

AquaMatic[®] 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

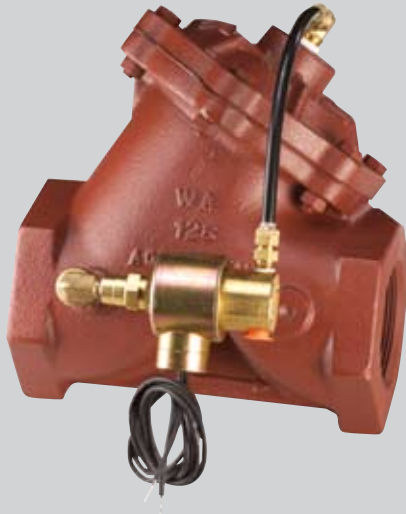
- Concrete Additive
- Agricultural Irrigation
- Turf Irrigation
- Pump Controls
- Fuel Handling
- Cooling Towers
- Level Control Systems
- Car Wash Systems
- Process Water Systems
- Laundry Equipment
- Conveyor Systems
- Air Control Systems
- Dust Suppression



AquaMatic
Pentair Water

AquaMatic® Diaphragm Valves

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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. |

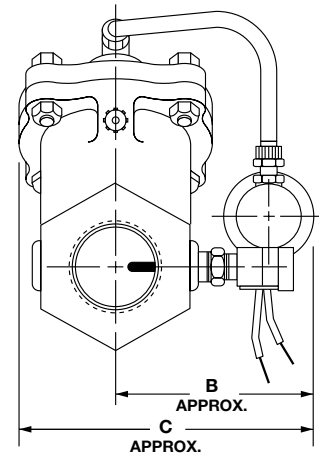
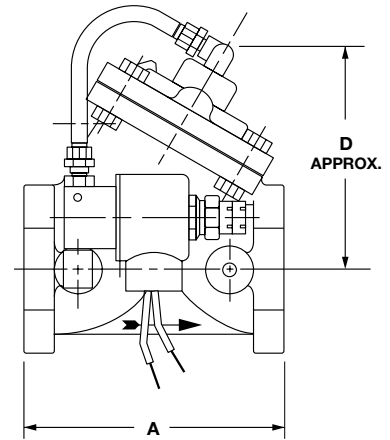


Dimensions for V42 Series Valves

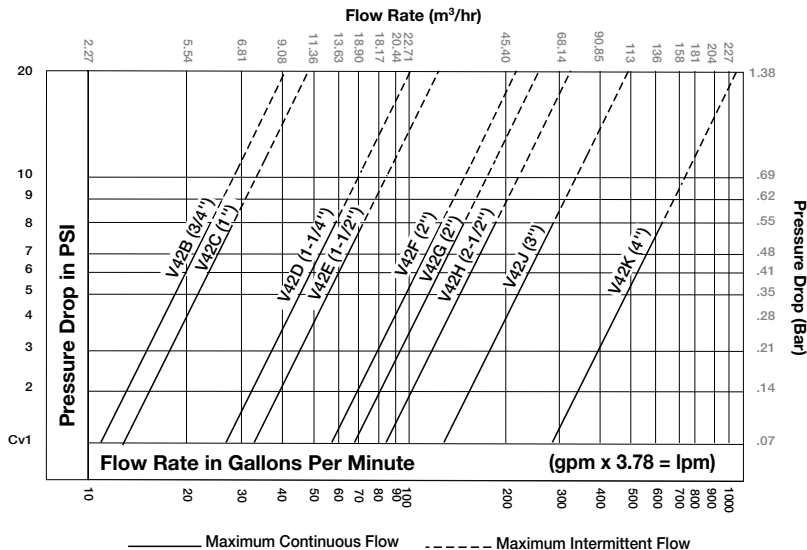
| Valve Series | Pipe Size | Cv* | Units | Dimensions (Approximate) | | | |
|--------------|----------------|------|--------------|--------------------------|---------------|---------------|---------------|
| | | | | A | B | C | D |
| V42B | 3/4" | 11.4 | inches mm | 3.69 93.7 | 3.25 82.5 | 4.63 117.5 | 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 |



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