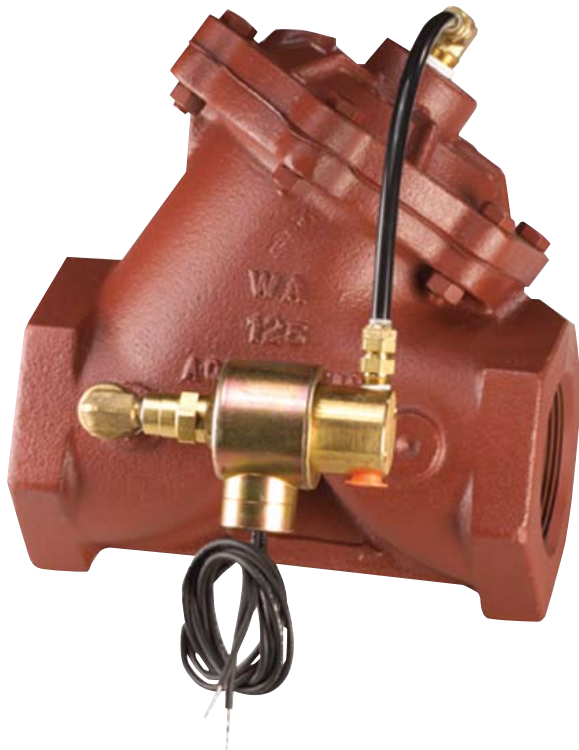


# AquaMatic<sup>®</sup> Diaphragm Valves

V42 Series



AquaMatic Series Diaphragm Valves are equipped with a 3-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.

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

## Typical Applications

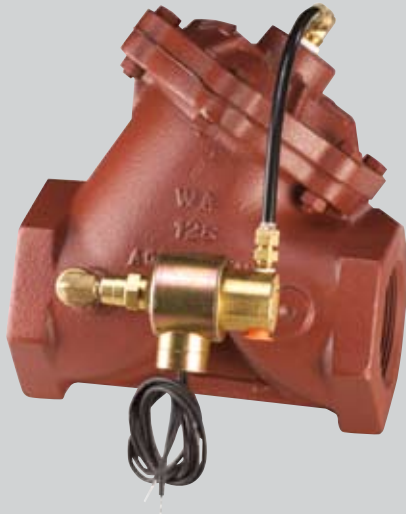
- Concrete Additive
- Agricultural Irrigation
- Turf Irrigation
- Pump Controls
- Fuel Handling
- Cooling Towers
- Level Control Systems
- Car Wash Systems
- Process Water Systems
- Laundry Equipment
- Conveyor Systems
- Air Control Systems
- Dust Suppression



**AquaMatic**  
Pentair Water

# AquaMatic® Diaphragm Valves

V42 Series



## Features and Benefits

- Low Pressure Loss –**  
 The unique AquaMatic Diaphragm Valve's y-pattern design, with large seat opening and high lift disc, permits higher flow rates at lower pressure loss than other comparable valves.
- Durable –** The AquaMatic V42 Valve features cast iron, brass, stainless steel, and nitrile elastomer components. The valve features an average life of 3 years or longer depending upon cycling rate and environment.
- Cost-Effective Design –**  
 The AquaMatic V42 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.
- Pipe Sizes –** 3/4- to 3-inch threaded (NPT or BSP); 3- to 4-inch flanged drilled in accordance with ASA16.1 class 125, or BSP4504.
- Adaptable to a Wide Variety of Control Devices**
- Design/Application Engineering Service**

## Options

- Spring-assist closed
- Spring-assist open
- Limit stop
- Adjustable flow rate control
- Seal and diaphragm materials for special applications

## Operating Specifications

Working Pressure	125 psi (8.6 bar)
Maximum Temperature	150°F (65°C)
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.

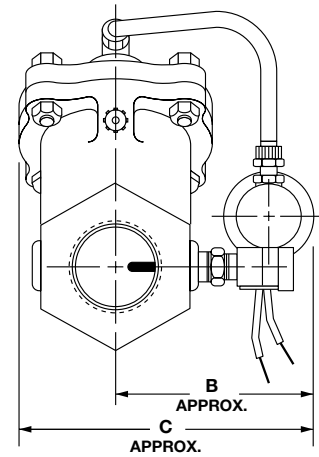
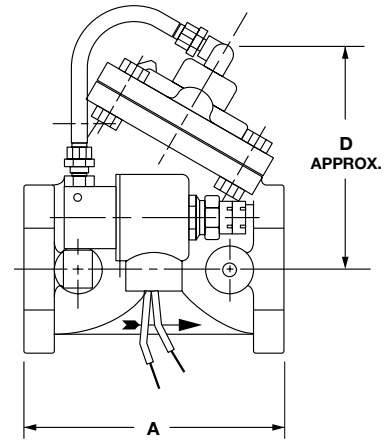


## Dimensions for V42 Series Valves

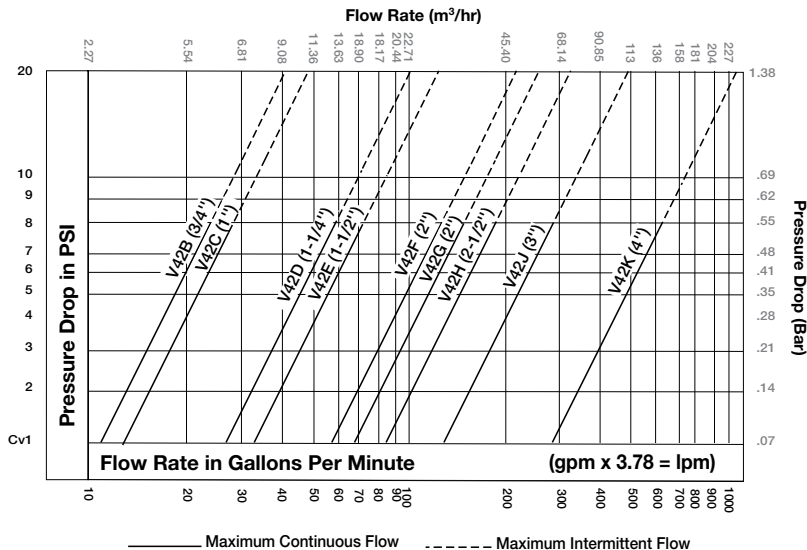
Valve Series	Pipe Size	Cv*	Units	Dimensions (Approximate)			
				A	B	C	D
V42B	3/4"	11.4	inches mm	3.69 93.7	3.25 82.5	4.63 117.5	3.81 96.8
V42C	1"	12.8	inches mm	3.69 93.7	3.25 82.5	4.63 117.5	3.81 96.8
V42D	1-1/4"	26.5	inches mm	4.75 120.6	3.56 90.5	5.31 134.9	4.56 115.9
V42E	1 1/2"	32.5	inches mm	4.75 120.6	3.56 90.5	5.31 134.9	4.56 115.9
V42F	2"	56	inches mm	6.62 168.3	3.94 100.0	6.63 168.3	5.94 150.8
V42G	2"	68	inches mm	7.38 187.3	4.19 106.4	7.25 184.2	6.25 158.8
V42H	2 1/2"	84	inches mm	7.38 187.3	4.19 106.4	7.25 184.2	6.25 158.8
V42J	3" threaded	134	inches mm	9.00 228.6	4.63 117.6	8.25 209.5	7.00 177.8
V42J	3" flanged	134	inches mm	10.62 269.9	4.63 117.6	8.25 209.5	7.00 177.8
V42K	4"	275	inches mm	11.75 298.5	5.13 130.3	9.50 241.3	8.75 222.3

\* 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.

## Standard Valves (Models V42B-V24K)



## Performance - Flow Rate Characteristics



## Current Drain (Amperes)

Voltage	Inrush	Holding
24V 60 Hz	1.1	0.65
120V 60 Hz	0.2	0.1
220V 50Hz	0.1	0.07
12 VDC	—	0.6
24 VDC	—	0.3



**AquaMatic**  
Pentair Water



**Pentair  
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