



ADDENDUM TO SOFTENER OWNERS MANUAL INSTALLATION INSTRUCTIONS FOR BRINE RECLAIM SYSTEM

The H2O4Life Brine Reclaim System (BRS) conversion kit is designed to be installed on standard H2O4Life softeners. By following this instruction sheet, your existing standard softener will be able to reclaim a portion of brine solution back to the brine tank during each regeneration process, which helps you to save water, salt and energy.



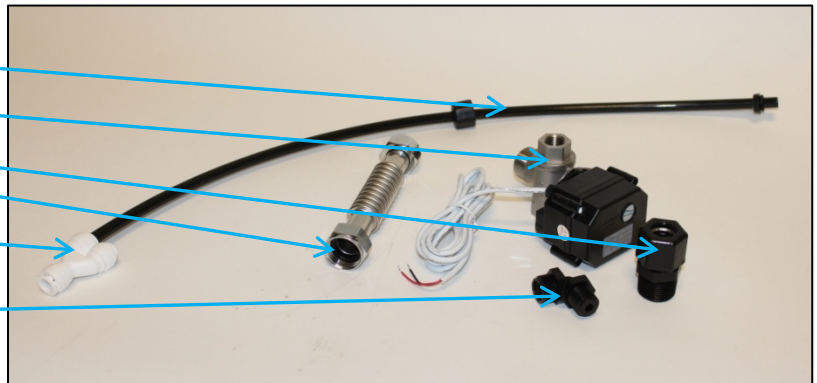
Before performing the procedures described in this instruction sheet, disconnect the power to the softener control valve while the softener is in **service** mode. **Never** disconnect the power when softener is backwashing or regenerating. Have dry towels handy in case of any unintentional water spillage and/or leakage.

Raw water requirement:

The total ferrous and ferric forms of iron in the raw water source MUST BE less than 0.5ppm. You should have your water checked to assure that this is the case. Iron levels that exceed this limit will plug injectors and/or damage the system and void the manufacturer's warranty.

In addition to this instruction sheet, the following are included in this kit:

- 3/8" black poly tubing
- BRS diverter valve
- 3/4" X 5/8" Parker fitting
- 3/4" stainless steel flex hose
- 3/8" two-way divider
- 3/8" male elbow
- Wire strain relief kit (*not shown*)



System Installation:

1. Disconnect the power to the softener control valve by unplugging the power cord. If the softener is backwashing or regenerating, manually change the softener to the service mode, and then unplug the power. **Never** unplug the power when softener is backwashing or regenerating.

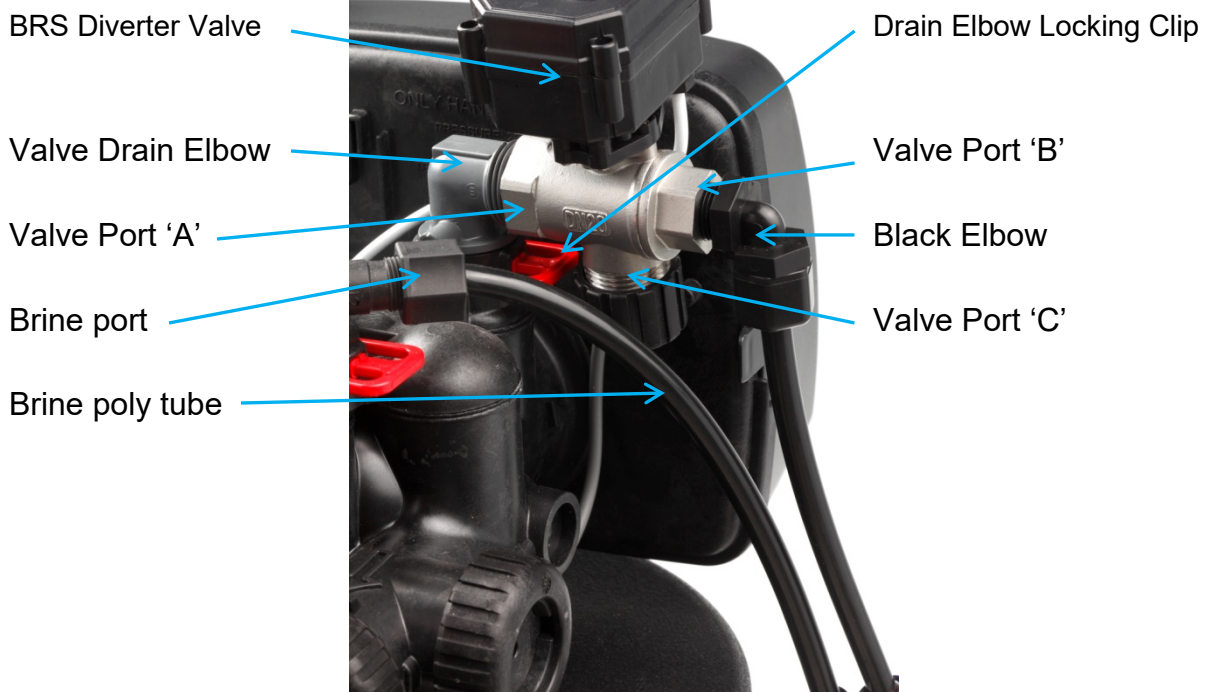


Figure 1.

2. Follow the softener drain line to locate the drain elbow assembly on the softener control valve. Disconnect the drain line from the drain elbow by unscrewing the compression fitting, pull out the red locking clip, and remove the drain line elbow from the softener control valve. See Figure 1.
3. By holding the BRS diverter valve with the black electrical box facing up, note the $\frac{3}{4}$ " male NPT facing horizontally (port A), a $\frac{3}{8}$ " female NPT outlet also facing horizontally (port B) and a $\frac{3}{4}$ " female NPT (port C) facing downwards. See Figure 1. Wrap the male $\frac{3}{4}$ " NPT thread on the drain elbow five to six times with white Teflon tape, then screw the drain elbow to the diverter valve port 'A'. Make sure after you tighten the drain elbow, port 'C' is facing downwards. **Do not over-tighten any threaded joints.**
4. *(This may be factory pre-assembled)* Wrap the $\frac{3}{8}$ " NPT thread on the black elbow (from the conversion kit) five to six times with Teflon tape. Screw the elbow to port B. Make sure after you tighten the elbow, the opening of the elbow is facing downwards. **Do not over-tighten it.**
5. Assemble one end of the stainless flexible tube to port C. **NOTE:** There is a rubber washer inside each end of the stainless flex hose to prevent water leakage. Do not use the flex hose if rubber washer is missing. Do not use Teflon tape on this fitting.

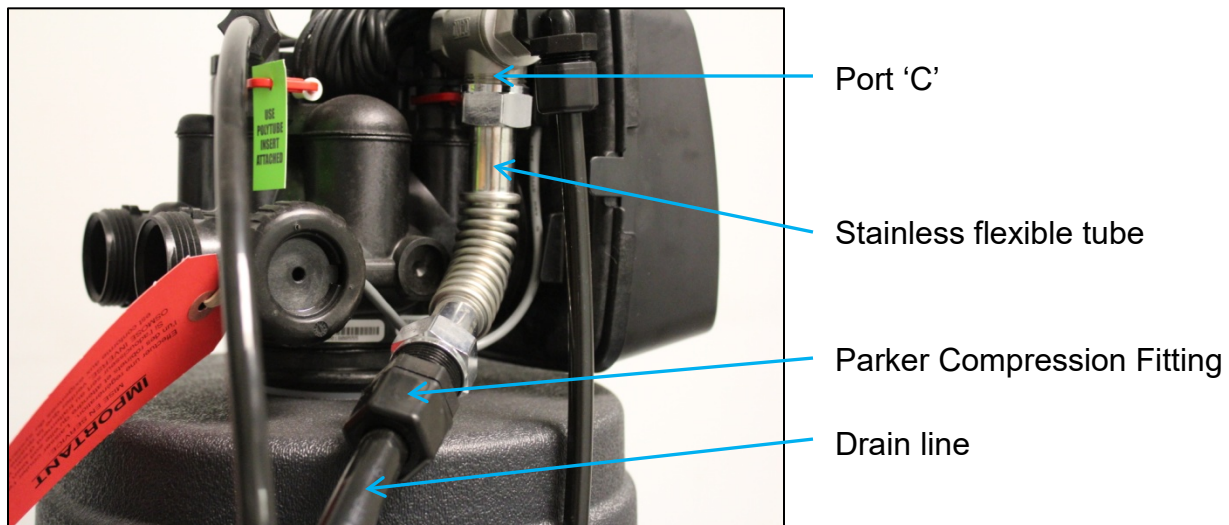
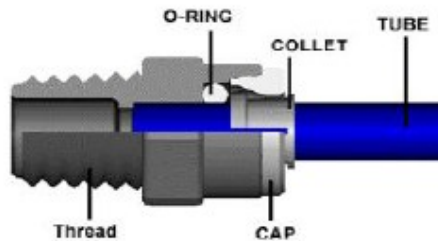


Figure 2.

6. Re-assemble the drain elbow and diverter valve assembly to the softener control valve. Re-assemble the red drain elbow locking clip. Bend the stainless steel flex hose at approximately 45°, as shown in Figure 2.
7. Screw the Parker male fitting to the end of the flex hose. **NOTE:** There is a rubber washer inside each end of the stainless flex hose to prevent water leakage. Do not use the flex hose if rubber washer is missing. Do not use Teflon tape on this fitting.
8. Connect the drain line to the Parker male fitting. Snug the compression nut with the drain line fully inserted, but do not over-tighten.
9. Connect the 3/8" black poly tubing to the 3/8" black male elbow. Snug the compression nut with the black poly tube fully inserted, but do not over-tighten.
10. Locate the brine poly tube (See Figure 1). Use a tube cutter or Exacto-style knife to cut the brine tubing 5 to 10 inches long from the softener head. Then cut the black poly tubing in step 7 to the same length as the brine tubing. Insert both tubing to the two-way divider.
11. Find the other end of the brine poly tubing which is still connected to brine tank. Insert the tube end to the two-way divider. (see *push-on fitting guide on next page*)
12. Connect the power to the softener, manually start the regeneration mode and let the softener go through the whole process to check for any water leakages. In case of water leaking, manually stop the regeneration process and change back to the service mode and fix the leakages accordingly.
13. Now you have completed the installation of Brine Reclaim System on your softener.



Two-way divider is a push on connection fitting. Making and securing this type of fitting is simple. First, the tubing should be cut square and any burrs or rough edges removed. Insert the tube firmly and push until the tube end contacts the stop. Gently tug the tube backwards to assure a secure connection, and then lock the fittings with locking clips.



System Wiring:

1. Unplug the softener control valve. Remove valve cover and drive bracket assembly.
2. From the valve cover side, use a punch and hammer to remove the knock out plug. Smooth the edge of the hole if needed. See Figure 3.



Figure 3.



Figure 4.

3. (Power cable may be factory pre-cut to 24" and ends stripped) Trim the power cable from the BRS diverter valve to 24" (61 cms). Run the power cable from the three-way valve through the strain relief feature on the back plate and run the cable as shown in figure 4.
4. Run the wire to the right side of the valve circuit board as shown in Figure 5. Locate the PC Board Relay Terminal Block; connect the red wire to Relay 1, and black wire to COM. Make sure the wire connection screws are tight.

5. Adjust cable length if necessary, to keep excess cable from interfering with the cover or from hanging loosely on the back of the valve. Do not let the cables come in contact with the drive gear assembly, inside the valve cover.
6. Install strain relief cover to secure cable (making sure there is adequate slack on either side of the strain relief) and secure in place using the screw provided. See Figure 6.
7. Replace valve cover and snap in place.

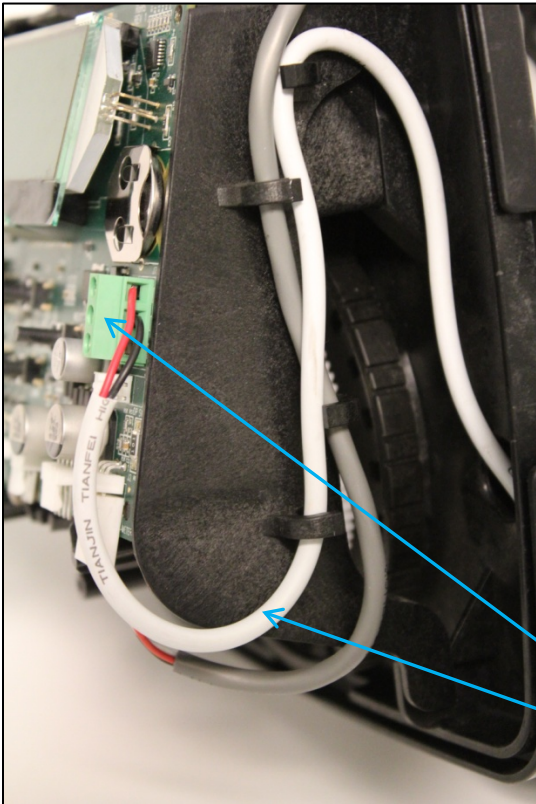


Figure 5.

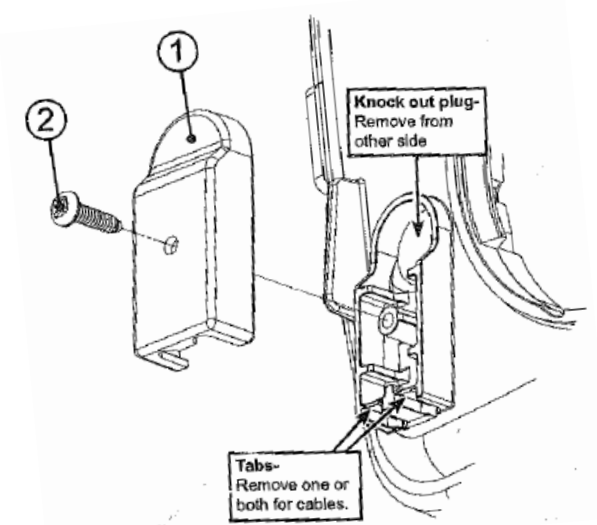


Figure 6.

- PC board relay terminal block
- Brine diverter valve power cable

Softener Programming:

In addition to the plumbing change and wiring, the softener program **must** be adjusted to accommodate the Brine Reclaim System. Choose correct numbers in the following data table based on your softener size through the softener programming. If you are unsure of your softener's size, consult your dealer or installer.

Softener Size (K grains)	Rinse Flow Rate Injector Color (gpm)	Volume Required for Regeneration (gallons)	Relay Start Time (min)	Relay Duration (min)	Backwash Time (min)	Brine Time (min)
30	Red – 0.32	3	50	9.5	8	52
40	White – 0.37	4	50	11	8	53
50	White – 0.37	5	50	14	8	56
60	Blue – 0.52	6	50	12	8	54
75	Yellow – 0.65	7.5	50	12	8	54
90	Green – 0.72	9	50	13	8	55
120	Green – 0.72	12	50	17	8	59

1. Press **NEXT** and **DOWN** simultaneously for 3 seconds and release.
2. Press **NEXT** until **BACKWASH TIME** appears on the top of the screen.
3. Select the time for the backwash according to the data table above using **UP** or **DOWN**. Press **NEXT** to go to next step.
4. Select the time for the **DRAW** (Brine Time) according to the data table using **UP** or **DOWN**. Press **NEXT** to go to next step.
5. Press **NEXT** until the **RELAY 1 TRIGGER** appears on the top of the screen.
6. Set **RELAY 1 TRIGGER** by “**TIME**” using **UP** or **DOWN**. Press **NEXT** to go to next step.
7. Set the relay start time according to the data table using **UP** or **DOWN**. Press **NEXT** to go to next step.
8. Set the relay duration according to the data table using **UP** or **DOWN**. Press **NEXT** to go to next step.
9. Make sure the **RELAY 2 TRIGGER** set to **OFF**, and then press **NEXT** to exit the softener programming.
10. **IMPORTANT:** Injector size, relay start time & duration, the first backwash and brine times are fixed and must be set exactly as indicated in the chart above. The brine fill must be set to 0.5lbs of salt. The customer may specify their own second backwash and rinse times as these are variable.



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