



GE Water & Process Technologies

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:

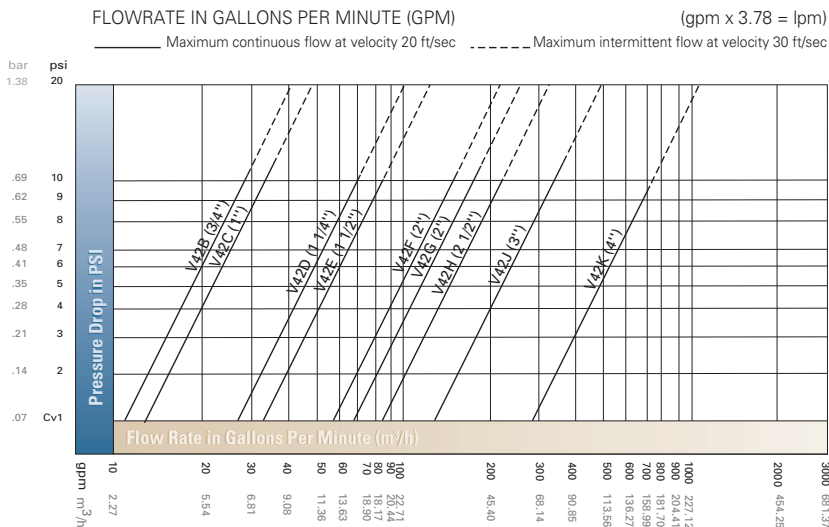
- **Energized to Open**.....Line pressure is directed through the solenoid to the upper diaphragm chamber, closing the valve. Activating the solenoid vents the upper diaphragm chamber, allowing the valve to open.
- **Energized to Close**.....Line pressure is directed through the solenoid to upper diaphragm 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

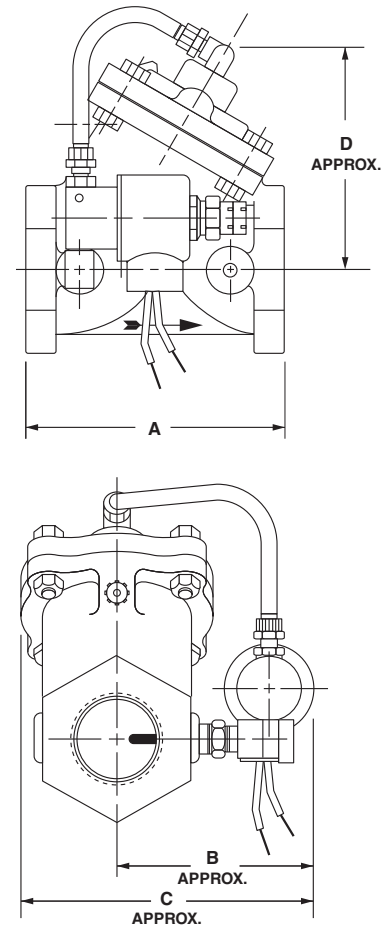
Pipe Size	Valve Series	Cv*	Units	Dimensions (Approximate)			
				A	B	C	D
3/4"	V42B	11.4	inches	3.69	3.25	4.63	3.81
			mm	93.7	82.5	117.5	96.8
1"	V42C	12.8	inches	3.69	3.25	4.63	3.81
			mm	93.7	82.5	117.5	96.8
1 1/4"	V42D	26.5	inches	4.75	3.56	5.31	4.56
			mm	120.6	90.5	134.9	115.9
1 1/2"	V42E	32.5	inches	4.75	3.56	5.31	4.56
			mm	120.6	90.5	134.9	115.9
2"	V42F	56	inches	6.62	3.94	6.63	5.94
			mm	168.3	100.0	168.3	150.8
2"	V42G	68	inches	7.38	4.19	7.25	6.25
			mm	187.3	106.4	184.2	158.8
2 1/2"	V42H	84	inches	7.38	4.19	7.25	6.25
			mm	187.3	106.4	184.2	158.8
3" threaded	V42J	134	inches	9.00	4.63	8.25	7.00
			mm	228.6	117.6	209.5	177.8
3" flanged	V42J	134	inches	10.62	4.63	8.25	7.00
			mm	269.9	117.6	209.5	177.8
4"	V42K	275	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



■ 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

For More Information:

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