

Osmonics®

AquaMatic® V42 Series Product Specifications Solenoid Operated Valves



AquaMatic® brand diaphragm valves are equipped with a three-way solenoid for direct or remote control. The solenoid can be actuated by a timer, pressure or temperature sensor or liquid-level switch. These valves are ideal for automated process systems.

■ Features and Options

- **Lowest Pressure Loss**.....The unique AquaMatic® Y-pattern diaphragm valve design, with large seat opening and high lift disc permits higher flow rates at lower pressure loss than other comparable valves.
- **Cost-Effective Design**.....The AquaMatic® valve is a cost-effective solution in initial purchase price as well as in lifetime maintenance. All components can be serviced while the valve is in-line.
- **Durable**.....The AquaMatic® valve features cast iron, brass, stainless steel, and nitrile elastomer components. The valve features an average life of three years or longer depending upon cycling rate and environment.
- **Pipe Sizes**.....3/4-inch through 3-inch threaded (N.P.T. or B.S.P.); 3-inch through 4-inch flanged drilled in accordance with ASA16.1 class 125, or BSP4504.
- **Design/Application Engineering Service**
- **Optional Spring Assist**
- **Adaptable to Wide Variety of Control Devices**
- **Optional All Stainless Internals**
- **Optional Adjustable Flow Rate Control**

Options

- Spring assist closed, spring assist open, limit stop, optional seal and diaphragm materials for special application, stainless steel internal parts.

■ Operating Specifications

- Working Pressure125 PSI (8.6 bars)
- Maximum Temperature150°F (65°C)

■ Typical Applications

In addition to the water treatment process systems, the valves are used in wide variety of applications. Some of the typical applications are:

- Concrete Additive
- Fuel Handling
- Process Water Systems
- Air Control Systems
- Agricultural Irrigation
- Cooling Towers
- Dust Suppression
- Turf Irrigation
- Level Control Systems
- Laundry Equipment
- Pump Controls
- Car Wash Systems
- Conveyor Systems

■ Valve Operation

The AquaMatic® diaphragm valve is a normally open valve, controlled by a 3-way universal solenoid, supplied as a complete assembly.

Three basic models are available: energized to open, energized to close and independent control pressure. Principle of operation for the three models are:

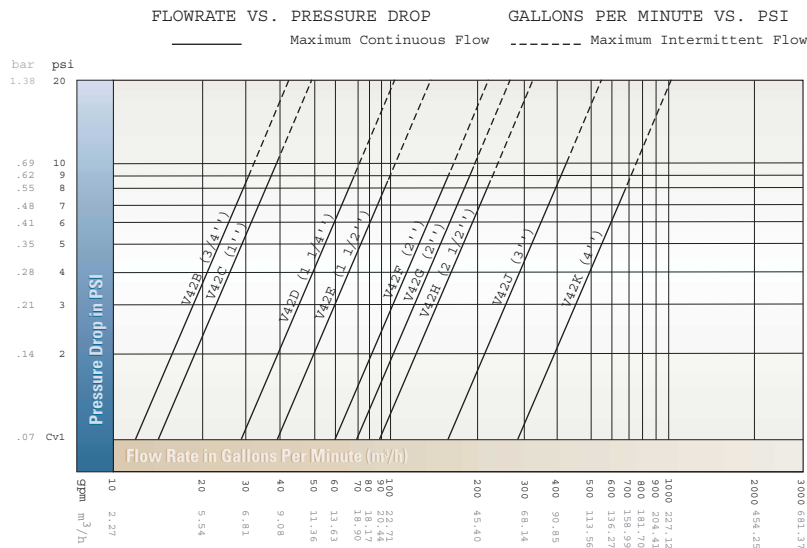
- **Energized to Open**.....Line pressure is directed through the solenoid to the upper diaphragm chamber, closing the valve. Activating the solenoid, vents the upper diaphragm chamber allowing the valve to open.
- **Energized to Close**.....Line pressure is directed through the solenoid to upper diaphragm chamber, closing the valve. Deactivating the solenoid vents the upper diaphragm chamber allowing the valve to open.
- **Independent Control Pressure**An independent source of pressure is used, through the solenoid, to control the diaphragm valve.

■ Dimensions for V42 Valves

Pipe Size	Valve Series	Cv*	Units	Dimensions (Approximate)			
				A	B	C	D
3/4"	V42B	11.4	inches	3.69	3.25	4.63	3.81
			mm	93.7	82.5	117.5	96.8
1"	V42C	12.8	inches	3.69	3.25	4.63	3.81
			mm	93.7	82.5	117.5	96.8
1 1/4"	V42D	26.5	inches	4.75	3.56	5.31	4.56
			mm	120.6	90.5	134.9	115.9
1 1/2"	V42E	32.5	inches	4.75	3.56	5.31	4.56
			mm	120.6	90.5	134.9	115.9
2"	V42F	5.6	inches	6.62	3.94	6.63	5.94
			mm	168.3	100.0	168.3	150.8
2"	V42G	6.8	inches	7.38	4.19	7.25	6.25
			mm	187.3	106.4	184.2	158.8
2 1/2"	V42H	8.4	inches	7.38	4.19	7.25	6.25
			mm	187.3	106.4	184.2	158.8
3" threaded	V42J	13.4	inches	9.00	4.63	8.25	7.00
			mm	228.6	117.6	209.5	177.8
3" flanged	V42J	13.4	inches	10.62	4.63	8.25	7.00
			mm	269.9	117.6	209.5	177.8
4"	V42K	27.5	inches	11.75	5.13	9.50	8.75
			mm	298.5	130.3	241.3	222.3

* Cv = Flowrate (gal/minute) of water at 60°F (15.5°C) at a 1 psi pressure drop.
Litres/minute = gal/minute x 3.78.

■ Flow Thru Metal Diaphragm Valves



For More Information:

Call **Osmonics** at **(815) 964-9421** or **(800) 245-9421**, or visit **www.osmonics.com**



OSMONICS

North American Sales

2412 Grant Avenue
Rockford, IL
61103-3991
USA
(815) 964-9421 Phone
(815) 964-4449 Fax

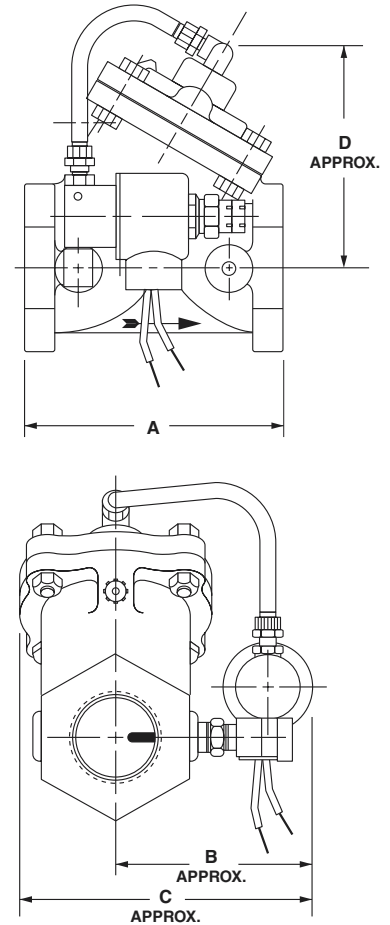
Euro/Africa Operations

230 rue Robert Schurman
ZA des Uselles
F-77350 Le Mée sur Seine
FRANCE
+33 1 64 10 2000 Phone
+33 1 64 10 3747 Fax

Asia/Pacific Operations

1044/8 SOI 44/2
Sukhumvit Road Parkanog
Bangkok 10110
THAILAND
+66 2 38 14213 Phone
+66 2 39 18183 Fax

■ Standard Valves (Models V42B-V42K)



■ 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