_Model_CSV3A
Pump Control Valve

INSTALLATION INSTRUCTIONS

NOTE: Submersible motor manufacturers recommend using a flow inducer sleeve to be sure the motor is sufficiently cooled at low flows. Pressure differential across the valve cannot be more than 125 PSI.

Please read all instructions before installation.

1) Be sure that the well has been pumped clean before the valve is installed. It is important that all lines including the pump, be flushed clean of debris. Turn off power to pump and drain system.This product creates back pressure, that is how it works. Back pressure is determined by the pump you are using. Be sure your piping between the pump and the Cycle Stop Valve is rated for that pressure.

2) The valve should be installed horizontally with valve top/ID plate facing up. It should be downstream of the pump but before the pressure tank/pressure switch with all water outlets/demand downstream of the valve. Four inch and smaller valves can be installed vertically with flow going up, not down. Flow direction is indicated by the arrow on the valve (Note: There cannot be any water outlets between the pump and the valve (including gate valve, pressure relief valve, etc. If outlet lines exist between the well and the tank, the valve must be installed at the well head. Always keep in mind this is a pump control valve. All water pumped/demanded must first go through our valve for it to be able to control the pump).

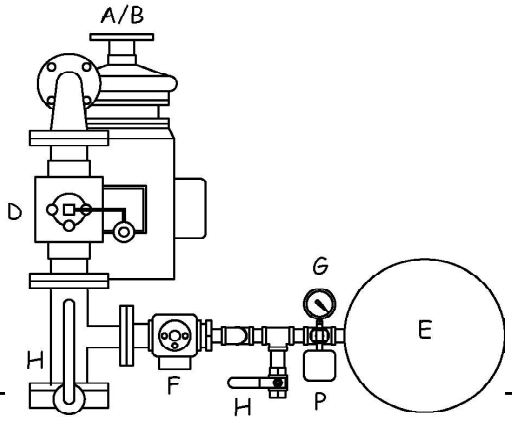
3) We recommend using teflon tape on threaded ends however most thread compounds are acceptable. All connections should be water tight.

4) Pressure tank should be installed downstream of the CSV3**A** on a tee at a 90 degree angle to the main discharge line . Valve and pressure tank should be as close together as possible. There should be no more than 6-10' of piping between the valve and the pressure tank. Pressure tank pre-charge should be 5-10 psi lower than the pressure switch start point. A water line at least 8" or longer and no larger than tank inlet size should be used to connect the tank. Pressure switch must be installed on the line going into the tank, as close to base of the tank as possible. (closer to the tank than the main line). Pressure switch should never be installed directly on the main line.

5) For start up, loosen the lock nut on adjusting stem of pilot valve (small valve attached to CSV3**A**). Make sure adjusting stem is loosened completely by turning counter clockwise until you feel it is no longer making contact with the spring. Set the pressure switch to desired settings. Cut off pressure must be at least 10 PSI higher than the desired valve set pressure (ie..40/60 pressure switch, valve set at 50). Open a small water outlet to turn pump on. It is critical to allow at least 5GPM and not more than 10 GPM out of the system during valve setting procedure (approximately 1 standard 3/4" water hose). Now adjust the CSV3**A** to desired pressure by turning the adjusting stem on the pilot valve clockwise to increase pressure, and counterclockwise to decrease pressure. When pressure steadies at the desired system pressure, tighten the lock nut on adjusting stem of the pilot valve. Valve setting is complete. (Note: If water hammer occurs on pump start up, you must set valve pressure and cut in pressure the same. For example...40/60 pressure switch, valve set at 40.)

6) Close off the water outlet making sure no water is being demanded. The pressure tank will begin to fill at approximately 5 gpm. As pressure tank slowly fills, pressure in the system will increase until the pressure switch turns the pump off.

Note: In multiple pump applications, never share a CSV with multiple pumps. Each pump must have its own valve.



A) Pump
B) Motor
C) Check valve
D) Cycle Stop Valve
E) Pressure tank
F) Pressure relief valve
G) Pressure gauge
H) Isolation valve
P) Pressure switch
LP) Low Pressure Cut off

CSV3A Troubleshooting

Symptom	Cause	Remedy
Pump is Cycling off and on	Pilot screen is stopped up	Clean screen (2003 or older models only)
	Pressure switch is not set correctly	Cut off pressure must be at least 10 psi higher than valve set pressure.
	Valve is not set correctly	Reset valve to at least 10 PSI lower than cut off pressure
	Debri between diaphragm and seat	Clean out valve
	Waterlogged pressure tank	Replace tank
	Bad or torn diaphragm in main valve or pilot valve	Replace damaged diaphragm
Pressure modulates 10-15 PSI from set pressure	Air trapped in mainline-usually occurs on new start ups and spring start ups.	Release air from main line and reset CSV if necessary
Low pressure	Valve is not set correctly	Reset valve
	Check colored (red on 2", orange on 3" and larger) restriction fitting on pilot for enlarged, missing, or wrong color orifice.	Replace worn orifice or get correct colored orifice.
	Demand is more than pump can provide at desired pressure	Reduce demand so it is within pump capabilities to maintain desired pressure.
Chattering valve	Pressure tank is located too far away from the valve	Relocate valve or tank to bring them closer together or add a second smaller tank to the system close to the valve.
	Too much air pressure in tank	Reduce air pressure in tank to 5-10 PSI below cut in pressure.
	Worn or defective diaphragm	Replace diaphragm
Pump rapid cycles at start up and then begins to function correctly	Pressure switch is located on the main line	Move pressure switch to small line at the base of the tank on a line no larger than 1 1/4" in diameter
	CSV setting is too close to cut off pressure	Set pressure switch cut off pressure at least 10 PSI higher than CSV setting
	Air pressure in tank too high	Reduce air pressure in tank to 5-10 PSI below cut in pressure
	Multiple check valves in system working against each other	Remove all but the check valve or foot valve on the pump itself
	Cut in pressure is not the same as CSV set pressure	Set pressure switch to come on at the same pressure the CSV is set to hold
	Air trapped in cover or bonnet	Loosen tubing or plug on cover to release trapped air
	More than 125 psi differential between inlet and outlet pressure of valve	Reduce differential pressure or add a second valve