



# AquaMatic® Stainless Steel Valves

## V46 Series



The AquaMatic V46 Series Stainless Steel Valves are designed to permit higher flow rates than similar-sized diaphragm-operated valves. They are available in 1-, 1-1/2- and 2-inch diameters in threaded or flanged ends. With all stainless steel internals and no internal threads, the V46 is ideally suited for corrosion-resistant applications.

### Typical Applications

- Reverse Osmosis Equipment
- Laundry Equipment
- Corrosive Liquid Handling
- Process Water Systems
- Ozone Generators
- Steam Sterilization
- Bottling Plants
- Chemical Injection
- Deionization Units
- Paper and Pulp
- Condensate Polishers



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V46 Series



#### Options

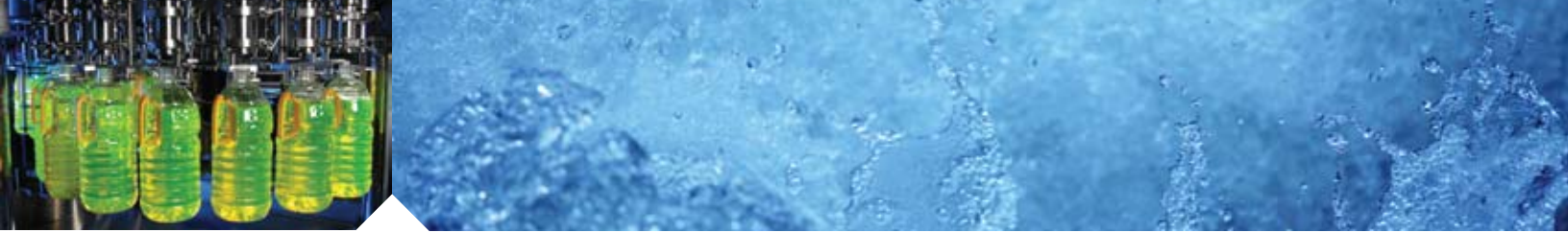
- Spring-assist closed
- Spring-assist open
- Adjustable flow rate control
- Seal and diaphragm materials for special applications
- Position indicator

#### Features and Benefits

- **Low Pressure Loss** – Our unique y-pattern design permits higher flow than other comparably-sized diaphragm operated valves.
- **Positive Control** – Larger diaphragm area compared to seat area permits drip-tight closing without any springs.
- **Cost-Effective** – Diaphragm acts as an actuator, eliminating the need for electric or pneumatic actuators, which minimizes initial investment and maintenance costs. All internal parts are replaceable without removing valve from piping.
- **Durable** – Stainless steel (CF8M) corrosion resistant alloy, all metal internals machined from 316 stainless steel alloy, Nitrile elastomer seals and pre-formed stress-relieved diaphragm offers excellent service life. All metal parts are passivated to improve corrosion resistance.
- **Available in Threaded and Flanged End Configurations**
- **Design/Application Engineering Service**

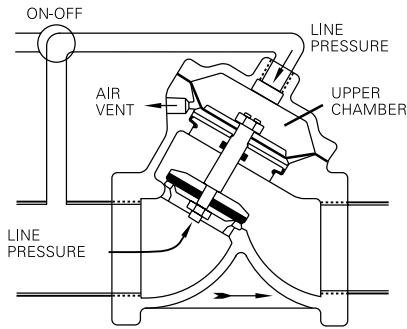
#### Operating Specifications

Maximum Working Pressure	Threaded Valves: 250 psi (17 bar) Flanged Valves: 150 psi (10.3 bar)
Temperature	Standard: 150°F (65°C) Maximum: 250°F (120°C)
Pipe Sizes	1-, 1-1/2- and 2-inch threaded (NPT, BSPP, JIS) 1-, 1-1/2- and 2-inch flanged (U.S. or ISO)
Standard Materials	Valve body, shaft and cap cast 316 stainless steel (CF8M) alloy, all metal internals 316 stainless steel, standard seals Nitrile, diaphragm Nitrile on Polyamide
Optional Materials	Seals EPDM or FKM elastomers, diaphragm FKM on Polyester



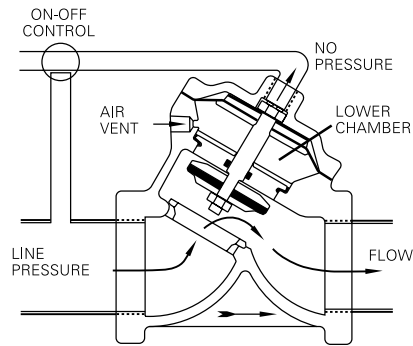
## Principles of Operation

### VALVE CLOSED



**Drip-Tight Closing:** Closure is obtained by directing line pressure or equivalent independent pressure into the upper chamber. This pressure on the large diaphragm area causes the valve disc to seal against the seat.

### VALVE OPEN



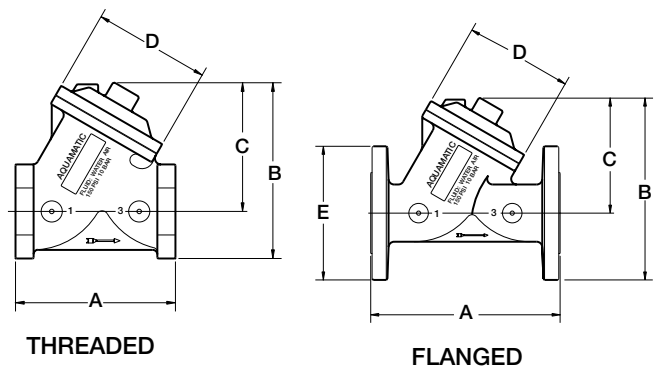
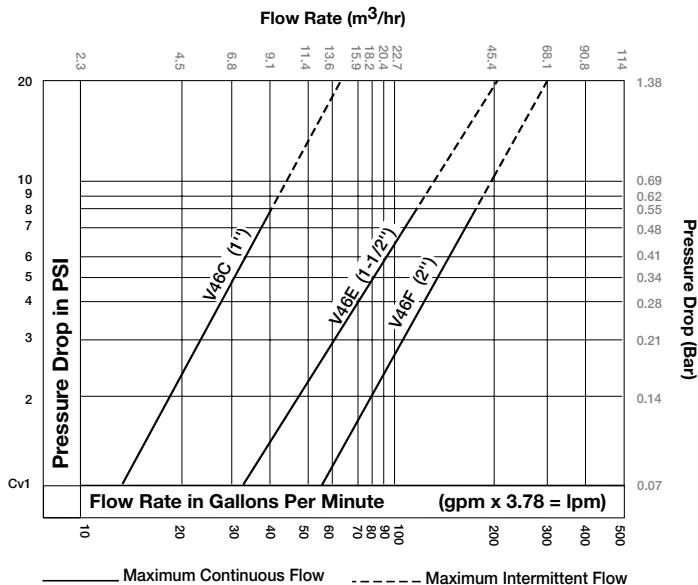
**Full Open Operation:** When the closing pressure in the upper chamber is relieved by venting the pilot line, the valve opens positively, by line pressure on the disc.

## Dimensions for Stainless Steel Valves

	Model Number	Pipe Size	Cv <sup>1</sup>	Unit	Dimensions (Approximate)				
					A	B	C	D	E
THREADED	V46C	1"	14	inches mm	3.75 95	4.45 113	3.21 82	2.75 70	-
	V46E	1-1/2"	33	inches mm	4.75 121	5.00 127	3.50 89	3.50 89	-
	V46F	2"	54	inches mm	6.62 168	7.28 185	5.34 136	4.84 123	-
FLANGED	V46C	1"	14	inches mm	5.50 140	5.49 139	3.36 85	2.75 70	4.25 108
	V46E	1-1/2"	33	inches mm	6.50 165	6.45 164	3.95 100	3.50 89	5.00 127
	V46F	2"	54	inches mm	8.50 216	8.16 207	5.16 131	4.84 123	6.00 152

<sup>1</sup> Cv is the flow rate in gallons per minute of water at 60°F at 1 pound pressure drop. Liters per minute = Gal/Min x 3.78

## Performance – Flow Rate Characteristics





20580 Enterprise Avenue  
Brookfield, WI 53045  
Tel: 262.784.4490  
Fax: 262.784.7794

5730 North Glen Park Road  
Milwaukee, WI 53209  
Tel: 262.238.4400  
Fax: 262.238.4402

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Customer Care: 800.279.9404    [www.pentairwatertreatment.com](http://www.pentairwatertreatment.com)