

# AquaMatic® Composite Control Valves

## K52 Series



AquaMatic K52 Series Composite Control Valves are designed to handle deionized water as well as acids, caustic, harsh chemicals or gases that would rapidly corrode metal valves. The valves are constructed of corrosion-resistant materials, but still have all of the advantages of the unparalleled AquaMatic metal body valve design. The K52 Series Valve body and cap are molded with glass-filled thermoplastic.

### Typical Applications

- Water Treatment Systems
- Deionizers
- Chemical Injection
- Desalinization
- Evaporation
- Metal Recovery Systems
- Process Water Systems
- Mining Wastes
- Level Control Systems
- Fertilizer Spray Equipment
- Electronic Industry
- Detergent and Bleach Handling



# AquaMatic® Composite Control Valves

K52 Series



## Options

- Adjustable flow rate control
- Seal and diaphragm materials for special applications

## Features and Benefits

- **Low Pressure Loss** – Y-pattern diaphragm valve, with large seat opening and high lift disc permits higher flow rates at lower pressure loss than other comparable valves.
- **Positive Control** – Separate flow and control chambers permit positive closing without springs; and only nominal cost for spring assist opening for low-pressure and self-draining applications.
- **Cost-Effective Design** – The K52 Series 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.
- **Separate Diaphragm Chambers** – Separate diaphragm chambers protect the valve diaphragm from the flow stream. This allows the diaphragm to be replaced without disrupting service.
- **Long Diaphragm Life** – Pre-formed, stress-relieved diaphragm minimizes fatigue, maximizes valve responsiveness and diaphragm lifetime.
- **Corrosion Resistant** – All internal parts in contact with media are made of composite materials.\* Seals are ethylene propylene for better chemical resistance.\*\*
- **Pipe Sizes** – K52 Series Valves are available in four different sizes, from 1/2- to 2-1/2-inch. A variety of available end connectors makes the valve compatible for 3/8- to 3-inch pipe sizes.
- **Adaptable to a Wide Variety of Control Devices**
- **Design/Application Engineering Service**

\* Normally closed valve configurations are **NOT** recommended when used with corrosive fluids.

\*\*Valves are **NOT** recommended for use with any aromatic, hydrocarbon-based media.

## Operating Specifications

Maximum Pressure	125 psi (8.6 bar)
Maximum Temperature	140°F (60°C)
Operation	The K52 Series Valve is closed by introducing either hydraulic or pneumatic pressure to the upper diaphragm chamber. The control pressure must be equal to or greater than the line pressure. The valve is opened by relieving the pressure from the upper diaphragm chamber. The line pressure under the seat will then open the valve. The unique AquaMatic y-pattern design minimizes pressure loss in the valve.



### Available Valve Options

- Normally Open (Standard)
- Normally Closed\*
- Spring-Assist Closed
- Spring-Assist Open
- Limit Stop Flow Control
- Position Indicator

### Ordering Information

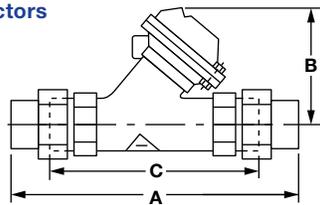
When ordering AquaMatic K52 Series Valves, please specify:

- Valve Size
- Valve Options
- Working Pressure and Temperature
- Type of End Connections

\* Normally closed valve configurations are **NOT** recommended when used with corrosive fluids.

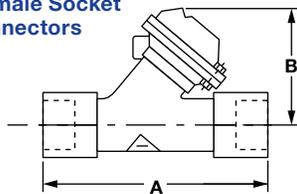
### Dimensions for K52 Series Valves

#### Valve with Union End Connectors



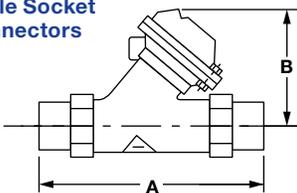
Valve Model	Pipe Size	Units	A	B	C
K520	1/2"	inches mm	7.00 177.8	2.62 66.5	4.87 123.7
K521	1"	inches mm	9.00 228.6	4.06 103.1	6.31 160.3
K524	1-1/2"	inches mm	12.50 317.5	5.06 128.5	9.31 135.0

#### Valve with Female Socket Weld End Connectors



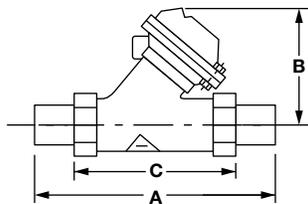
Valve Model	Pipe Size	Units	A	B
K524	2"	inches mm	10.50 266.7	5.06 128.5
K526	2-1/2"	inches mm	15.00 381.0	7.31 185.7

#### Valve with Male Socket Weld End Connectors



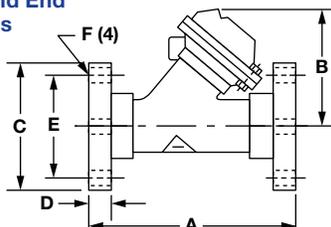
Valve Model	Pipe Size	Units	A	B
K524	2"	inches mm	10.50 266.7	5.06 128.5
K526	2-1/2"	inches mm	15.00 381.0	7.31 185.7

#### Valve with Grooved Adaptor Connectors



Valve Model	Pipe Size	Units	A	B	C
K520	1/2"	inches mm	7.00 177.8	2.62 66.5	3.93 99.8
K521	1"	inches mm	9.00 228.6	4.06 103.1	4.50 114.3
K524	1-1/2"	inches mm	12.50 336.5	5.06 128.5	7.75 196.8

#### Valve with Flanged Socket Weld End Connectors

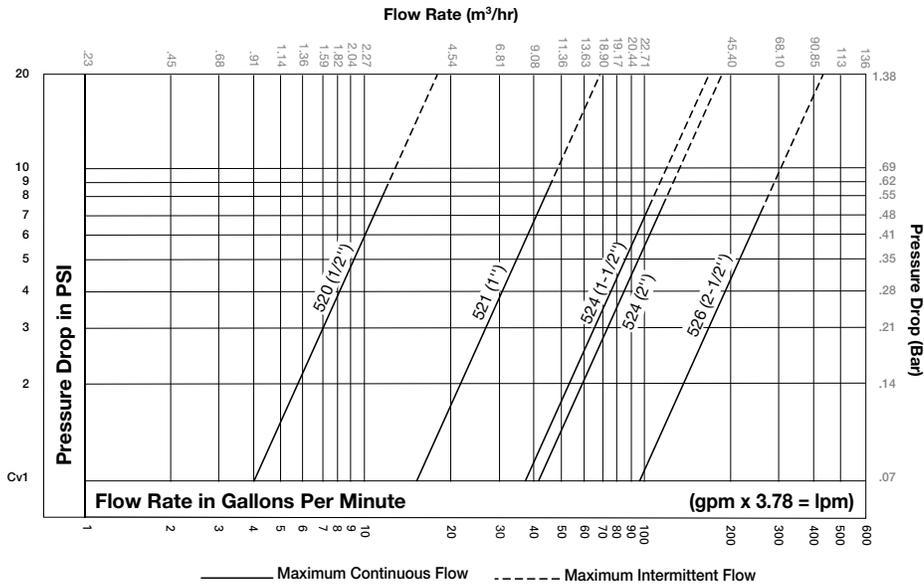


Valve Model	Pipe Size	Units	A	B	C	D	E	F
K524	2"	inches mm	9.00 226.6	5.06 128.5	6.00 152.4	.75 19.05	4.750 120.85	.688 174.8
K525	2-1/2"	inches mm	11.37 288.8	7.31 185.7	6.94 176.3	.94 23.9	5.50 139.7	6.88 174.8
K526	3"	inches mm	12.37 314.2	7.31 185.7	7.38 187.5	1.81 45.9	6.000 152.4	.750 19.05

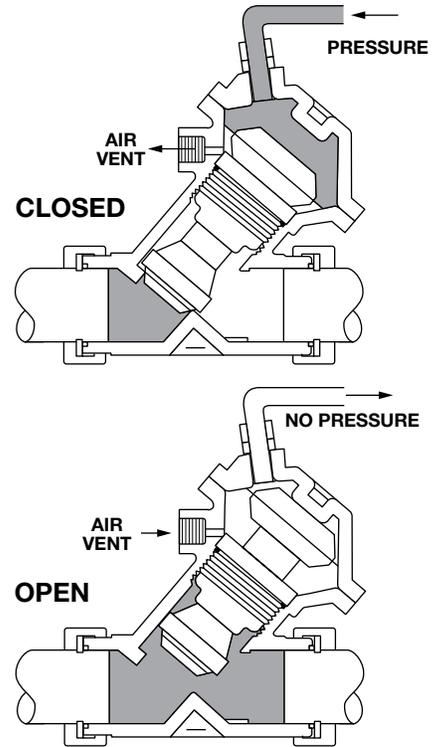


**AquaMatic**  
Pentair Water

## Performance – Flow Rate Characteristics



\*Cv = Flow rate in GPM of water @ 60°F (15.5°C) @ 1 psi (.069 bar) drop.



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 1229846 Rev F DE09

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