

Diaphragm Tri-Purpose Valve

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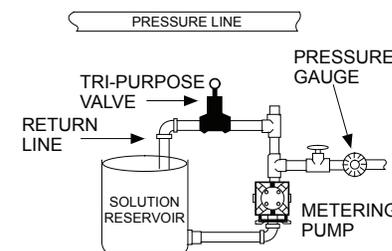
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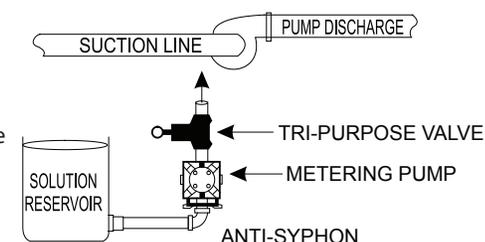
Pressure Relief Valve

The Tri-Purpose Valve is an excellent relief valve. It can be adjusted after installation to open at any desired pressure between 30 PSI (2.1 kg/cm²) and 125 PSI (8.8 kg/cm²). When used as a pressure relief valve, the Tri-Purpose Valve should be installed on the branch of a tee whose run is in the pressure line. Flow direction through the valve when used as a pressure relief valve is 180° opposite the anti-syphon and back pressure flow direction. See data plate on base of valve.



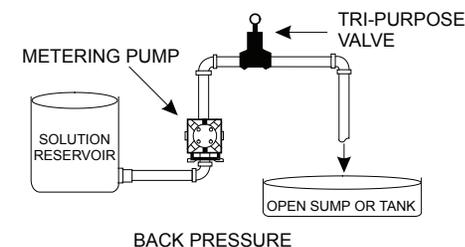
Anti Syphon Valve

The Tri-Purpose Valve can be installed as an anti-syphon valve to prevent syphoning fluid through a metering pump or other feeding system where liquid is being fed into negative pressure (e.g. pump suction). The greater the negative pressure, the tighter the diaphragm seats. Install with flow direction as shown on data plate on base of valve.



Back Pressure Valve

The Tri-Purpose Valve can also be installed so as to require a metering pump or other injection device to develop a positive pressure in order to feed through it. The opening pressure is approximately 30-40 PSI*. Useful for feeding or metering into an open tank or reservoir located at a level below the supply tank. As a back pressure valve, it should be installed so that the flow direction is the same as the direction of flow when used as an anti-syphon valve. See data plate on base of valve.



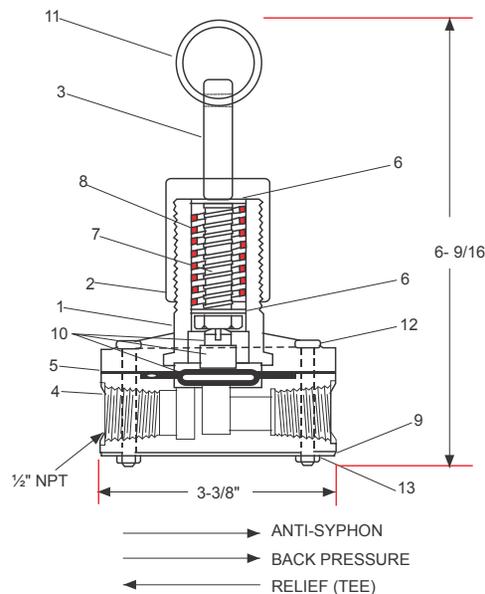
The Tri-Purpose Valve may be installed horizontally or vertically. All parts except the body may be serviced or replaced without removing the valve from the line.

* The adjustment nut does little to effect the Back Pressure or Anti-syphon pressures.

INSTALLATION NOTES

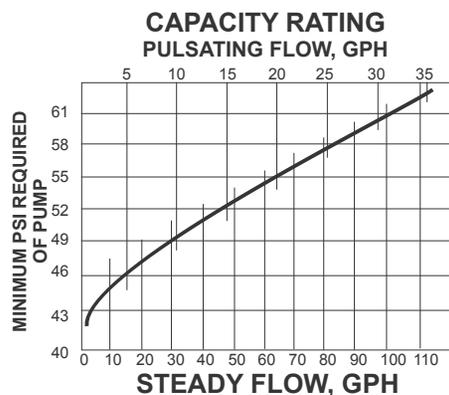
1. Your Tri-Purpose Valve may be installed in any position. The axis of the inlet and outlet ports may be at any angle.
2. If the valve is to be installed in a plastic pipeline (PVC or other), the line may be threaded directly into the valve body if desired. It is recommended, however, that a PVC pipe nipple and union be used on at least one side to permit ease of dismounting.
3. Flow direction for both Anti-Syphon and Back Pressure functions should be from the annular port to the central port. See the data plate on bottom of valve body. This function is not adjustable.
4. Flow for the Pressure Relief function should be from the central port to the annular port. Note that in this case, the valve is not installed "in-line", but on a tee, and the direction referred to in this function is the flow direction of relieved fluid back to the solution container or to waste. It is important that a pressure gauge be installed (at least temporarily) upstream of the Tri-Purpose Valve in order to permit checking of the pressure setting.
5. The Tri-Purpose Check Valve is shipped at a low pressure setting. To increase the opening pressure of the valve, tighten down (clockwise looking from the pull rod end) the No. 8007 adjustment nut while watching the upstream pressure gauge. When the desired pressure is reached, the pressure gauge may be valved off, although it is helpful to leave the pressure gauge installed in order to permit easy checking of the opening pressure from time to time.
6. If it is desired to open the valve temporarily, pull the 6831 ring. This relieves the spring pressure on the diaphragm and permits flow through the valve, reducing pressure.
7. Do not use your Tri-Purpose Valve on any fluids which contain solvents or other chemicals which might attack PVC or polypropylene.
8. Do not install the Tri-Purpose Valve where it may be required to relieve a flow volume greater than that shown on the capacity rating chart. Note the difference between the valve's flow capacity when used on a pulsating flow, such as that delivered by a reciprocating pump, and the rating for a steady flow. Where a greater relief flow is required, two or more valves should be installed on a manifold.
9. Maximum solution temperature is 135°F (55°C).

Specifications



Model	Connection	Liquid Contacting Parts	
		Valve Body	Diaphragm
8011-C	1/2" NPTF	PVC	Teflon face
8011-CP	1/2" NPTF	Polypropylene	Teflon face

Item	Part No.	Desc.	Qty Req'd
1	8005	Spring housing	1
2	8007	Adjustment nut	1
3	8008	Pull rod	1
4	8009	Valve body, PVC	1
4	8009-1	Valve body, polypropylene	1
5	8010-1	Spring housing retainer	1
6	8013	Washer	2
7	8014	Inner spring	1
8	8015	Outer spring	1
9	8019	Nameplate, 8011-C	1
9	8019-1	Nameplate, 8011-CP	1
10	51060	Diaphragm, Teflon face	1
11	6831	Ring	1
12	103698	Screw, 10-32 x 1-3/4	4
13	100898	Nut, KEPS, 10-32	4
14	---	Instruction Sheet	1



For steady, non-pulsating flows, use the capacity rating shown on the bottom scale. For pulsating flows, use the top scale. Do not use on systems exceeding 150 psi.

Part No.	For	Required per valve
4542-W	TUBING CONNECTOR, PVC, 1/2" NPTM x 1/2" O.D.	2
20050	TUBING CONNECTOR, PVC, 1/2" NPTM x 3/8" O.D.	2
100177	TUBING CONNECTOR, PP, 1/2" NPTM x 1/2" O.D.	2
102805	TUBING CONNECTOR PP, 1/2" NPTM x 3/8" O.D.	2