

# AquaMatic® Control Valves

## K53 Series



The rugged AquaMatic K53 Series Control Valves are designed to handle deionized water as well as acids, caustic and harsh chemicals or gases that would rapidly corrode metal valves. These valves, constructed of corrosion resistant materials, have all the advantages of the AquaMatic K52 Series Composite Valves. In addition, K53 Series Valves boast a number of additional added features. The valve body and cap are molded from glass-filled thermoplastic.

### Typical Applications

- Water Treatment Systems
- Deionizers
- Chemical Injection
- Desalinization Systems
- Evaporators
- Metal Recovery Systems
- Process Water Systems
- Mining Waste Systems
- Level Control Systems
- Fertilizer Spray Equipment
- Electronics Industry
- Detergent and Bleach Handling



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## Features and Benefits

- **Dual Shaft Seals** – Two dynamic o-rings on the shaft, with a vent in between the o-rings, to prevent damage to the diaphragm.
- **Union End Connectors** – Female socket weld connectors for easy installation and the ability to remove the valve without disrupting the service piping.
- **Mounting Pads** – Valve bodies provided with molded pads that can be used to support the piping manifold.
- **Position Indicator and Limit Stop** – Fully adjustable limit stop from full-open to full-closed, with a position indicator to show the valve position.
- **Cap Retaining Design** – Cap held by a retaining ring, eliminating screws and nuts. No external metal parts to corrode in aggressive environment.

## Standard Diaphragm Valve

- **Low Pressure Loss** – Unique 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.
- **Positive Control** – Separate flow and control chambers permit positive closing without springs; spring assist option for low-pressure and self-draining applications is available.
- **Cost-Effective** – Design is a cost-effective solution when considering initial purchase price as well as lifetime maintenance. All components can be serviced while the valve is in-line.
- **Long Diaphragm Life** – Pre-formed, stress relieved diaphragm minimizes fatigue, maximizes valve responsiveness and diaphragm life.
- **Corrosion Resistant** – All internal parts in contact with media are made of composite materials. Seals are ethylene propylene for better chemical resistance.\*
- **Pipe Sizes** – Available in four different sizes, from 1- to 3-inch. A variety of end connectors are available to make the valve compatible in pipe sizes from 3/4- to 3-inch.

\*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	Close 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 y-pattern design minimizes pressure loss in the valve.



### Available Valve Options

- Normally Open (Standard)
- Spring-Assist Closed
- Limit Stop Flow Control
- Externally Normally Closed
- Spring-Assist Open
- Position Indicator and Limit Stop
- Optional Seal Materials

### Ordering Information

When ordering AquaMatic K53 Series Valves, please specify:

- Valve size
- Valve options
- Seal material
- Type of end connections

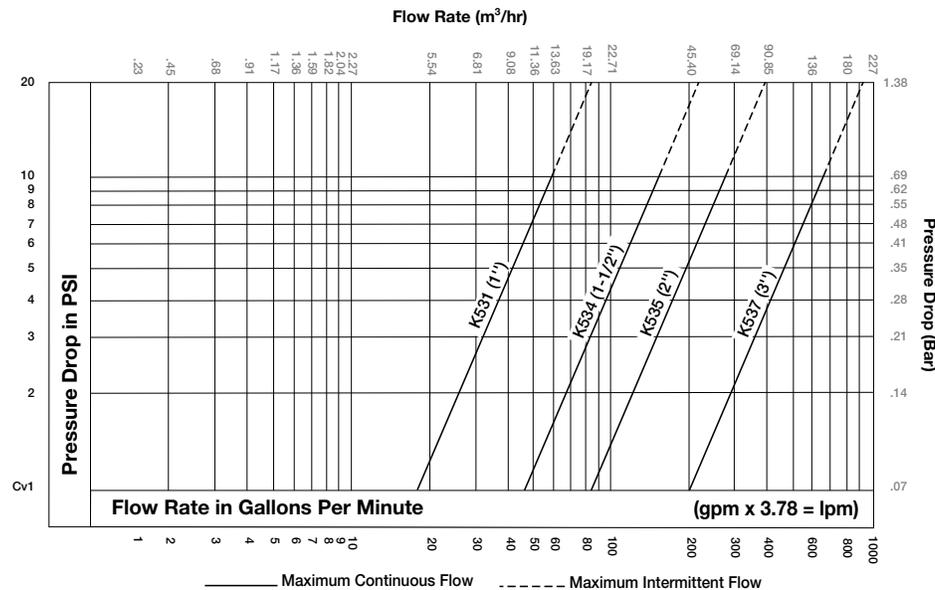
### Dimensions for K530 Series Valves

Valve Model	Pipe Size	Cv <sup>1</sup> (Kv)	Weight (Standard Valve)	Weight (Fail Save Valve)	Unit	A <sup>2</sup>	Dimensions (Approximate)				
							AW	B	B1	C	D
K531	0.75", 1.0"	18.0	1.7 lbs	3.0 lbs	inches	5.75	8.12	6.00	8.62	2.04	1.38
	20, 25mm	(15.6)	0.8 kg	1.4 kg	mm	146	206	152	220	52	35
K534	1.5"	46.0	4.0 lbs	7.5 lbs	inches	8.38	11.00	8.07	13.46	2.62	1.96
	40mm	(39.8)	1.8 kg	3.4 kg	mm	213	279	205	342	67	50
K535	2.0"	84.0	8.0 lbs	15.0 lbs	inches	9.88	12.88	9.12	14.28	3.18	2.18
	50mm	(72.6)	3.6 kg	6.8 kg	mm	251	333	232	363	81	55
K537	3.0"	200.0	11.5 lbs	27.0 lbs	inches	11.13	15.25	11.41	17.06	3.79	2.68
	75mm	(173.0)	5.2 kg	12.3 kg	mm	283	387	290	433	96	68

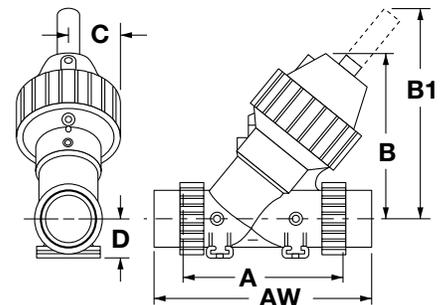
<sup>1</sup> Cv is the flowrate in gallons per minute of water at 60°F at 1 pound pressure drop or (Kv) (flowrate in cubic meters per hour of water at (15.5°C) at 1 bar pressure drop).

<sup>2</sup> The "A" dimension is the distance between face to face seal surfaces.

### Performance – Flow Rate Characteristics



### Standard Valves (Models K531-K537)





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