Installation and Troubleshooting

BR1100

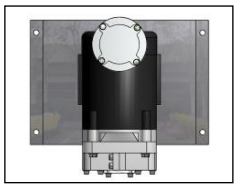
Solar Powered Chemical Injection Pump

The Bruin BR1100 pump comes equipped with a common manifold that houses the connections for the pump, allowing the suction and/or discharge piping to be installed from either side. All port connections are 1/4" FNPT. Each pump manifold houses four port connections, the top two ports, left and right, are the discharge ports and the bottom two ports, left and right, are the suction ports.

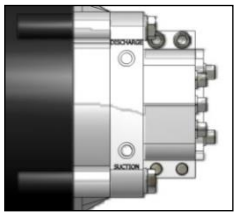
In the **STANDARD** configuration of the Bruin BR1100 pump both suction ports are connected via a connection port through the manifold. This allows for only one suction port to be connected to the supply while the other suction port is blocked with a ¼" NPT plug. This allows for ease of installation, depending on pump location and piping requirements, the connection can be made on either side of the pump. Similarly both discharge ports are connected via a port through the manifold, allowing for only one discharge port to be connected to the discharge line while the other port is blocked with a ¼" NPT plug. *Note: Ensure all unused ports are blocked with ¼" NPT plugs.*

Alternatively, an **OPTION** is available to divide the common suction and/or discharge ports resulting in two separate suction and/or discharge ports. A ⅛" NPT plug can be installed into the common port to separate them. The ⅛" plug location is located in between the two outside accessible ¼" FNPT ports and is accessible by removing the ¼" NPT fitting or plug on the right hand side of the pump when looking at the face (clear cover) of the pump. The ⅛" NPT threads are located in a one inch deep recessed pocket, behind the ¼" NPT threads. When the ports are separated in this manner, all external ¼" FNPT ports are to be utilized, as both sides are kept separate.

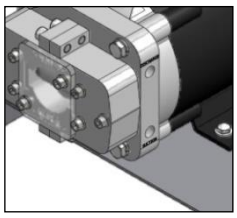
INSTALLATION



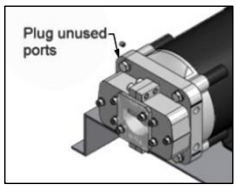
Step 1: Mount pump in desired location. Bolt holes are provided for permanent mounting (see dimensional drawing). The pump should be installed as close as possible to the chemical supply tank.



Step 2: Connect suction lines to the bottom ¼" FNPT ports. The suction line should contain a sufficient strainer to prevent foreign matter from entering the pump, which could result in pump or check valve damage. *Note: The pump requires a flooded suction. Note: Restrictions in the suction line should be avoided, use ½" or ⅜" suction line minimum and limit the use of 90° elbows in the suction line, use 45° elbows instead.*



Step 3: Connect discharge line to the top ¼" FNPT ports on the pump manifold. *Note: The discharge line should include a check valve located as close to the injection point as possible. Part Number BA-0675 is a stainless steel ¼" line check valve sufficient for use up to 6000 psig. Note: The discharge line should include a pressure relief valve installed immediately after the pump.*



Step 4: Ensure all unused ports are blocked with ¼" FNPT plugs. *Note: Each pump should have a **MAXIMUM** of two plugs (either ⅛" or ¼" NPT) installed.*

Step 5: Connect control box and electricity source.

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TROUBLESHOOTING

If the pump experiences a drop in pressure or volume:

- Inspect suction line for air leaks, clogs, and blockages.
- Ensure the supply is adequate and the supply tank is not empty.
- Inspect all valves for worn parts.
- Inspect check valves for foreign debris.
- Check O-rings to ensure no damage caused by pressure.

Pump operates but fails to pump fluid:

- Check if the unit is air blocked and bleed off any air in the system.
- Inspect check valves and clean any foreign debris.

9001-20 Street NW, Edmonton, Alberta, Canada T6P 1K8 **Phone: 780-430-1777** **Fax: 780-449-5233**
Email: info@bruinpumps.com **www.bruinpumps.com**