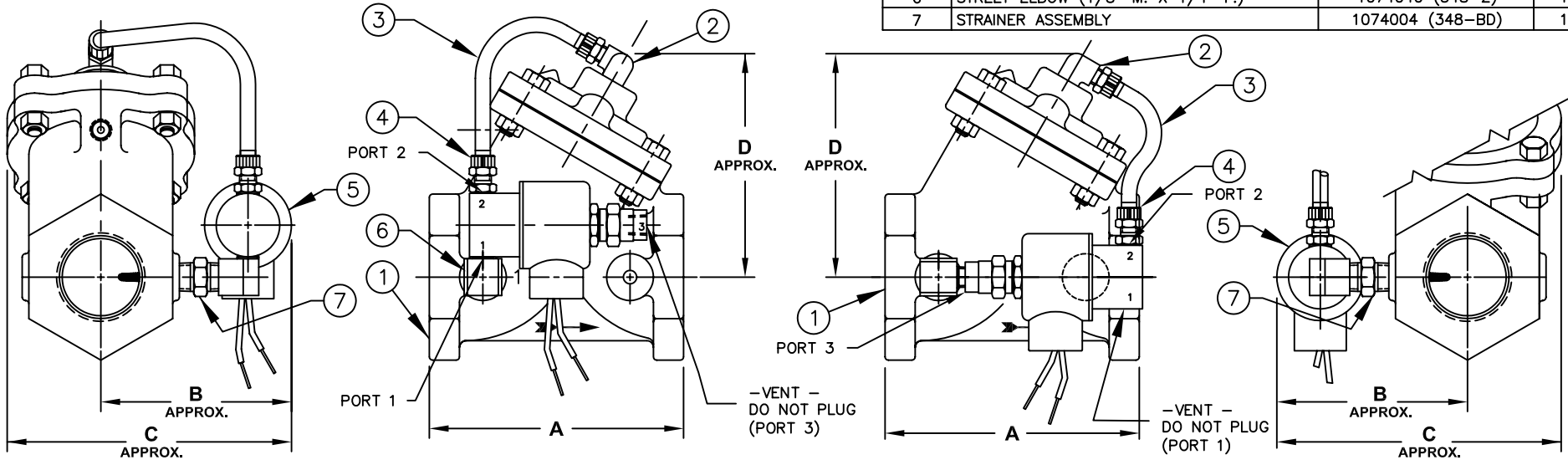


**NOTE:**

1. LENGTH OF TUBING VARIES WITH EACH SIZE OF DIAPHRAGM VALVE.
2. B.S.P.T. AVAILABLE UPON REQUEST.
3. DIAPHRAGM VALVE IS NORMALLY OPEN, PRESSURE TO CLOSE
4. BOSS NO. 1 ON VALVE TAPPED 1/4" N.P.T.
5. DRY DRAIN OPTION - VENT PORT OF SOLENOID IS CONNECTED TO DOWNSTREAM SIDE OF VALVE.

ITEM	DESCRIPTION	PART NO.	QTY.	
1	DIAPHRAGM VALVE - NORMALLY OPEN		1	
2	ELBOW (1/4" M. X 1/4" TUBING)	1078766	1	
3	TUBING - 1/4" O.D. (SEE NOTE)	1071936 (PTP-0005)	1	
4	TUBING COUPLING (1/8" M. X 1/4" TUBING)	1074003 (348-BC)	1	
5	SOLENOID (NEMA 1 ENCLOSURE)	110 V. 60 HZ.	1070652 (C4H470)	1
		220 V. 50 HZ.	1070648 (C4BM1150V)	
		24 V. 60 HZ.	1070649 (C4BM1150W)	
		12 VDC	1070650 (C4BM115012V)	
		24 VDC	1070651 (C4BM115024DC)	
6	STREET ELBOW (1/8" M. X 1/4" F.)	1074040 (348-Z)	1	
7	STRAINER ASSEMBLY	1074004 (348-BD)	1	



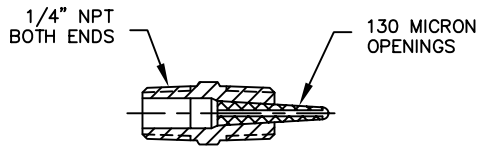
**ENERGIZED TO CLOSE**

**SOLENOID ENERGIZED.**

UPSTREAM PRESSURE, FROM SOLENOID PORT 1 TO PORT 2, IS APPLIED TO UPPER DIAPHRAGM CHAMBER TO CLOSE THE DIAPHRAGM VALVE.

**SOLENOID DE-ENERGIZED.**

PRESSURE FROM UPPER DIAPHRAGM CHAMBER IS VENTED, THROUGH SOLENOID PORT 2 TO PORT 3 TO DRAIN. UPSTREAM PRESSURE OPENS THE DIAPHRAGM VALVE.



**STRAINER ASSEMBLY**

VALVE SERIES	PIPE SIZE	A	B	C	D
V42B	3/4"	3.69	3.25	4.63	3.81
		93.7	82.5	117.5	96.8
V42C	1"	3.69	3.25	4.63	3.81
		93.7	82.5	117.5	96.8
V42D	1-1/4"	4.75	3.56	5.31	4.56
		120.6	90.5	134.9	115.9
V42E	1-1/2"	4.75	3.56	5.31	4.56
		120.6	90.5	134.9	115.9
V42F	2"	6.62	3.94	6.63	5.94
		168.3	100.0	168.3	150.8
V42G	2"	7.38	4.19	7.25	6.25
		187.3	106.4	184.2	158.8
V42H	2-1/2"	7.38	4.19	7.25	6.25
		187.3	106.4	184.2	158.8
V42J	3" THREADED	9.00	4.63	8.25	7.00
		228.6	117.6	209.5	177.8
V42J	3" FLANGED	10.62	4.63	8.25	7.00
		269.9	117.6	209.5	177.8
V42K	4"	11.75	5.13	9.50	8.75
		298.5	130.3	241.3	222.3

**ENERGIZED TO OPEN**

**SOLENOID DE-ENERGIZED.**

UPSTREAM PRESSURE, FROM SOLENOID PORT 3 TO PORT 2, IS APPLIED TO UPPER DIAPHRAGM CHAMBER TO CLOSE THE DIAPHRAGM VALVE.

**SOLENOID ENERGIZED.**

PRESSURE FROM UPPER DIAPHRAGM CHAMBER IS VENTED, THROUGH SOLENOID PORT 2 TO PORT 1 TO DRAIN. UPSTREAM PRESSURE OPENS THE DIAPHRAGM VALVE.

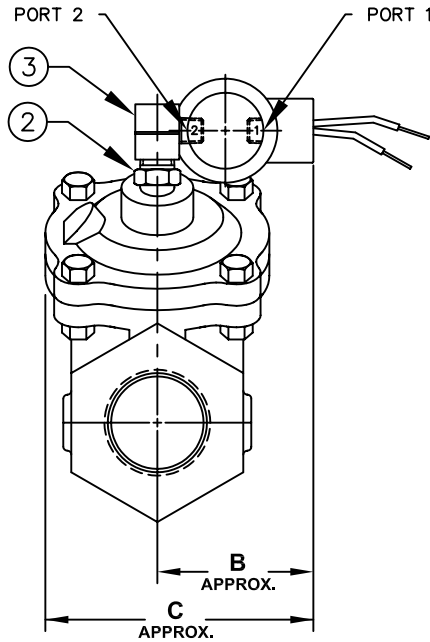
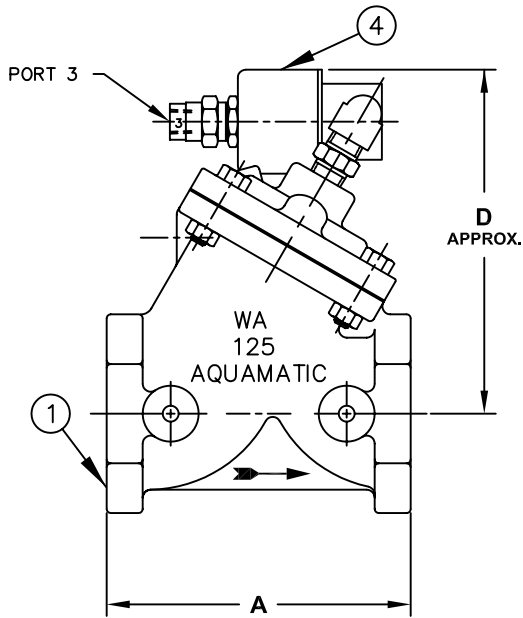
FORM NO. 1078113

REV	DESCRIPTION	ECO	DWN	DATE	APVD
C	ITEM NO. 2 WAS P/N 1081627 (510-BFX)	NONE	MSM	22AUG03	
REV	DESCRIPTION	ECO	DWN	DATE	APVD
		20580 Enterprise Avenue Brookfield, WI 53045 888.784.9065 www.Pentairwatertreatment.com			
<b>SERIES 420 DIAPHRAGM VALVES</b> <b>SOLENOID OPERATED VALVES</b>					
SCALE	DRAWN	DATE	DWG. NO.		
N/A	JWB	31MAY01	1078114		

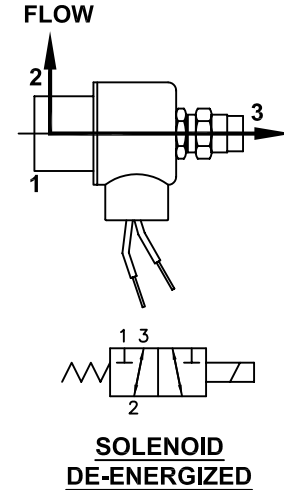
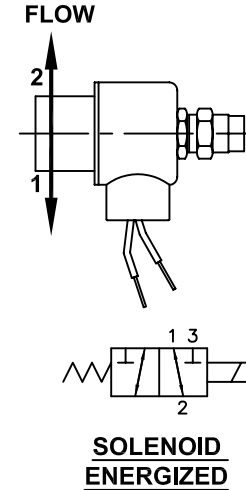
IN.  
MM

# SOLENOID OPERATED DIAPHRAGM VALVES

- NOTE:
1. B.S.P.T. AVAILABLE UPON REQUEST.
  2. DIAPHRAGM VALVE IS NORMALLY OPEN.



ITEM	DESCRIPTION	PART NO.	QTY.	
1	DIAPHRAGM VALVE - NORMALLY OPEN		1	
2	NIPPLE (1/4" HEX)	1081648 (510-CM)	1	
3	STREET ELBOW (1/4" F. X 1/8" M.)	1074040 (348-Z)	1	
4	SOLENOID (NEMA 1 ENCLOSURE)	110 V. 60 HZ.	1070652 (C4H470)	1
		220 V. 50 HZ.	1070648 (C4BM1150V)	
		24 V. 60 HZ.	1070649 (C4BM1150VV)	
		12 VDC	1070650 (C4BM115012V)	
		24 VDC	1070651 (C4BM115024DC)	



## INDEPENDENT CONTROL PRESSURE

### ENERGIZE TO OPEN

APPLY CONTROL PRESSURE AT SOLENOID PORT NO. 3  
(PORT NO. 1 VENTED)

### ENERGIZE TO CLOSE

APPLY CONTROL PRESSURE AT SOLENOID PORT NO. 1  
(PORT NO. 3 VENTED)

CONTROL PRESSURE MUST BE EQUAL TO OR GREATER  
THAN LINE PRESSURE.

VALVE SERIES	PIPE SIZE	A	B	C	D
V42B	3/4"	3.69	2.44	3.81	4.63
		93.7	91.9	96.8	117.5
V42C	1"	3.69	2.44	3.81	4.63
		93.7	91.9	96.8	96.8
V42D	1-1/4"	4.75	2.44	4.19	5.38
		120.6	91.9	106.4	136.5
V42E	1-1/2"	4.75	2.44	4.19	5.38
		120.6	91.9	106.4	136.5
V42F	2"	6.63	2.69	5.38	6.75
		168.3	68.3	136.5	171.5
V42G	2"	7.38	3.06	6.13	7.06
		187.3	77.7	155.6	179.4
V42H	2-1/2"	7.38	3.06	6.13	7.06
		187.3	77.7	155.6	179.4
V42J	3" THREADED	9.00	3.63	7.25	7.81
		228.6	92.1	184.1	198.4
V42J	3" FLANGED	10.63	3.63	7.25	7.81
		269.9	92.1	184.1	198.4
V42K	4"	11.75	4.44	8.75	9.56
		298.5	111.1	222.3	242.9

CURRENT DRAIN (AMPERES)		
VOLTAGE	INRUSH	HOLDING
24V 60Hz	1.1	0.65
120V 60Hz	0.2	0.1
220V 50Hz	0.1	0.07
12 VDC	—	0.6
24 VDC	—	0.3

FORM NO. 1078113

C	ITEM NO. 2 WAS P/N 1081627 (510-BFX)	NONE	MSM	22AUG03	
REV	DESCRIPTION	ECO	DWN	DATE	APVD
		20580 Enterprise Avenue Brookfield, WI 53045 888.784.9065 www.Pentairwatertreatment.com			
<b>SERIES 420 DIAPHRAGM VALVES</b> <b>SOLENOID OPERATED VALVES</b>					
SCALE N/A	DRAWN JWB	DATE 31MAY01	DWG. NO. 1078114		