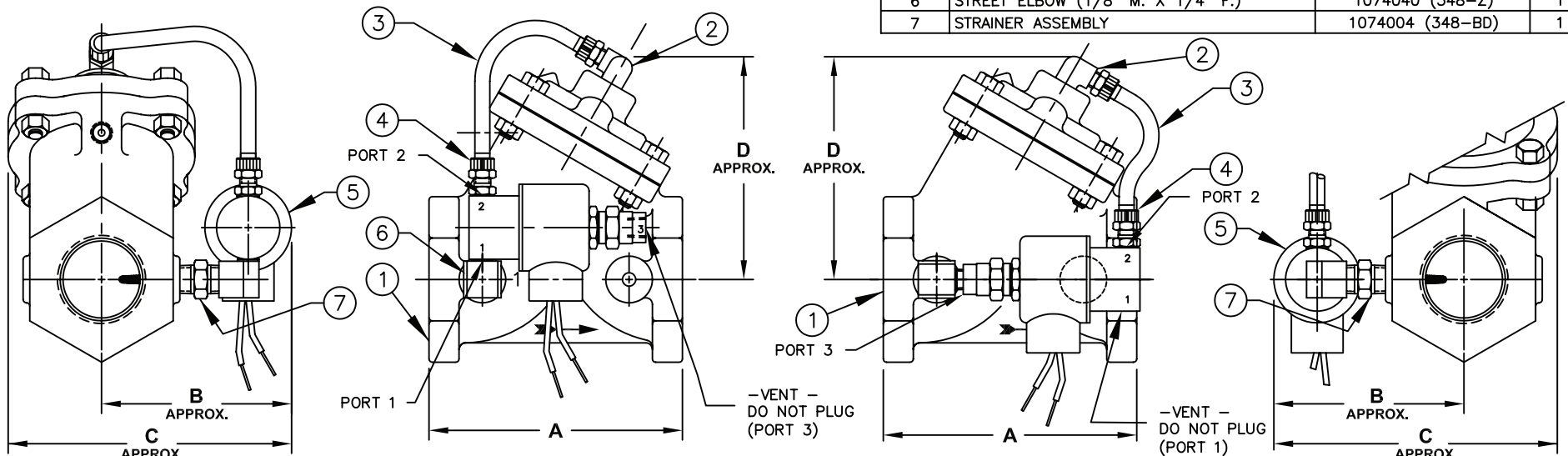


SOLENOID OPERATED DIAPHRAGM VALVES

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 (C4BM1150VV) | |
| | | 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.

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

| 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 |

1/4" NPT BOTH ENDS
130 MICRON OPENINGS



STRAINER ASSEMBLY

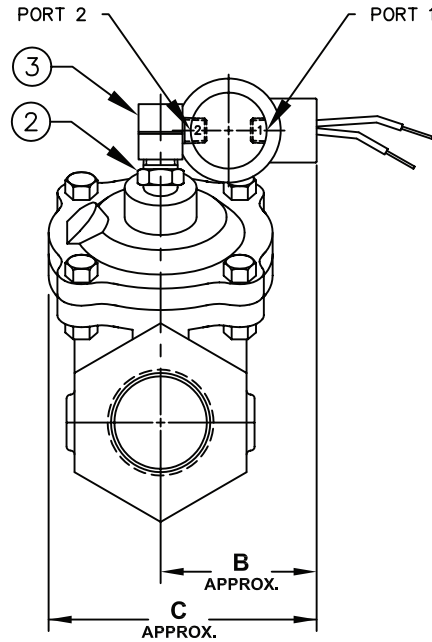
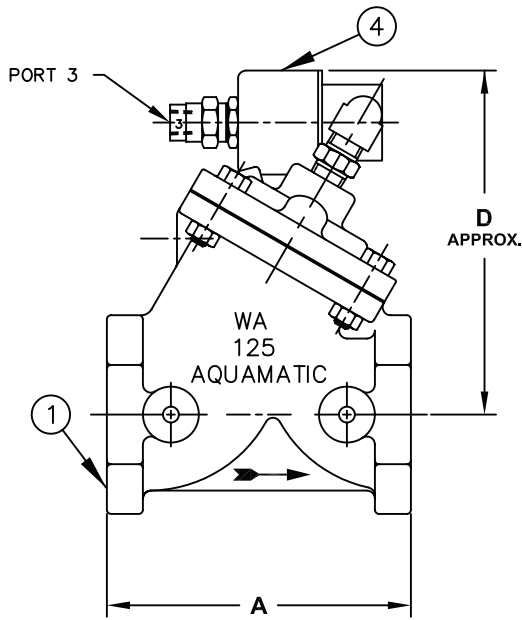
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| | | | | | |
|---|--------------------------------------|---------|----------|---------|------|
| C | ITEM NO. 2 WAS P/N 1081627 (510-BFX) | NONE | MSM | 22AUG03 | |
| REV | DESCRIPTION | ECO | DWN | DATE | APVD |
| | | | | | |
| SERIES 420 DIAPHRAGM VALVES SOLENOID OPERATED VALVES | | | | | |
| SCALE | DRAWN | DATE | DWG. NO. | | |
| N/A | JWB | 31MAY01 | 1078114 | | |

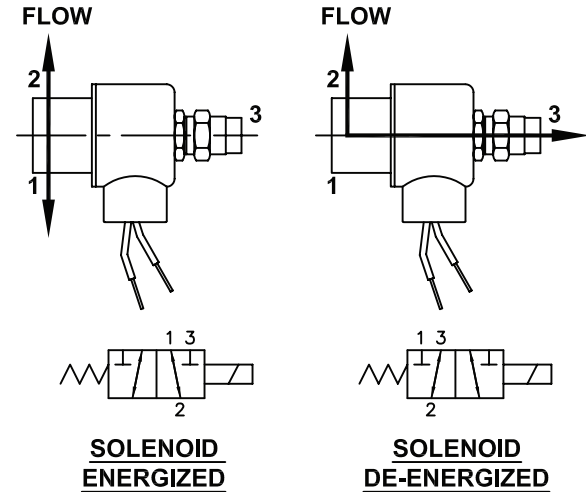
SOLENOID OPERATED DIAPHRAGM VALVES

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 (C4BM1150V) | |
| | | 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.

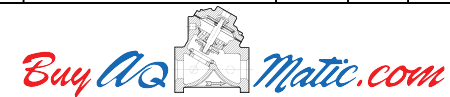
| VALVE SERIES | PIPE SIZE | A | B | C | D |
|--------------|----------------|-------|-------|-------|-------|
| V42B | 3/4" | 3.69 | 2.44 | 3.81 | 4.63 |
| | | 93.7 | 91.9 | 96.8 | 117.5 |
| V42C | 1" | 3.69 | 2.44 | 3.81 | 4.63 |
| | | 93.7 | 91.9 | 96.8 | 96.8 |
| V42D | 1-1/4" | 4.75 | 2.44 | 4.19 | 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 |

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MM



SERIES 420 DIAPHRAGM VALVES
SOLENOID OPERATED VALVES

| SCALE | DRAWN | DATE | DWG. NO. |
|-------|-------|---------|----------|
| N/A | JWB | 31MAY01 | 1078114 |