

Instruction Sheet

Four Function Valve (4FV)

Model No. 34626

This 4FV is designed for installation directly into the pump head discharge and is equipped with:
1/2" O.D. or 12 mm O.D. x 9 mm I.D. tubing connection discharge*

Model No. 34627

This 4FV is designed for installation directly into the pump head discharge and is equipped with:
1/2" NPT pipe thread connection discharge x 1-12 UNF*

- * To retrofit, remove the existing discharge valve. Install the 4FV until contact is made with the seal ring. An additional 1/8 turn ensures a leak-proof seal.



Always wear protective clothing and face shield when working on or near your metering pump.
Additional precautions should be taken depending on the solution being pumped.
Refer to MSDS precautions from your solution supplier.



*If you are installing the 4FV on an existing pump installation, before disconnecting the tubing or discharge fitting, place the footvalve and suction tubing into a container of water or other neutralizing solution. Turn the pump on to flush (purge) the pump head and discharge line of solution being pumped. Switch the pump to off or unplug. **The injection check valve must be properly installed and working.** If a gatevalve or globevalve has been installed downstream of the injection check valve, it should be closed to the off position. Once these precautions are met, carefully depressurize and disconnect the discharge tubing line. The 4FV may now be installed.*

FUNCTIONS

1. **Anti-Syphon (automatic)**
Prevents syphoning when pumping downhill, into a vacuum or into atmosphere.
2. **Back Pressure (automatic)**
Supplies approximately 20 psi (1.4 Bar) back pressure in suction lift applications.
3. **Pressure Relief (automatic)**
If discharge line is overpressurized, the valve opens, sending the solution back to your supply tank.
4. **Line Depressurization (manual)**
By turning the relief and anti-syphon knobs, the discharge line will depressurize and drain most of the solution back to your supply tank.

INSTALLATION

Connecting the Return Line

The return line is the translucent .375 in (10 mm) O.D. tubing, supplied in a 10 ft (3 m) length. This tubing is used to send the solution back to the supply tank when pressure relief is activated or when priming, draining, or depressurizing the discharge line.

1. Loosen the coupling nut on the return line elbow and insert one end of the return tubing into the elbow connector. Push and hold the tubing in place while tightening the coupling nut.
2. Route the other end of the tubing beside the suction tubing and cut the return tubing so that the end is just above the highest possible solution level in the supply tank. Attach the return tubing to the suction tubing with a wire tie to hold the return tubing securely in place. **DO NOT SUBMERGE THE RETURN TUBING IN THE SOLUTION BEING PUMPED.**



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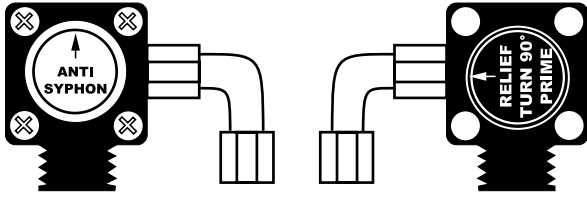


PRIMING



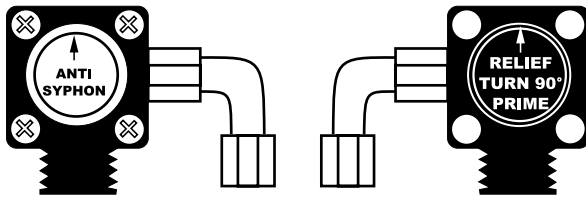
Pump must be properly mounted and all tubing securely attached before proceeding.

1. The ANTI-SYPHON and RELIEF knobs should be adjusted as shown below to prime the pump:



NOTE: *These positions are for priming only.*

2. Plug in or switch on pump.
3. While pump is running, set the speed knob at 80% and the stroke knob at 100%. The suction tubing should now begin to fill with solution. Note: if your pump is equipped with a pressure control knob, turn the knob fully clockwise.
4. A small amount of solution will start to discharge out the return tubing of the 4FV. Once this begins, turn the RELIEF knob to the position shown below:



NOTE: *These positions are for normal pumping service.*

5. The pump is now primed. Speed and stroke setting adjustments should now be made for appropriate output requirements.

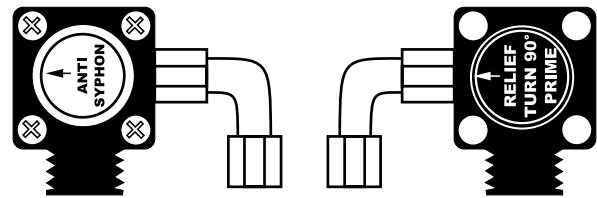
NOTE:

At injection pressures below 20 psi (1.4 Bar) a slight buzzing noise coming from the 4FV may be audible. This is normal and in no way effects the operation of the valve.

DEPRESSURIZING AND DRAINING THE DISCHARGE LINE

The injection check valve must be properly installed and working. If a gatevalve or globevalve has been installed downstream of the injection check valve, it should be closed to the off position.

1. Turn both the ANTI-SYPHON and RELIEF knobs to the position shown below:



NOTE:

These positions are for depressurizing and draining the discharge line.

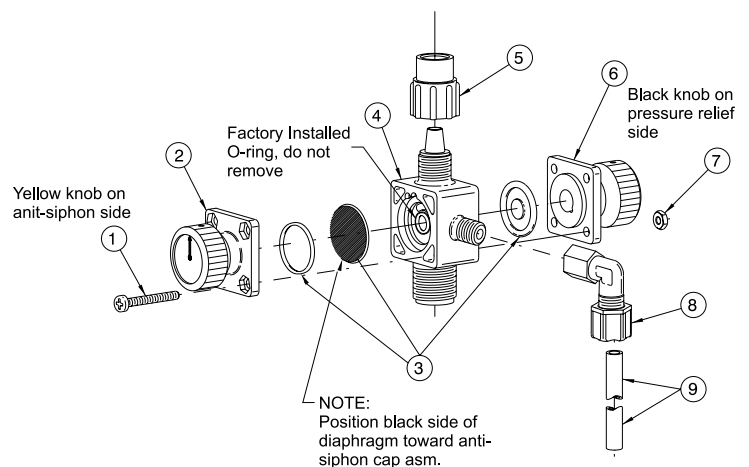
2. The solution in the discharge line will depressurize and begin to flow out the return line and into the solution tank.

REPAIR AND MAINTENANCE

Please see cautions on front of this sheet

1. Once the valve and pump head have been flushed, disassemble the valve and replace worn components.
2. Re-assemble and install the valve following precautions and steps outlined previously.

Key No.	Part No.	Description	Quantity	
			34626	34627
1	10140	Screw	4	4
2	34615	Anti-Syphon Cap Assembly	1	1
3	34613	Seal Repair Kit	1	1
4	34610	Valve Body Asm.1-12x 1/2" Tubing	1	
	34611	Valve Body Asm.1-12x1/2" NPT.		1
5	10411	Coupling Nut	1	
6	32115	Pressure Relief Cap Assembly	1	1
7	10143	Nut	4	4
8	10587	Elbow	1	1
9	10342-10	Tubing,.375 O.D.	1	1



NOTE:

When installing new diaphragms, note the positions shown above. Improper installation will prevent the valve from functioning properly.