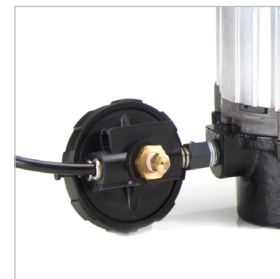
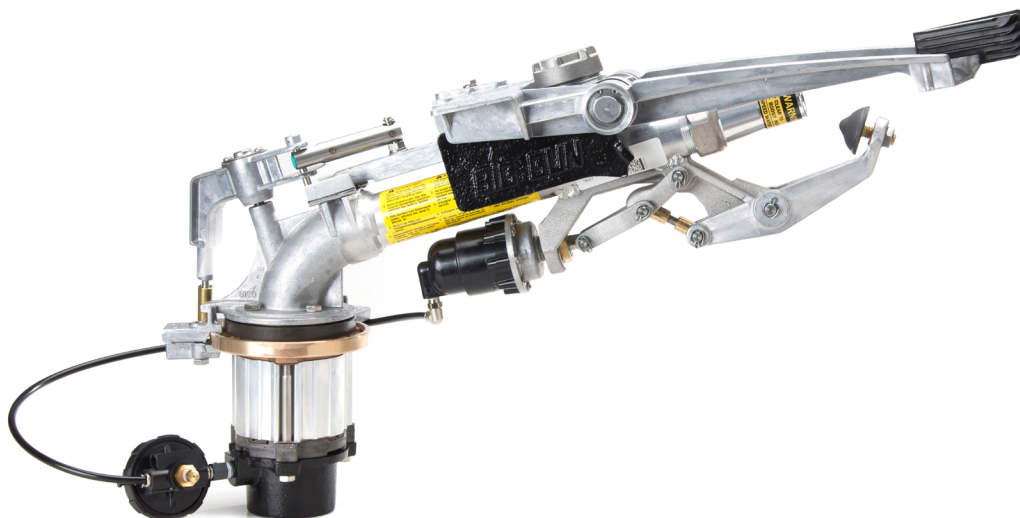


DELTA P FOR SRNV100 BIG GUN®

Reliable control of a booster pump-operated end gun without a solenoid

#12289 Delta P Kit

#8211-316 SRNV100 18° x 2" FNPT, with Delta P (less nozzle)



DELTA P FEATURES:

- Used with a booster pump, the Delta P eliminates the need for a solenoid to turn the end gun on/off.
- Automatically opens the valve when booster pump is on (min. 15 psi boost required).
- Includes internal, self cleaning filter for reliable operation.
- Designed specifically for the SRNV100 Nozzle Valve:
 - Eliminates pressure loss, turbulence, and plugging common with other end gun valves.
 - Automatically opens to flush the system at startup and shutdown (when pressure is below 8 psi).

OPERATION AND INSTALLATION

Installation (see Figure 1):

1. Connect 1/4" tubing from the Delta P port labeled "valve" to the nozzle valve actuator.
2. Connect 1/4" tubing from the barb on the top of the Delta P to mainline (unboosted) pressure (a filter is recommended to prevent plugging of the tube).
3. Thread the internal filter on the Delta P into the base of the SRNV100 Big Gun® Sprinkler.



Figure 1. Delta P installation.

LOGIC DIAGRAM

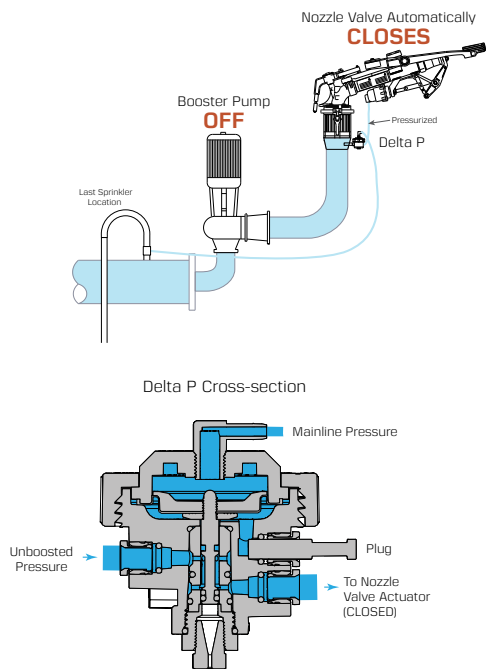


Figure 2. Booster pump OFF logic diagram. The Delta P pressurizes the line to the actuator on the nozzle valve, maintaining the valve closed.

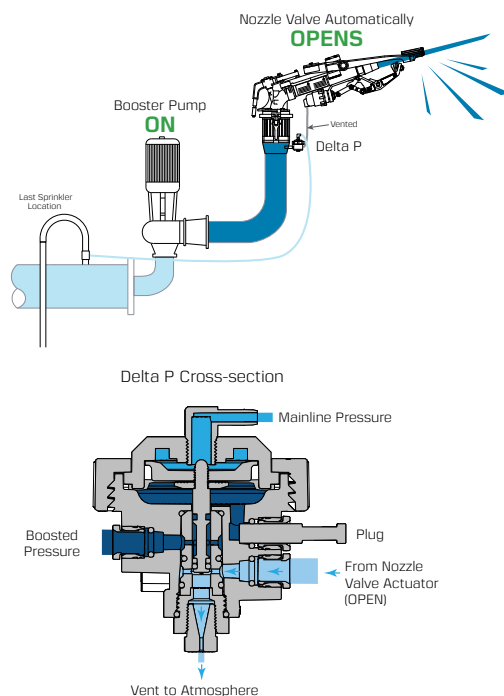


Figure 3. Booster pump ON logic diagram. When **at least 15 psi** of pressure is added by the booster pump, the Delta P vents the actuator on the nozzle valve, opening the valve.

TROUBLESHOOTING

The Delta P is a reliable method of turning the SRNV100 end gun on/off without the need for a costly solenoid. The most common cause of the SRNV100 not opening when expected is due to inadequate boosted pressure. Unlike traditional end gun valves, booster pump air lock is not a common problem with the SRNV100.

If the SRNV100 Nozzle Valve with Delta P will not open when the booster pump is turned ON, verify the following:

1. **Is the Delta P installed correctly?** Check plumbing diagram (see Figure 1).
2. **Is the control tubing plugged?** At the Delta P, disconnect the tubing that runs to mainline pressure (unboosted). This is the tube that is connected to the barb fitting on the top of the Delta P.
 - A. The nozzle valve should open, and there should be good strong flow from the tube. If there is good flow from the tube, but the nozzle valve doesn't open, go to Step 3.
 - B. If the nozzle valve opens, but the flow from the tube is low or there is no flow, there may be a plug/kink/restriction in either the tubing or the connection to the main system. Disconnect tubing at the last sprinkler/tower that connects to the Delta P. This tubing will often be connected to a cross filter on the last outlet upstream of the last tower.
 - The nozzle valve should open. Check that the filter/connection is clean.
 - If the nozzle valve doesn't open, this indicates the tubing is plugged/kinked. Replace the tubing.
3. **Is there at least 15 psi pressure differential between the boosted pressure and mainline pressure?** This is checked by installing pressure gauges in the corresponding locations (see Figure 4) then turning the booster pump ON.
 - A. If there is LESS than 15 psi difference
 - Verify the filter is clean on the Delta P.
 - Check that the booster pump is not plugged, worn, or out of phase. Also verify it is not running beyond its capacity by checking the nozzle size of the SRNV100 matches the design on the pivot sprinkler chart.
 - The Delta P will not work with less than 15 psi of boosted pressure. If this cannot be achieved, a solenoid will need to be used to activate the SRNV100.
 - B. If there is MORE than 15 psi difference:
 - Disconnect the tube that connects the nozzle valve actuator to the Delta P. The nozzle valve should open.
 - There should be no water coming out of the "valve" port on the Delta P. If there is, repair or replace the Delta P. The problem is likely due to damaged o-rings inside the Delta P.
 - If there is no water leaking out of the Delta P then it might be plugged. Disassemble and clean the Delta P.

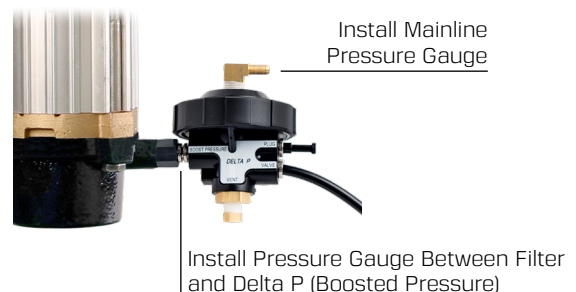
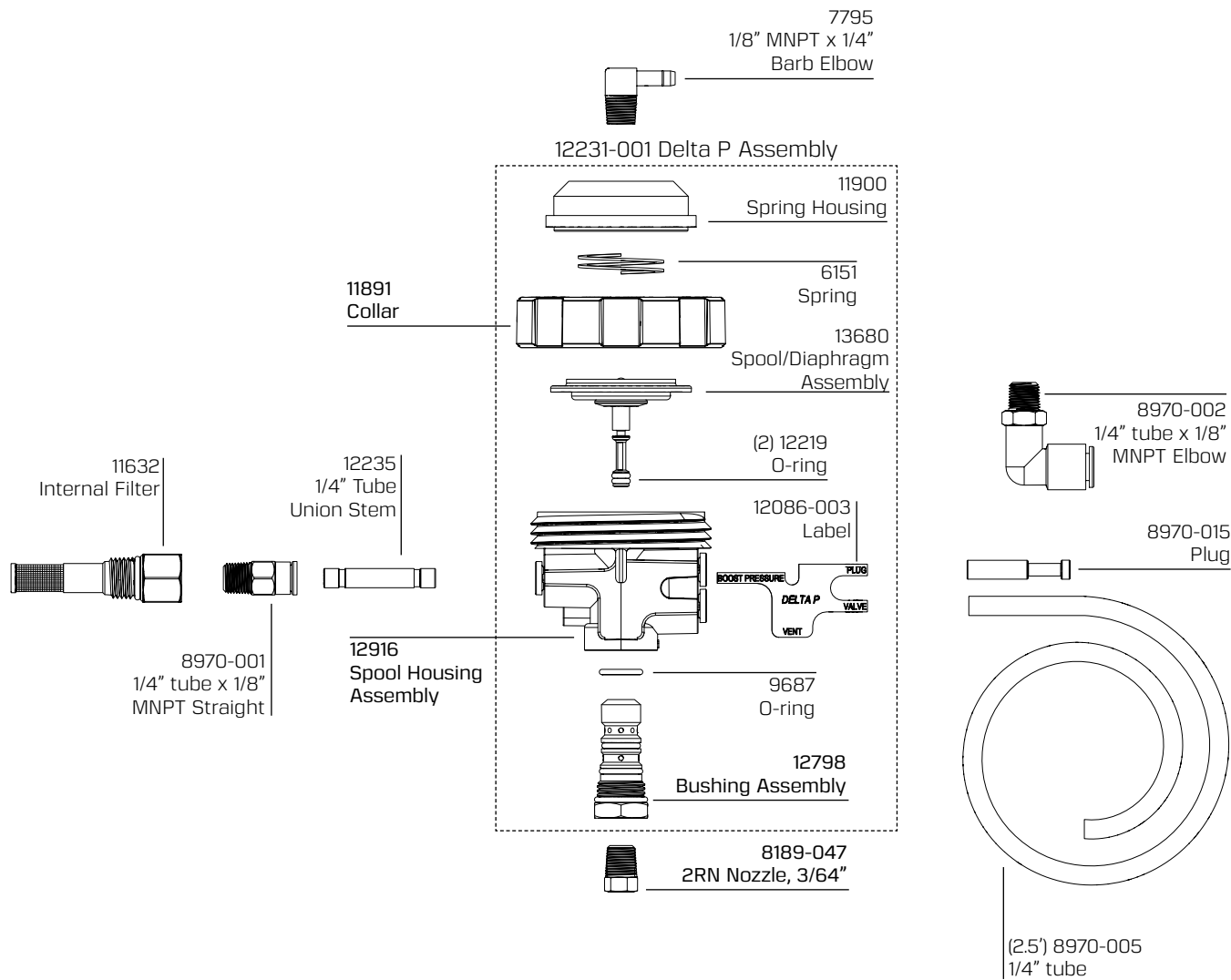


Figure 4. Location of pressure gauges to be installed for troubleshooting.

PARTS

#12289 Delta P Kit



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