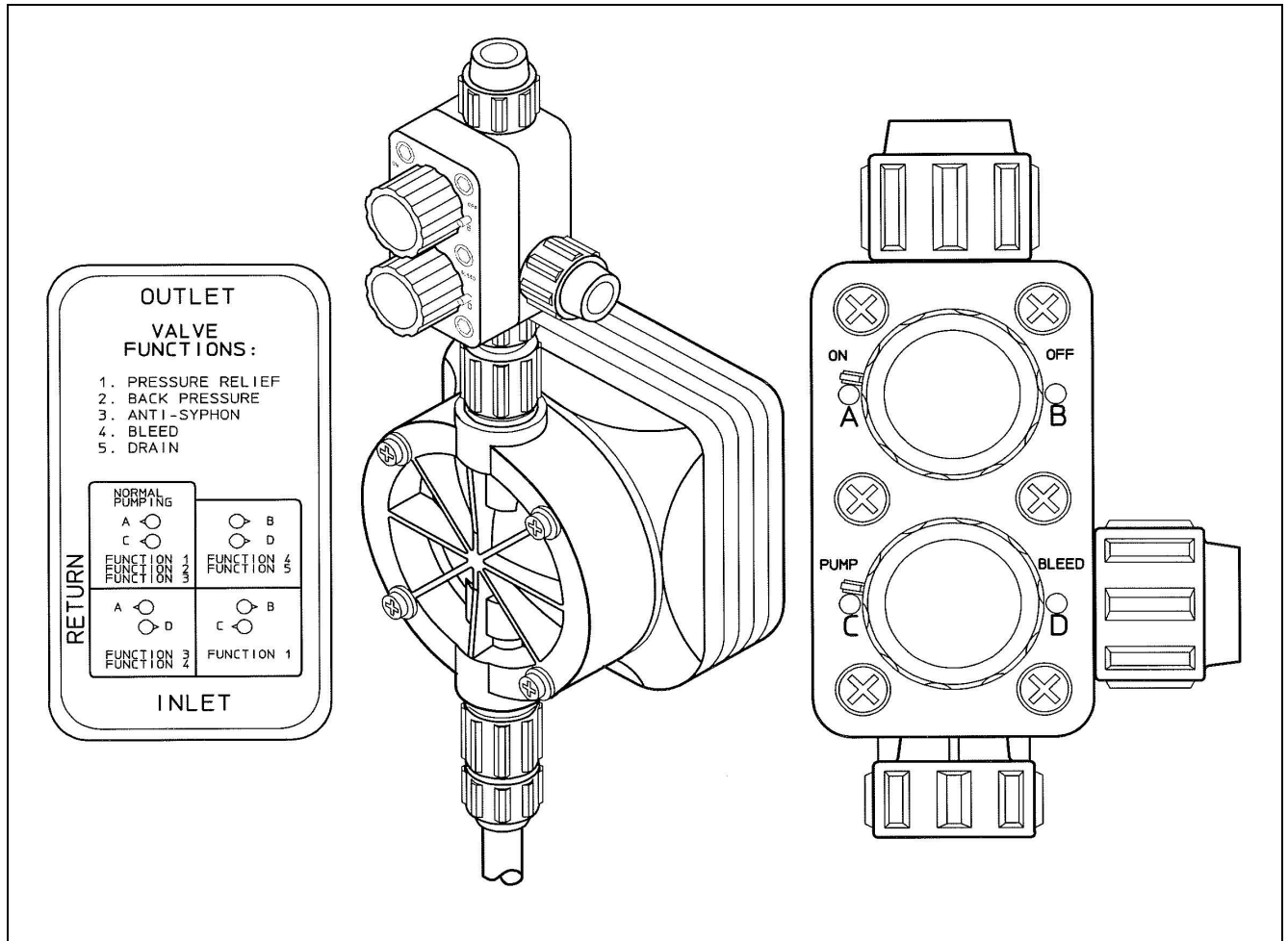


# 5-FUNCTION VALVE INSTALLATION OPERATION MAINTENANCE INSTRUCTIONS



1. **1. Tubing Version:** Remove the tubing nut from the discharge valve cartridge on the top of the pump head. Install the supplied Viton O-ring (#L1501200-VTN)\* into the groove around the tubing tip on the valve cartridge. Hand-tighten the 5-Function Valve onto the discharge valve of the pump. Connect the discharge tubing to the “OUTLET” port and the bypass tubing to the “RETURN” port of the 5-Function Valve.

**\*\*PRESOAK TUBE:** Prior to assembly soak tube end in 180°F to Boiling Water (approx. the water temperature from the discharge of an office coffee maker). Soak time should be a minimum of 30 seconds.

2. **2. NPT Version:** Apply plumbers tape or sealant to the threads of the 5-Function Valve. Screw “INLET” connection into the discharge valve of the pump head. Connect piping to the “OUTLET” and “RETURN” port connections of the 5-Function Valve.

\*If Viton is not compatible with fluid being pumped and alternate Teflon O-Ring is available (L1501200-TFE). Viton is the preferred sealing material with difficult to seal fluids like Sodium Hypochlorite and similar

## 5-FUNCTION VALVE OPERATIONS:

### Pressure Relief Function (PRV):

Designed to relieve excessive pump discharge pressure (approximately 50% above PRV rating). PRV is functional anytime the bottom control knob is turned to the letter “C”, also labeled “PUMP” position.

#### Color code for PRV Rating:

Black.....40-psi Spring part #L1104400-000  
Blue.....100-psi Spring part #L1104500-000  
Green.....150-psi Spring part #L1104600-000  
Red.....250-psi Spring part #L1104700-000

#### 1. **Back Pressure Function:**

The back pressure function allows the pump to meter to atmosphere by creating a discharge restriction of approximately 20-psi. Back pressure is provided anytime the top knob is turned to “A”, also labeled “ON” position. Note: The back pressure function is not intended to prevent flow-through from elevated supply tanks. The pumps’ rated pressure does not have to be de-rated when the back pressure knob is in the “ON” position.

#### 2. **Anti-Siphon Function:**

The anti-siphon function prevents siphoning through the pump when pumping to a receptacle lower than the pump. This feature is active when the top knob is turned to the letter “A”, also labeled “ON” position.

#### 3. **Pump head Air Bleed Function:**

This function is used when starting the pump to aid in priming. It allows for removal of air from the pump head by bypassing air and fluid out the “RETURN” connection. This feature will function when the bottom knob is turned to the letter “D”, also labeled “BLEED” position.

#### 4. **Discharge Drain Function:**

This function is used to depressurize and/or drain the pump discharge line. This is accomplished by turning the top knob to the “B”, also labeled “OFF” position, and the bottom knob to the “D”, also labeled “BLEED” position. This will bypass the discharge line fluid through the “RETURN” line of the 5-Function Valve.

### **Maintenance:**

The only maintenance required is to replace the diaphragms whenever the pump head diaphragm is replaced. Sometimes when pumping dirty fluids, solids may become trapped between the PRV diaphragm (bottom one) and the PRV seat. This may cause the PRV to weep slightly. This is easily remedied by removing the diaphragm and wiping it with a cloth and reinstalling it, if the damage is excessive, the diaphragm must be replaced.

# 5-FUNCTION VALVE

## SPECIFICATIONS:

Material of construction:

Valve body:	<b>Polyvinylidene Fluoride (PVDF)</b>
Diaphragm:	<b>PTFE faced Hypalon</b>
O-rings:	<b>TFE</b>
Hardware:	<b>18-8 Stainless Steel (recessed)</b>
Maximum Flow:	<b>240-GPD</b>
Maximum Viscosity:	<b>1000-CPS</b>
Pressure Relief settings:	<b>40-PSI (approximately 50)</b> <b>100-PSI (approximately 140)</b> <b>150-PSI (approximately 200)</b> <b>250-PSI (approximately 300)</b>

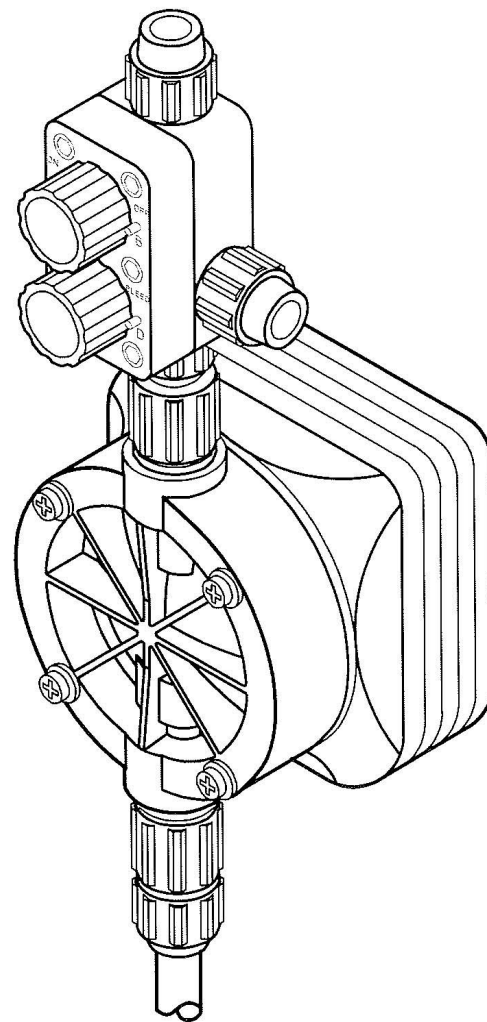
**Note:** Pressure relief may occur at 50% above maximum pressure rating of the valve assembly.

## Connections:

- .25in.-NPT (male)**
- .38in.-I.D. x .50in.-O.D.-TUBING**
- .25in.-I.D. x .38in.-O.D.-TUBING**
- G-1/2-A (metric)**

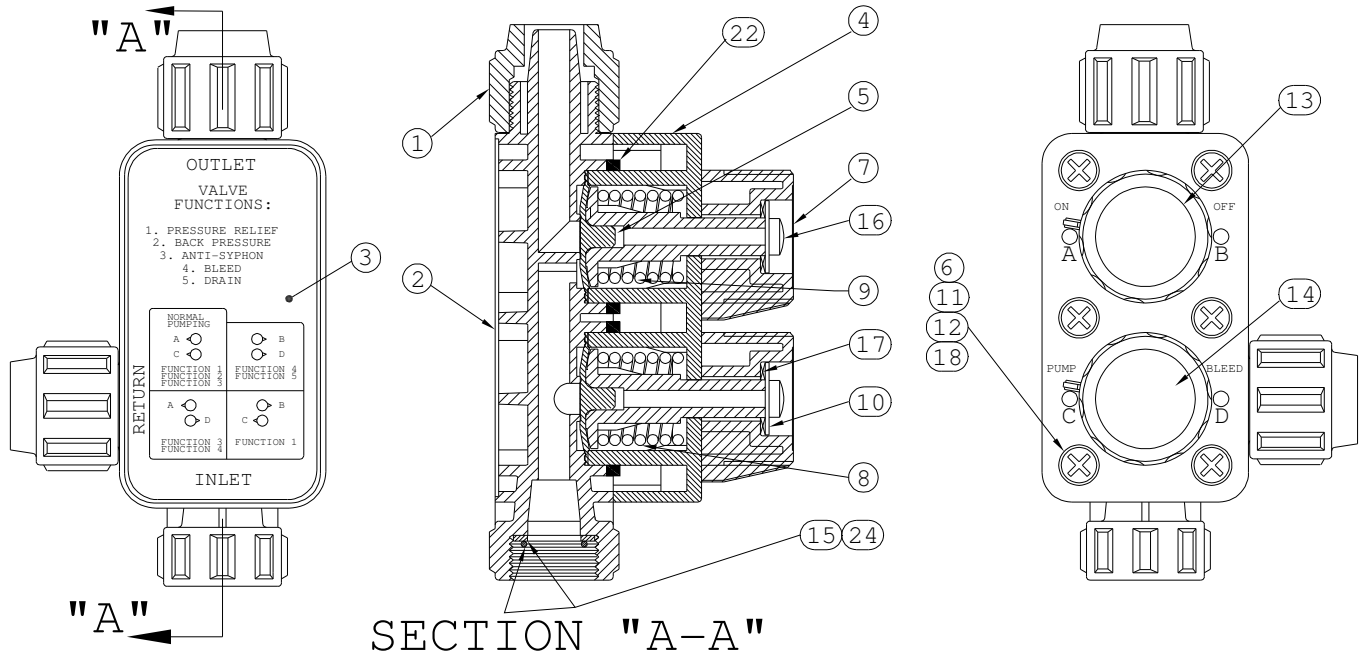
### METRIC TUBING COUPLING NUT KITS

<b>4x6mm-Tubing</b>	<b>L9909100-HPV</b>
<b>4x10mm- Tubing</b>	<b>L9909200-HPV</b>
<b>6x10mm- Tubing</b>	<b>L9909201-HPV</b>
<b>6x12mm- Tubing</b>	<b>L9909300-HPV</b>
<b>10x14mm- Tubing</b>	<b>L9909400-HPV</b>
<b>10x16mm- Tubing</b>	<b>L9909401-HPV</b>



<b>.25 in. - MALE NPT CONNECTION</b>			<b>.38 IN. - O.D. TUBING CONNECTION</b>			<b>.38 IN. - O.D. TUBING CONNECTION</b>		
<b>MODEL #</b>	<b>PSI</b>	<b>VLV BODY MATERIAL</b>	<b>MODEL #</b>	<b>PSI</b>	<b>VLV BODY MATERIAL</b>	<b>MODEL #</b>	<b>PSI</b>	<b>VLV BODY MATERIAL</b>
L380BT02-PVD	40	PVDF	L380BT01-PVD	40	PVDF	L380BT03-PVD	40	PVDF
L380DT02-PVD	100	PVDF	L380DT01-PVD	100	PVDF	L380DT03-PVD	100	PVDF
L380FT02-PVD	150	PVDF	L380FT01-PVD	150	PVDF	L380FT03-PVD	150	PVDF
L380KT02-PVD	250	PVDF	L380KT01-PVD	250	PVDF	L380KT03-PVD	250	PVDF

# 5-FUNCTION VALVE ASSEMBLY



ITEM	PART #	DESCRIPTION	QTY
1	L1100300-PVD	NUT (PVD), .38in TUBE COUPLING	2
	L1100400-PVD	NUT (PVD), .50in TUBE COUPLING	2
2	L1104000-PVD	BODY (PVD), .38in TUBE VALVE	1
	L1104100-PVD	BODY (PVD), .50in TUBE VALVE	1
3	L1704500-000	LABEL, 5-FUNCTION INSTRUCTION DECAL	1
4	L1104200-PVD	BODY (PVD), BLOCK	1
5	L0301900-000	DIAPHRAGM AS'Y	2
6	L9805001-188	FW (SST) #10 .403X.203X.04	6
7	L1900600-FPP	KNOB (FPP), ADJUSTMENT	2
8	L1104400-000	SPRING, P.R.V. 40-PSI (BLACK)	1
	L1104500-000	SPRING, P.R.V. 100-PSI (BLUE)	1
	L1104600-000	SPRING, P.R.V. 150-PSI (GREEN)	1
	L1104700-000	SPRING, P.R.V. 250-PSI (RED)	1
9	L1104400-000	SPRING, P.R.V. 40-PSI (BLACK)	1
10	L9804600-188	WASHER (SST), FLAT	2
11	L9804700-188	SCREW (SST), #10-32x1.50-lg.FILLISTER PHIL.	6
12	L9809700-188	NUT (SST), #10-32 x .25 thk. HEX	6
13	L1701600-000	LABEL, KNOB, BLACK	1
14	L1701600-000	LABEL, KNOB 40-PSI (BLACK)	1
	L1701601-000	LABEL, KNOB 100-PSI (BLUE)	1
	L1701602-000	LABEL, KNOB 150-PSI (GREEN)	1
	L1701603-000	LABEL, KNOB 250-PSI (RED)	1
15	L1501200-VTN	GASKET (VTN), O-RING, 2-013	1
16	06-008-26-E	SCREW (SST), #8 x 1.0in.-lg. TYPE-A PHP	2
17	L9904400-188	WASHER (SST), CURVED SPRING	3
20	L9404500-000	MANUAL, 5-FUNCTION VALVE	1
21	L1715xxx-005	LABEL, DECAL 5-FUNCTION VALVE	1
22	L1504100-000	O-RING, .989 X 1.121 X .066 VITON	2
24	J27903	GSK (TFE) .05X.455X.69	1

