Before working on your planter or drill

**DANGER:** When storing or working on the planter always install cylinder stops or place the planter on stands to prevent personal injury or damage to the attachments.

**PLEASE:** Read instructions completely and verify all package contents before beginning installation.

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**NOTE:** Your pump system configuration will vary from the images shown. These images are taken from a variety of our custom-made systems and depict only some of the possible setups. These instructions and their corresponding images are a guide only.

For further assistance, please call us at 308-364-2607 or toll-free 800-382-2607.
PUMP SYSTEM MOUNTING INSTRUCTIONS
GX1, GX2 Tower & Manifolds

**Step #1:**
GX1 or GX2 pump system mounts on most bars from 4”x4” to 8”x16”.

**Step #2:**
Bolt the center PVC manifold or visual Wilgers on to top of the main pump system tower.

**Step #3:**
Attach wing of other PVC manifolds or visual Wilgers to each GX1 chassis (long black stand).

**Step #4:**
Mount these to each wing bar with the u-bolts provided.
PUMP SYSTEM MOUNTING INSTRUCTIONS
Running Hoses: Plumbing the Manifolds Down to the Rows

**NOTE:** As regards to hose length, individual hoses do not need to all be the same length. However, hoses should be within 5’ to each other.

**Step #1:**
Run the individual 1/4” orange line from the tops of the manifolds down to the row.

**Step #2:**
Connect orange or black hose to the gray check valve.
Make sure the arrow is pointing down or away from the manifold (the arrow indicates the direction of flow).

**Step #3:**
Run another piece of orange or black hose from the check valve down to the Rebounder’s in-furrow fertilizer attachment or the 2x2 set-up.

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Hoses running from PVC manifold

Check valve and hoses on Landoll

Check valve and hoses on Tye

Rebounder with Straight Shot fertilizer attachment

GX2 pump system with manifolds for both in-furrow and 2x2 fertilizer application

GX2 2x2 fertilizer disc setup

2x2 fertilizer tube setup on Case IH

Final assembly (condensed version)
**Step #1:**
Run the 3/4” hose to all three manifolds.

**Step #2:**
Connect the 3/4” line from the tank to the pump system where it reads INLET. This should be on the 50 mesh filter side with an elbow pointing down.

Place the 3/4” ball valve in between the tank and the pump. Make sure the arrow is pointed in the direction of flow (away from the tank).

Connect hose into the fitting.

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**Diagram:**

- **Tank (not included)**
- **3/4” ball valve**
- **50 mesh filter**
- **Bleeding valve**
  - Bleeds air out of GX2 pump system; hose drains to ground
Pressure Gauge

Screw the pressure gauge to the top of the manifolds or place it closer to the cab for better visibility by attaching it to the Magmount.

Make sure to place the pressure gauge in the best viewing location.

DIRECT TO MANIFOLD

REMOTE PRESSURE GAUGE KIT

The remote pressure gauge kit includes a bracket and magnet (Magmount) so the pressure gauge can be easily mounted to the most visible location on your equipment.

The bracket is adjustable so that the Magmount can be placed on the top or the side of a metal frame.

Run the 1/4" orange or black tubing from the mounted pressure gauge to quick connect on the 3/4" tee assembly that taps into the system’s main plumbing.

This tee assembly connects the 3/4" black rubber hose coming from the 80 mesh filter on the main tower to the 3/4" black rubber hoses running to the wing manifolds.
**PUMP SYSTEM MOUNTING INSTRUCTIONS**

**Electrical Connections**

- **25-60 60’ 8 gauge cable**
  - OR
  - **25-50 50’ 10 gauge cable** (mount direct to Y cable or if GX1 to ManX)
  - OR
  - **25-40 40’ 10 gauge cable** (mount direct to Y cable or if GX1 to ManX)
  - OR
  - **25-30 30’ 12 gauge cable** (mount direct to Y cable or if GX1 to ManX)

- **Y cable is only used with GX2 dual pump systems**
  - **25-Y 10 gauge cable** (used with 25-60)
  - OR
  - **25Y cable** (used with 25-30, 25-40, & 25-50)

- **25-8 9’ cable**

- **30 amp fuse direct to 12 volt tractor battery**
  - DO NOT use an accessory plug

- **You may need relay termination plug for troubleshooting or in case of lost or damaged Run Hold**
  - DO NOT discard
Electrical Connections

**NOTE:** Parts are NOT drawn to scale. Eliminate 1 side of cables and the Y cable for GX1 single pump systems.

**Y cable is only used with GX2 dual pump systems**

- 25-Y 10 gauge cable (used with 25-60)
- OR
  - 25Y cable (used with 25-30, 25-40, & 25-50)

**Tractor battery**

- 25-8 9’ cable
- 30 AMP FUSE DIRECT TO 12V TRACTOR BATTERY
- DO NOT USE AN ACCESSORY PLUG

**ManX**

- INSTALL MANX IN TRACTOR CAB

**GX2**

- REMCO pump

**25-30**

- 30' 12 gauge cable

**25-40**

- 40' 10 gauge cable

**25-50**

- 50' 10 gauge cable

**40-10-4**

- 4' 10 gauge cables (only used with 25-60)

**25-60**

- 60' 8 gauge cables

**Mount Run Hold to planter bar for tripping of switch**

**Tether Run Hold & Magmount to your planter**

**Run Hold extension**

**OR**

- Relay termination plug

**DO NOT DISCARD**

**Tractor battery**

- 25-30
- 30' 12 gauge cable

**OR**

- 25-Y 10 gauge cable (used with 25-60)

**OR**

- 25Y cable (used with 25-30, 25-40, & 25-50)
**RED STATUS INDICATOR LIGHT**

1. On steadily if switch is on and controller is operating normally.
2. Flashes steadily when in **HOLD**.
3. If there is a problem with the wiring or motor, the light will flash to indicate the system status:
   - Flash once, pause, flash once, pause, etc. → Open circuit, check motor leads.
   - Flash twice, pause, flash twice, pause, etc. → Thermal overload due to shorted motor or motor leads, check motor wiring.

If other system problems occur, please count the number of flashes to help with troubleshooting.

To clear a fault code, cycle power with the controller **ON/OFF** switch.

**For troubleshooting, contact Schaffert Mfg.**
308-364-2607

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**WARNING:**
DO NOT ground motor to metal
DO NOT ground controller to metal

Always run power cable to battery
Controller controls speed of pump and pressure to rows or orifices
Grounding motor or controller can damage the controller.
DO NOT RUN ORIFICES WITH SQUEEZE PUMPS.  This cannot be done because squeeze pumps do not put out enough pressure for an orifice system. Squeeze pumps only put out 2-3 pounds of pressure.

NOTE: We normally recommend using only 1 orifice under pressure when running 7-15 lbs of pressure. However, using 2 orifices under pressure can be beneficial because it will help eliminate fertilizer splatter or misting/volatilization of fertilizer when done in the following manner:

- Use the correct size orifice above for 15-30 psi pressures
- Use 2-3 times size orifice below, creating 5-7 lbs pressure to stream fertilizer into the soil

NEVER USE 2 OF THE SAME SIZE ORIFICES IN YOUR SYSTEM!

Step #1:  Remove the clip that holds the top onto the Wilger column.

Step #2:  Remove the top from the column. Use caution so as to not spill the balls in the column.

Step #3:  Insert the desired orifice into the column top you’ve removed. The “O” ring side goes in first.

Step #4:  Inside the top of the column, you’ll see a pie shaped ball retainer. The retainer is not used when using an orifice, set it aside.

Step #5:  Select the weighted ball, for the solution you are using. In most cases the green or red ball will be used.

Step #6:  Reinstall the top with the orifice and reinsert the retaining clip.
DO NOT RUN ORIFICES WITH SQUEEZE PUMPS. This cannot be done because squeeze pumps do not put out enough pressure for an orifice system. Squeeze pumps only put out 2-3 pounds of pressure.

NOTE: We normally recommend using only 1 orifice under pressure when running 7-15 lbs of pressure. However, using 2 orifices under pressure can be beneficial because it will help eliminate fertilizer splatter or misting/volatilization of fertilizer when done in the following manner:
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NEVER USE 2 OF THE SAME SIZE ORIFICES IN YOUR SYSTEM!

DIAPHRAGM CHECK VALVE

When installing optional orifice in TeeJet or Wilger inline diaphragm check valves:
Colored Disc Orifice assembles under the check valve cap in most cases.

Drop the orifice with the hole down into the check valve body, then put the cap on top of it.

IMPORTANT: Do not use wrench on cap. Hand tighten only!

PVC MANIFOLD

The orifice can also be installed in the PVC manifold.

Install orifice with dish down or convex side towards pressure to keep orifice from plugging or breaking.

IMPORTANT: Do not use wrench on cap. Hand tighten only!
DO NOT RUN ORIFICES WITH SQUEEZE PUMPS. This cannot be done because squeeze pumps do not put out enough pressure for an orifice system. Squeeze pumps only put out 2-3 pounds of pressure.

NOTE: We normally recommend using only 1 orifice under pressure when running 7-15 lbs of pressure. However, using 2 orifices under pressure can be beneficial because it will help eliminate fertilizer splatter or misting/volatilization of fertilizer when done in the following manner:
- Use the correct size orifice above for 15-30 psi pressures
- Use 2-3 times size orifice below, creating 5-7 lbs pressure to stream fertilizer into the soil

NEVER USE 2 OF THE SAME SIZE ORIFICES IN YOUR SYSTEM!

The injector orifice is used for applying liquid fertilizer 2x2 with either the G2’s high pressure kit or the 2x2 fertilizer tube for Case IH.

Use an Allen wrench to screw orifice inside threaded 3/8” stainless steel tube.

Troubleshooting the 2x2 Fertilizer Tube & Injector Orifice

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filings and crud in tubes and fertilizer application system from the manufacturing process</td>
<td>USE WATER TO FLUSH your entire fertilizer application system and the fertilizer tubes out before use and before installing injector orifices. This will clean out all the crud and filings left over from the manufacturing process and also test for leaks.</td>
</tr>
<tr>
<td>2x2 fertilizer tubes are plugging</td>
<td>Use 50 or 80 mesh filters ahead of the tubes to keep them from plugging.</td>
</tr>
<tr>
<td>Injector orifice will not thread into 2x2 fertilizer tube</td>
<td>Use a 5/16-24 standard tap threader to clean out the tube’s threads. During the manufacturing process, filings and crud can get lodged in the threads.</td>
</tr>
</tbody>
</table>