

# Instruction Sheet

## Installation Instructions

### Diaphragm and Cartridge Valve Replacement



**ALWAYS** wear protective clothing, face shield, safety glasses, and gloves when working near or performing any maintenance or replacement on your pump. See SDS sheet from solution supplier for additional precautions.  
**READ ALL STEPS BELOW BEFORE PROCEEDING.**

#### Diaphragm Replacement



*When replacing the diaphragm, check valves should also be replaced.*

1. Depressurize discharge line. Be sure the injection check valve is properly installed and is operating. If a shut-off valve has been installed downstream of the injection valve, it should be closed to off.



*Be sure the relief tubing is connected to the priming/relief valve and runs back to your solution drum or tank.*

2. Open the priming/relief valve until solution drains back down the discharge tubing into the solution tank or drum, and the discharge line is fully depressurized.
3. Place the foot valve into a container of water or other neutralizing solution. Turn the pump on to flush the head assembly. Once the head has been flushed, lift the foot valve out of the solution and continue to pump air into the pump head until the pump head is purged of water or neutralizing solution.



*If the liquid cannot be pumped due to diaphragm rupture, wearing protective clothing, carefully disconnect the suction and discharge tubing.*

4. Remove the pump head by unscrewing the head screws.

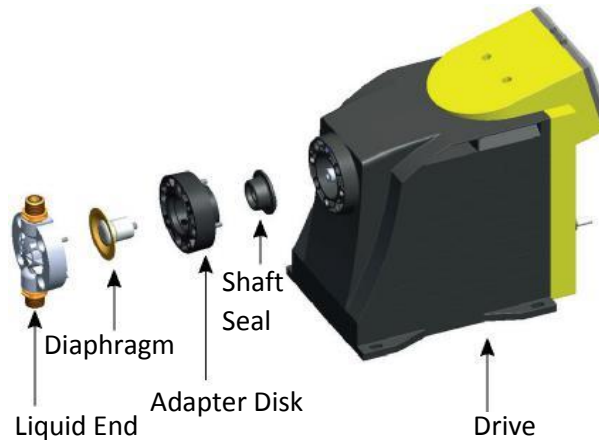


Figure 1 – Pump Assembly

5. On the Settings screen, select **Diaphragm Replacement** and press **ENTER**.
6. Press the **LEFT** arrow to fully extend the diaphragm to the full out position. (see figure 2)



Figure 2 – Full Out diaphragm replacement screen

7. Unscrew the diaphragm by carefully grasping the outer edge and turning it counter-clockwise. Discard the old diaphragm.
8. Remove the Adapter Disk by removing the four (4) Adapter Disk screws. Check the condition of the shaft seal, and replace the shaft seal if necessary.
9. Replace the Adapter Disk so that the drain hole of the disk is oriented downward and the mounting holes line up with the mounting holes of the pump.



*Be careful not to scratch the Fluorofilm™ face of the new diaphragm.*

10. Install the new diaphragm by screwing it onto the shaft, in the clockwise direction, until turned in all the way.
11. Press the **RIGHT** arrow to fully retract the diaphragm to the “Full in” position. (see figure 3)



Figure 3 – Full In diaphragm replacement screen

12. Remount the pump head to the adapter disk using the new screws and washers (if so equipped). Make sure to torque the screws to 25 inch-pounds and tighten in a crisscross pattern.
13. After one week of operation, recheck the screws and tighten if necessary.



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**READ ALL STEPS BELOW BEFORE PROCEEDING.**

## **Cartridge Valve Replacement**

1. Depressurize discharge line. Be sure the injection check valve is properly installed and is operating. If a shut-off valve has been installed downstream of the injection valve, it should be closed to off.



*Be sure the relief tubing is connected to the priming/relief valve and runs back to your solution drum or tank.*

2. Open the priming/relief valve until solution drains back down the discharge tubing into the solution tank or drum, and the discharge line is fully depressurized.
3. Place the foot valve into a container of water or other neutralizing solution. Turn the pump on the flush the head assembly. Once the head has been flushed, lift the foot valve out of the solution and continue to pump air into the pump head until the pump head is purged of water or neutralizing solution.
4. Depressurize and drain pipeline so that the Injection Check Valve can safely be disassembled.
5. Carefully disconnect one tubing connection and fitting at a time, removing and replacing each cartridge, and O-rings (and ball and seat if so equipped). If necessary, carefully loosen stuck valves by prying side to side using a small screwdriver through the center hole of the valve. Make sure the new installed cartridges are oriented correctly.



*Before disassembling the check valves, note the orientation of the valve*

## **Instruction Sheet** **Repair and Preventative Maintenance Kit**



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