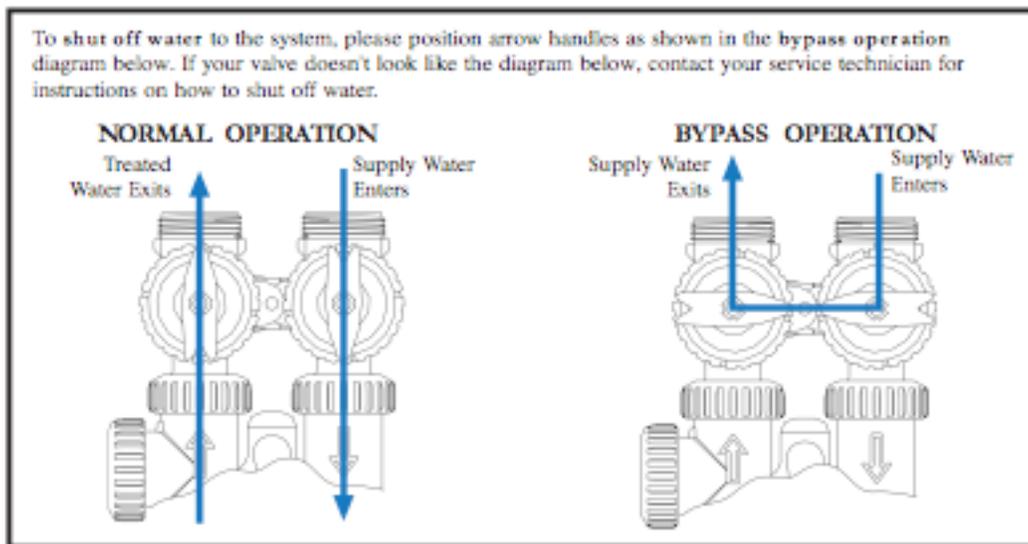
PRESS: SET HOUR BUTTON; CHOOSE "dp" WITH ARROW POINTED AT "REGEN HOUR"

PRESS SET HOUR BUTTON TO RETURN TO NORMAL SERVICE MODE

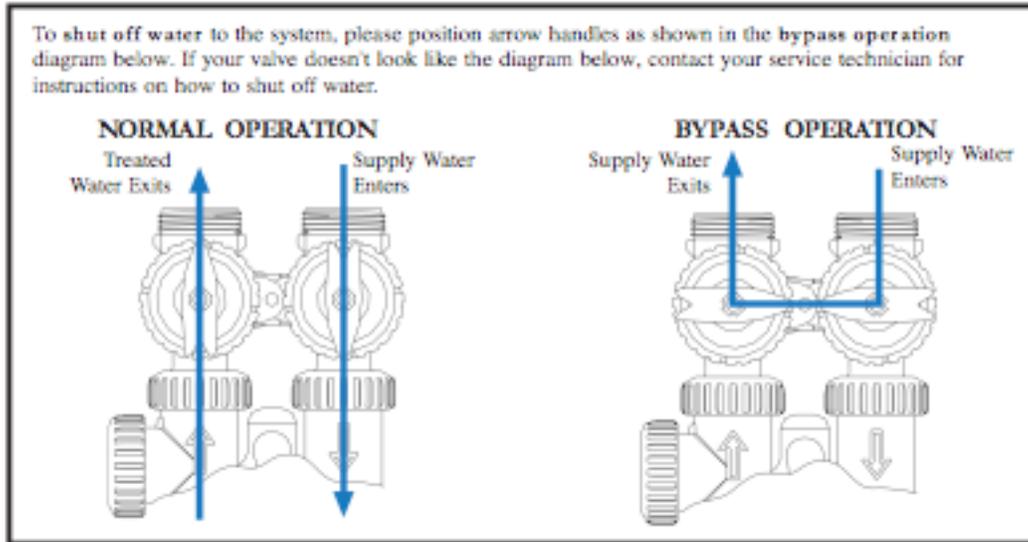
INSTALLATION AND PROGRAMMING PROCEDURES

INSTALLATION AND STARTUP

1. System should be installed by a licensed contractor, complying with all local and federal codes and using quality materials to insure proper operation.
2. Install system. Be certain the inlet and outlet are properly connected.
3. Place bypass valve in "Bypass Position" with valve handles perpendicular to the inlet and outlet.



4. Fully open the *test spigot (if installed) at the outlet of the system, or open a high flow **COLD** water fixture, like a tub. **DO NOT use any other water in house at this time, including hot water and toilets.** *Does not apply if using test spigot.
5. Place bypass valve into "Service Position" with valve handles parallel to each other and the inlet and outlet.



6. Allow water to run through the open fixture or test spigot for 15-20 minutes. Observe the water flow for color. If after 20 minutes color from the media is still present, allow system flow to continue until clear.
7. Close fixture or test spigot to stop water flow.
8. Initiate Manual Backwash of the CrystalClear Interior.

MANUAL REGENERATION

NOTE: For softeners, if brine tank does not contain salt, fill with salt and wait at least 2 hours before regeneration.

If you need to initiate a manual regeneration, either immediately, or tonight at the preprogrammed time (typically 2 a.m.), complete the following steps.

For Immediate Regeneration:
Press and hold UP and DOWN simultaneously until valve motor starts (typically 3 seconds).

For Regeneration Tonight:
Press and release UP and DOWN simultaneously (notice that arrow points to Regen).

Arrow will point to Regen if a regeneration is expected "Tonight."

Regen Min. Fill Regen Hour

Time - Hour PM Days To Regen

SET HOUR UP DOWN

9. Observe visually and/or audibly the Backwash Flow (Cycle 1) for any reduction of flow to drain. Backwash should maintain constant flow and sound.
10. If the backwash flow starts strong but diminishes start a new manual backwash and allow backwash to complete and system to return to service mode automatically.
11. If backwash flow is normal, allow the backwash process to complete automatically.

12. If reduction in backwash flow is observed, repeat steps 5 through 10 until backwash operates normally.
13. Finally, fully open a cold-water fixture and insure service flow is adequate.
14. If a reduction in service flow is observed, repeat steps 5 through 10 until household service flow is normal.
15. With backwash and service flow adequate, set time of day on the control valve by using the up and down buttons. Installation and verification are complete.

Notes:

- A. Check static (no water flowing) water pressure in pounds per square inch (psi) using an accurate gauge, as close to the water main as possible. Water pressure less than 40 psi may present problems with the **Healthy Home** service flow, and compromising the backwashing capability of the system.
- B. Any addition to household plumbing can cause a drop in pressure and/or flow rates. Great care has been taken in the design of the **Healthy Home** to minimize these affects.

MANUAL REGENERATION

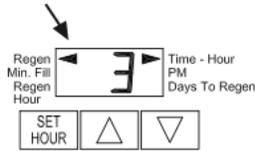
NOTE: For softeners, if brine tank does not contain salt, fill with salt and wait at least 2 hours before regeneration.

If you need to initiate a manual regeneration, either immediately, or tonight at the preprogrammed time (typically 2 a.m.), complete the following steps.

For Immediate Regeneration:

Press and hold UP and DOWN simultaneously until valve motor starts (typically 3 seconds).

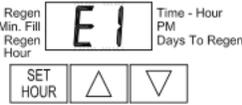
Arrow will point to Regen if a regeneration is expected "Tonight."



For Regeneration Tonight:

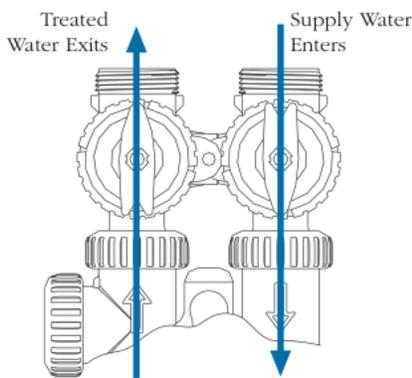
Press and release UP and DOWN simultaneously (notice that arrow points to Regen).

If the display shows "E1," "E2" or "E3" (for error), call a service technician.

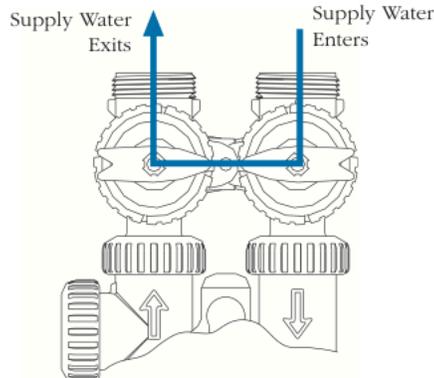


To **shut off water** to the system, please position arrow handles as shown in the **bypass operation** diagram below. If your valve doesn't look like the diagram below, contact your service technician for instructions on how to shut off water.

NORMAL OPERATION

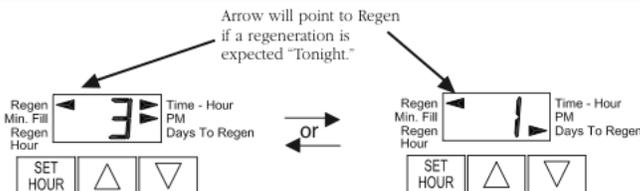


BYPASS OPERATION



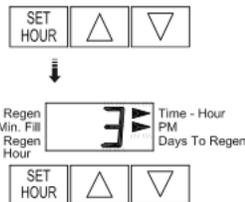
GENERAL OPERATION

When the system is operating one of two displays will be shown: time of day or days until the next regeneration. Pressing ▲ or ▼ will toggle between the two choices.



TO SET TIME OF DAY

In the event of a power outage, time of day needs to be reset. All other information will be stored in memory no matter how long the power outage. Please complete the steps as shown to the right. To access this mode, press SET HOUR.

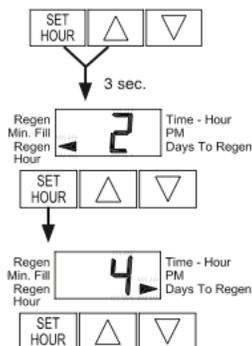


1. Accessed by pressing SET HOUR.
2. Adjust to the nearest hour using ▲ or ▼. An arrow points to PM during p.m. hours.
3. Press SET HOUR to complete and return to normal operation.

TO SET TIME OF REGENERATION and DAYS BETWEEN REGENERATION

For initial set-up or to make adjustments, please complete the steps as shown to the right. Access this mode by pressing SET HOUR and ▲ simultaneously for 3 seconds.

The number of days between regenerations may need to be varied based on usage and water conditions. (This step will not appear if the 7-day clock option is selected.)

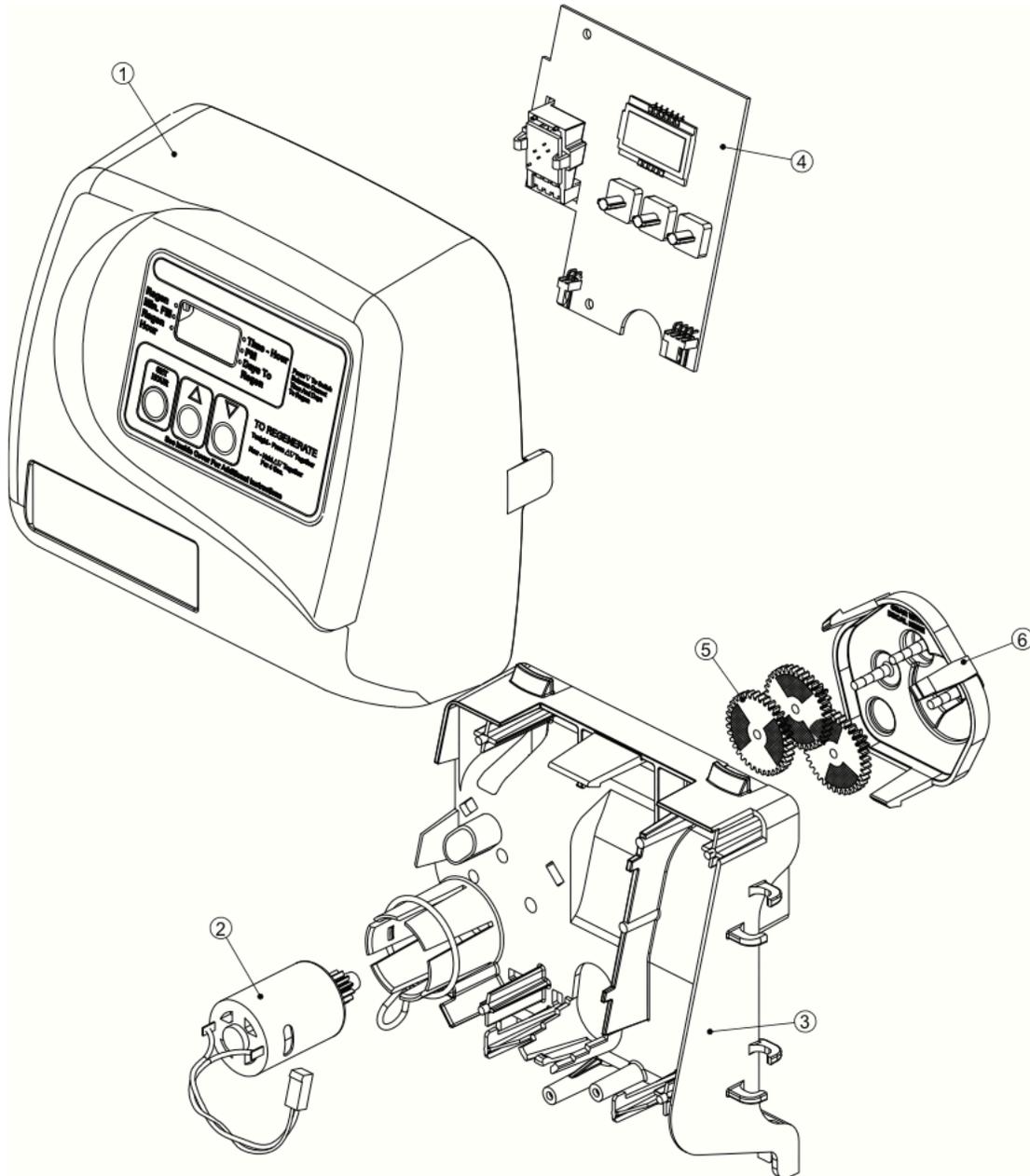


1. Accessed by pressing SET HOUR and ▲ simultaneously for 3 seconds.
 2. Adjust time of regeneration hour using the ▲ or ▼ buttons. An arrow points to PM during p.m. hours.
 3. Simultaneously press SET HOUR and ▼ to return to display mode.
- OR:
3. Press SET HOUR to select days between regeneration (1-99 day option only). Adjust days between regeneration using the ▲ or ▼ buttons. Pressing SET HOUR again will return to the display mode.

Front Cover and Drive Assembly

Drawing No.	Order No.	Description	Quantity
1	V3175TC-01	WS1TC Front Cover ASY	1
2	V3107-01	WS1 Motor Asy	1
3	V3106-01	WS1 Drive Bracket & Spring Clip	1
4	V3108TC	WS1TC PC Board	1
5	V3110	WS1 Drive Reducing Gear 12 x 36	3
6	V3109	WS1 Drive Gear Cover	1
	V3002TC	WS1TC Drive ASY	*
Not Shown	V3186	WS1 AC Adapter 110V - 12V	1
Not Shown	V3186	WS1 AC ADAPTER 110V-12V	1
	V3186EU	WS1 AC ADAPTER 220-240V-12V EU	
	V3186UK	WS1 AC ADAPTER 220-240V-12V UK	
	V3186-01	WS1 AC ADAPTER CORD ONLY	

* Drawing number parts 2 through 6 may be purchased as a complete assembly, part V3002.



WS1TC Drive Cap Assembly, Downflow Piston, Regenerant Piston and Spacer Stack Assembly

Drawing No.	Order No.	Description	Quantity
1	V3005	WS1 Spacer Stack Assembly	1
2	V3004	Drive Cap ASY	1
3	V3178	WS1 Drive Back Plate	1
4	V3011	WS1 Piston Downflow ASY	1
5	V3174	WS1 Regenerant Piston	1
6	V3135	O-ring 228	1
7	V3180	O-ring 337	1
8	V3105	O-ring 215 (Distributer Tube)	1
Not Shown	V3001	WS1 Body ASY Downflow	1
	V3001-02	WS1 Mixing Valve Body ASY	

Note: The regenerant piston is not used in backwash only applications.

