



BR1100

Solar Powered Chemical Injection Pump

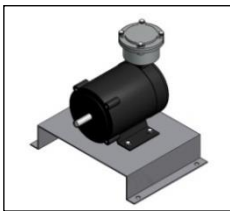
MAINTENANCE



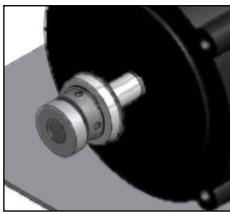
Disconnect power source and ensure pressure is removed from pump head prior to performing any maintenance. Hazardous pressures can result in serious injury or property damage.

Pump Assembly

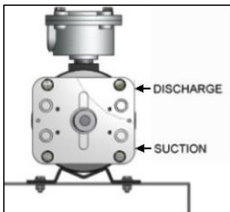
Step 1: Ensure all parts are clean and free from damage (see Inspection section).



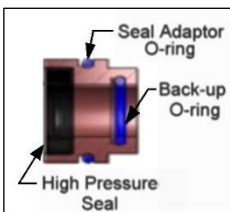
Step 2: Mount motor on base using hex head cap screws, nuts, lock washers, and flat washers. Screw connection box onto the top of the motor ensuring wires are enclosed.



Step 3: Press bearing onto adaptor, and install external retaining ring. Press cam bearing onto adaptor ensuring set screws are in place, but not tight. Install the adaptor assembly into the mount plate, and install internal retaining ring. *Note: Mount plate is not shown in figure for illustration purposes.*



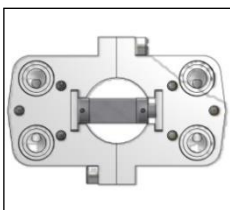
Step 4: Position mount plate on motor ensuring proper orientation of key slot and mount plate. Discharge ports should be at the top and suction ports should be at the bottom. Secure mount plate in place using four cap screws and washers. Utilizing a thread sealant, tighten set screws on adaptor assembly by aligning set screws with access slots in mount plate.



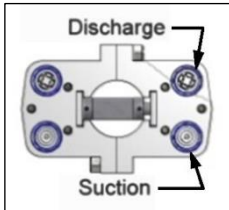
Step 5: Install the high pressure seal into the seal retainer. Install the O-ring and the seal adaptor O-ring into the seal retainer. Repeat for the other seal retainer.



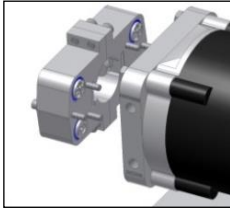
Step 6: Insert the seal retainer into the pump body utilizing petroleum based lubricant. Slide the two retainers into the slot in the body to hold seal retainer in place. Repeat for the other half of pump body. *Note: Shims may be utilized alongside retainers to ensure a tight fit.*



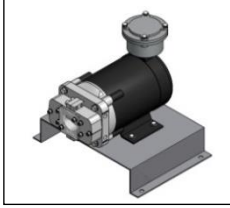
Step 7: Insert the plunger into one half of the pump body. Then assemble the two halves together. Ensure the flat on the plunger assembly is facing the back of the bodies. Fasten with four socket head cap screws, but do not tighten cap screws at this time.



Step 8: Insert gaskets into check valve pockets on the body. Insert check valves into body ensuring discharge check valves have retainer clips facing out and the suction check valves have the smooth surface facing out. Install check valve O-rings in groove around the check valves.



Step 9: Insert gaskets into the check valve pockets on the mount plate. Position the body on the mount plate and secure using socket head cap screws and spring lock washers. Ensure correct orientation and proper alignment of the check valves. Torque socket head cap screws to 13 ft-lbs. Tighten four socket head cap screws securing the two body halves together.



Step 10: Place cover on front of pump body and fasten with the socket head cap screws.

Pump Disassembly

- Step 1:** Disconnect power source. Ensure all pressure is removed from pump head assembly and isolate fluid discharge and suction lines. Disconnect fluid discharge and suction lines.
- Step 2:** Remove cap screws and cover from front of pump.
- Step 3:** Remove cap screws and pump body from the mount plate.
- Step 4:** Separate the two halves of the body by removing the four cap screws. Remove the plunger assembly, retainers, and seal retainers.
- Step 5:** Remove gaskets, check valve O-rings, and check valves from the pockets.
- Step 6:** Remove the cap screws, washers, mount plate from the motor. Remember to loosen set screws from bearing assembly to be able to remove bearing assembly from the motor shaft.
- Step 7:** Remove the bearing assembly from the mount plate by removing the retaining ring inside the mount plate.

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INSPECTION

Inspect all components for damage. Replace or repair parts as necessary. The following is a guideline of what to inspect:

- Inspect all seals and gaskets.
- Inspect body seal areas and the seal retainers. Look for corrosion, pitting, or other damage.
- Inspect the plunger for wear, scarring, or other damage.
- Inspect all threads.
- Inspect check valves.