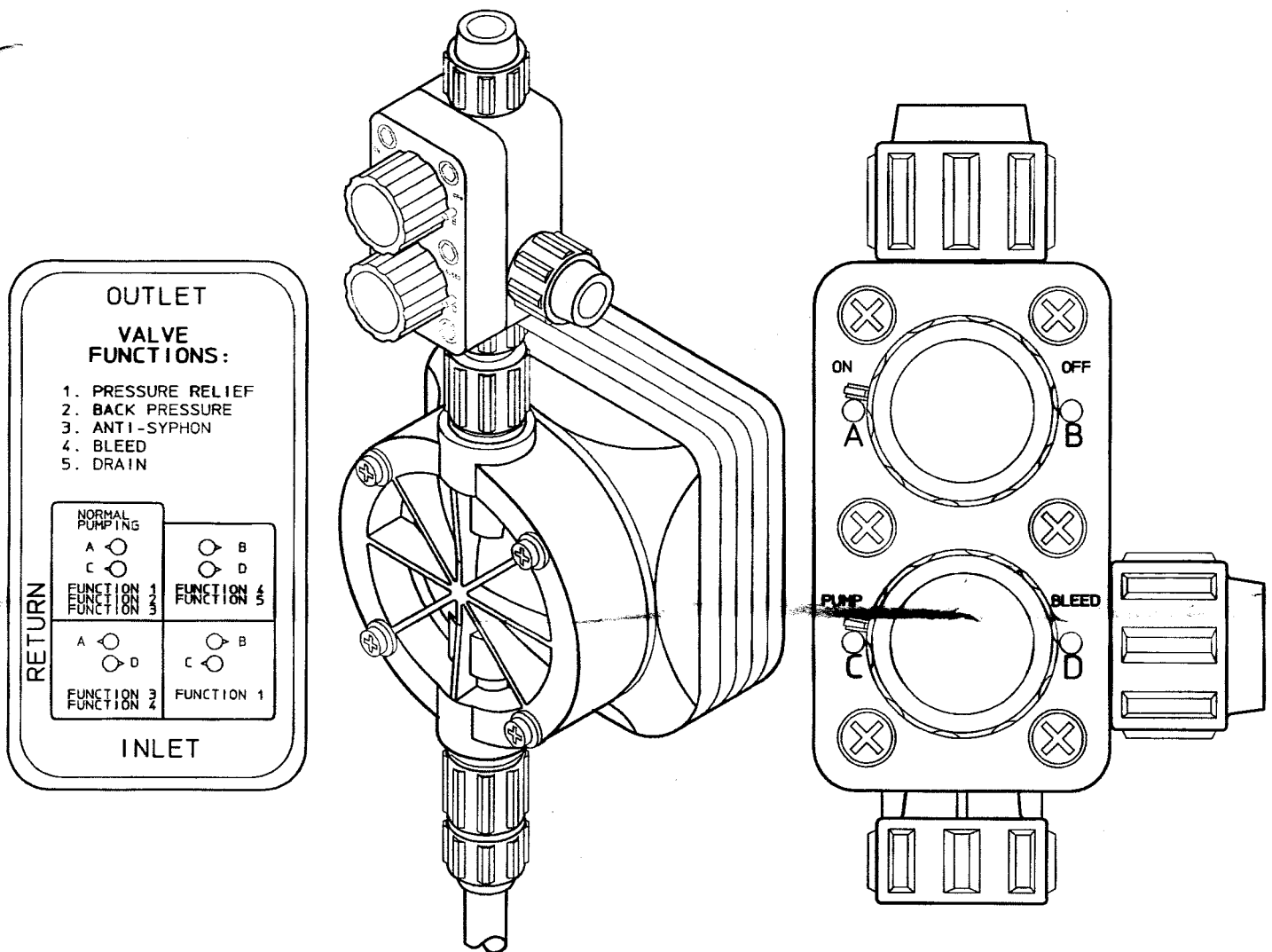


# 5-FUNCTION VALVE

## INSTALLATION OPERATION MAINTENANCE INSTRUCTIONS



- 1. Tubing Version:** Remove the tubing nut from the discharge valve cartridge on the top of the pump head. Install the supplied o-ring 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.
- 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.

## 5-FUNCTION VALVE OPERATIONS:

### 1. 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

### 2. 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 derated when the back pressure knob is in the "ON" position.

### 3. Anti-Syphon Function:

The anti-syphon 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.

### 4. 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.

### 5. 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:.....Glass filled Polypropylene(GFPPL),  
 .....Polyvinylidene Fluoride(PVDF).

Diaphragm:.....PTFE faced Hypalon.

O-rings:.....TFE.

Hardware:.....188 Stainless Steel(recessed).

Maximum Flow:.....240-G.P.D.

Maximum Viscosity:.....1000-CPS.

Pressure Relief settings:....40-PSI(approximately 50),  
 ....100-PSI(approximately 140),  
 ....150-PSI(approximately 200),  
 ....250-PSI(approximately 300).

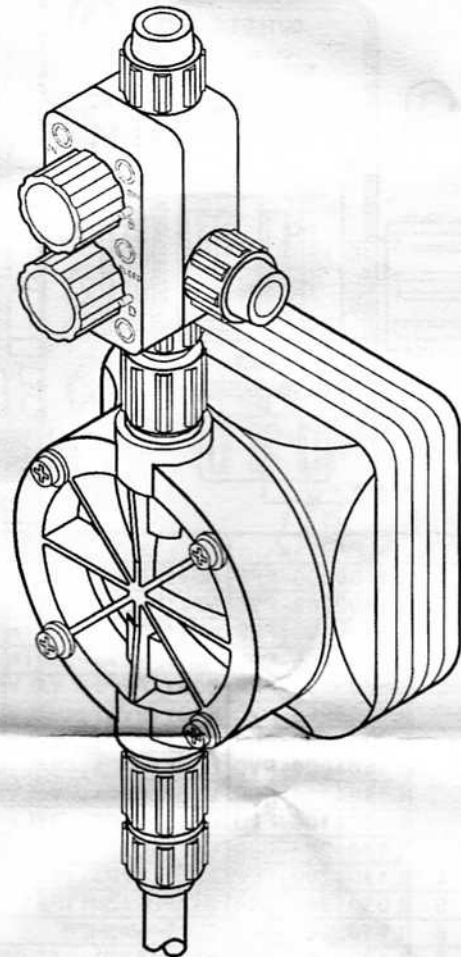
**Note:** Pressure relief may occur at 50% above maximum pressure rating of the valve assembly.

### Connections:

- .25"-Male NPT,
- .38" x .50"O.D.-TUBING,
- .25" x .38"O.D.-TUBING,
- G-1/2-A METRIC-TUBING,

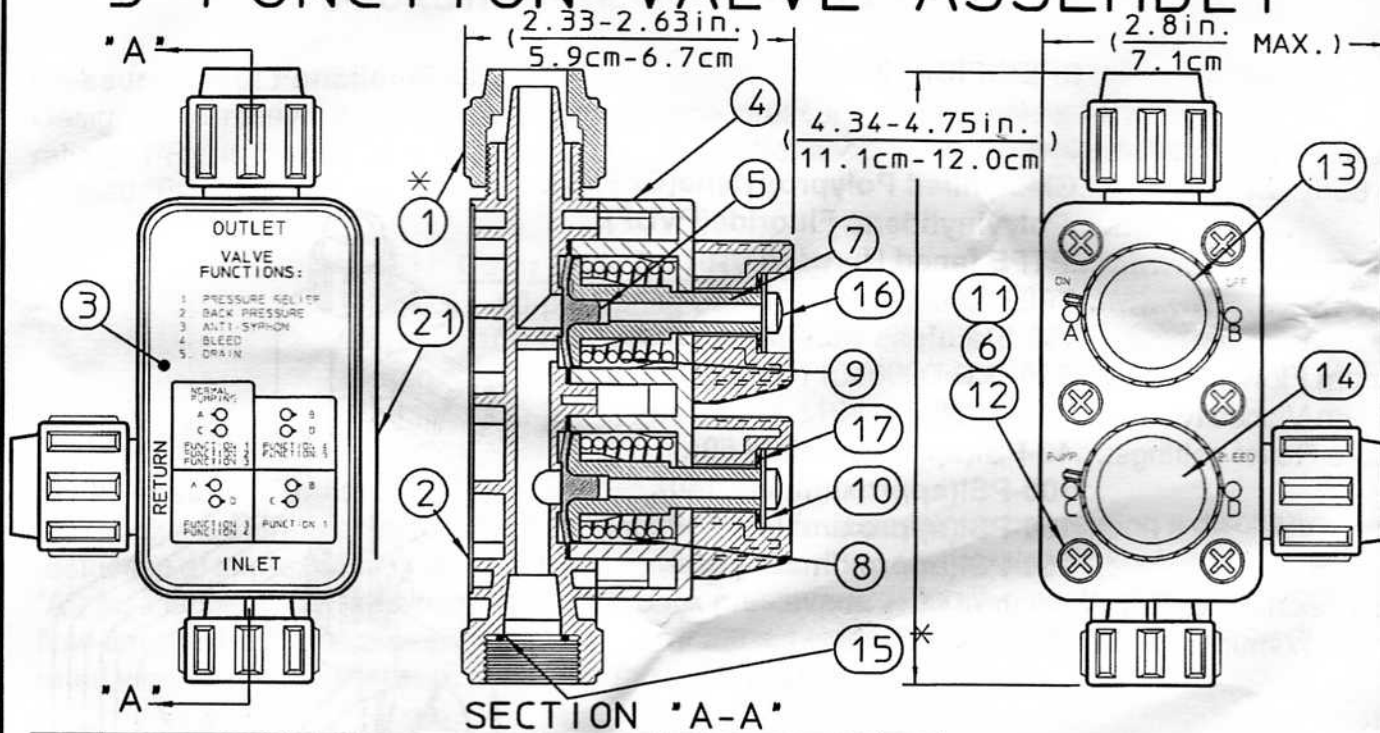
### ASSEMBLY KITS

- 4x6mm-TUBING. ....L9909100-HPV,
- 4x10mm-TUBING.....L9909200-HPV,
- 6x10mm-TUBING.....L9909201-HPV,
- 6x12mm-TUBING.....L9909300-HPV,
- 10x14mm-TUBING.....L9909400-HPV,
- 10x16mm-TUBING.....L9909401-HPV.



.25in.-MALE NPT CONNECTION			.38in.-O.D.TUBING CONNECTION			.50in.-O.D.TUBING CONNECTION		
MODEL #	PSI	VLV.BODY MATERIAL	MODEL #	PSI	VLV.BODY MATERIAL	MODEL #	PSI	VLV.BODY MATERIAL
L380BT02-FPP	40	GFPPL	L380BT01-FPP	40	GFPPL	L380BT03-FPP	40	GFPPL
L380DT02-FPP	100	GFPPL	L380DT01-FPP	100	GFPPL	L380DT03-FPP	100	GFPPL
L380FT02-FPP	150	GFPPL	L380FT01-FPP	150	GFPPL	L380FT03-FPP	150	GFPPL
L380KT02-FPP	250	GFPPL	L380KT01-FPP	250	GFPPL	L380KT03-FPP	250	GFPPL
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



SECTION "A-A"

ITEM	PART #	DESCRIPTION	QTY
* 1	L1100300-FPP	NUT(FPP), .38in.-TUBE COUPLING	2
	L1100300-PVD	NUT(PVD), .38in.-TUBE COUPLING	
	L1100400-FPP	NUT(FPP), .50in.-TUBE COUPLING	
	L1100400-PVD	NUT(PVD), .50in.-TUBE COUPLING	
2	L1103900-FPP	BODY(FPP), VALVE, .25in.-NPT	1
	L1103900-PVD	BODY(PVD), VALVE, .25in.-NPT	
	L1104000-FPP	BODY(FPP), VALVE, .38in.-TUBE	
	L1104000-PVD	BODY(PVD), VALVE, .38in.-TUBE	
	L1104100-FPP	BODY(FPP), VALVE, .50in.-TUBE	
	L1104100-PVD	BODY(PVD), VALVE, .50in.-TUBE	
3	L1704500-000	LABEL, 5-FUNCTION INSTRUCTION DECAL	1
4	L1104200-FPP	BODY(FPP), BLOCK	1
5	L0301900-000	DIAPHRAGM(TFE) and SHAFT AS'Y	2
6	L9805000-000	FLAT WASHER	6
7	L1900600-FPP	KNOB(FPP), ADJUSTMENT	2
8	L1104400-000	SPRING, PRV, 40psi	1
	L1104500-000	SPRING, PRV, 100psi	
	L1104600-000	SPRING, PRV, 150psi	
	L1104700-000	SPRING, PRV, 250psi	
9	L1104400-000	SPRING	1
10	L9804600-188	WASHER(SST)	2
11	L9804700-188	SCREW(SST), #10-32 x 1.5in.-lg. FILLISTER	6
12	U0812299	NUT(SST), #10-32 x .13in.-thk. HEX NUT	6
13	L1701600-000	LABEL(BLK), KNOB	1
14	L1701600-000	LABEL(BLK), KNOB, 40psi	1
	L1701601-000	LABEL(BLU), KNOB, 100psi	
	L1701602-000	LABEL(GRN), KNOB, 150psi	
	L1701603-000	LABEL(RED), KNOB, 250psi	
*15	L1501200-TFE	GASKET(TFE), O-RING	1
16	06-008-26-E	SCREW, SELF-TAP .75in.-lg.	2
17	L9904400-188	SPRING, CURVED WASHER(250psi)	2
	L9904400-188	SPRING, CURVED WASHER(40, 100 and 150-psi)	
20	L9404500-000	MANUAL, 5-FUNCTION VALVE	1
21	L940xxxx-xxx	LABEL, 5-FUNCTION VALVE MODEL/PRESSURE	1

\* - REQUIRED FOR VALVES WITH TUBING CONNECTIONS ONLY.

REFERENCE INFO:  
 FPP = GLASS FILLED POLYPROPYLENE.  
 PVD = POLYVINYLIDENE FLUORIDE.  
 TFE = POLYTETRAFLUOROETHYLENE.  
 PVC = POLYVINYLCHLORIDE.

pt.#L9403700-000;  
 REV.: E07.