

# Installation Reference - Membrane Electrode

## Topic: D.I. Water Solenoid P/N 360035

Please read all the instructions listed below carefully to familiarize yourself with the project before attempting to perform any of the work.

### Required Materials

- UFSc P/N 360035
- Teflon Tape
- 2 x AWG #12-18 Butt Connectors

### Required Tools

- Two Adjustable Pipe Wrenches
- Wire Crimper
- Side Cutters

The purpose of the D.I. Water Solenoid Valve is to automatically add D.I. water to the Anolyte Circulation Tank when the anolyte needs diluted. Eighty (80) psi is the maximum the Solenoid Valve can handle.

### Instructions

1. Close the ball valve above the old Solenoid Valve.
2. Disconnect the flexible conduit connection from the old Solenoid Valve.
3. Using the side cutters, cut the butt connectors off of the end of the old Solenoid Valve wires.
4. Using the pipe wrenches, disconnect the union found above the ball valve and PVC pipe.
5. Separate the nipple in the top of the Solenoid Valve from the ball valve.
6. Remove the nipple from the old Solenoid Valve. Be careful not to damage the threads on the nipple with the pipe wrench.
7. Remove the remaining PVC pipe from the bottom of the old Solenoid Valve. TIP: Do not reduce the pipe size on the outlet side. Keep it at 1 inch, otherwise there may be water hammer and the valve will shack.
8. Apply teflon tape to the nipple threads and insert into the top of the new Solenoid Valve. The top is the inlet side. Refer to the "Flow" markings on the Solenoid Valve.
9. Apply teflon tape to the PVC pipe threads and insert into the bottom of the Solenoid Valve. The bottom is the outlet side.
10. Insert the nipple into the ball valve.
11. Connect the union and PVC pipe above the ball valve.
12. Feed the two wires from the new Solenoid Valve through the flexible conduit connector and flexible conduit.
13. Attach the wires of the new Solenoid Valve with new butt connectors. It does not matter which wire goes where.
14. Open the ball valve and restore power. TIP: Adjust the valve opening about half way for initial start up.

#### Troubleshooting

If you are having difficulties with the Solenoid Valve, one or a combination of the following might be the problem, in no particular order.

- A. Does the Solenoid have power? To check the Solenoid, remove the screw on the top. Be sure not to lose the small o-ring. Apply 100v to see if the Solenoid moves (pulls in).

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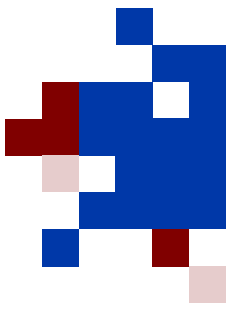
Topic: D.I. Water Solenoid PN 360035  
(P/N 993123)

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Think and act in a safe manner. Always disconnect power and use a lockout before you work on the E-coat system, or any of the related subsystems. Observe any confined space conditions. Use the appropriate safety equipment and clothing for the task.

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- B. Is the valve control adjusted correctly? Twist the control knob clockwise until the knob will twist no more. Next, twist the knob counter clockwise and count the number of twists. Twist the knob clockwise half the number of counter clockwise twists. This will adjust the control knob halfway.
- C. Is the valve or PVC pipe obstructed? In order to make this determination, you may need to disassemble the Solenoid Valve from the PVC fittings. The easiest way to do this is to disconnect the union above the ball valve and PVC pipe. This will allow you to remove the assembly from the Anolyte Tank. One sure way the Solenoid Valve may have gotten obstructed is if the initial installer used "pipe dope" on the threads instead of teflon tape.
- D. Is the ball valve above the Solenoid Valve open?
- E. Was the Solenoid Valve installed correctly? Molded into the Valve are arrows that indicate the correct flow direction. The valve should be installed so the arrows point down to the Anolyte Tank.
- F. Make sure the line pressure is a minimum of 10 psi.

Use UFSc P/N 275001 for a replacement Solenoid.

**For more information** see the original manual that came with the equipment or call UFSc (219) 464-2027 ext. 24.

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