

# **AQUAMATIC**® V46 SERIES STAINLESS STEEL VALVES

HIGH-FLOW VALVES FOR CORROSION-RESISTANT APPLICATIONS





#### FEATURES/BENEFITS

Unique Y-pattern design with large seat opening and high lift disc permits higher flow rates at lower pressure loss than other comparable valves

All components can be serviced while the valve is in-line

Separate flow and control chambers permit positive closing without springs

Pre-formed, stress-relieved diaphragm minimizes fatigue, maximizes valve responsiveness and diaphragm lifetime Durable stainless steel [CF8M] corrosion-resistant alloy, all metal internal parts machined from 316 stainless steel alloy

Diaphragm acts as an actuator, eliminating the need for electric or pneumatic actuators

Adaptable to a wide variety of control devices

### **OPTIONS**

Spring-assist closed

Spring-assist open

Limit stop for flow control

Position indicator

Seal and diaphragm materials for special applications

Available in threaded or flanged end configurations

# **TYPICAL APPLICATIONS**

Bottling Plants

Chemical Injection
Condensate Polishers

Corrosive Liquid Handling

Deionizers

Laundry Equipment

Ozone Generators

Paper and Pulp

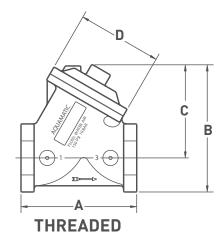
**Process Water Systems** 

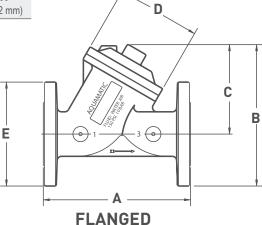
Reverse Osmosis Equipment

Steam Sterilization

## **DIMENSIONS**

| MODEL# | ENDS     | PIPE<br>SIZE | Cv* | DIMENSIONS (APPROXIMATE) |                   |                   |                   |                   |
|--------|----------|--------------|-----|--------------------------|-------------------|-------------------|-------------------|-------------------|
|        |          |              |     | А                        | В                 | С                 | D                 | Е                 |
| V46C   | Threaded | 1"           | 14  | 3.75"<br>(95 mm)         | 4.45"<br>(113 mm) | 3.21"<br>(82 mm)  | 2.75"<br>(70 mm)  | -                 |
| V46E   | Threaded | 1-1/2"       | 33  | 4.75"<br>(121 mm)        | 5.00"<br>(127 mm) | 3.50"<br>(89 mm)  | 3.50"<br>(89 mm)  | -                 |
| V46F   | Threaded | 2"           | 54  | 6.62"<br>(168 mm)        | 7.28"<br>(185 mm) | 5.34"<br>(136 mm) | 4.84"<br>(123 mm) | -                 |
| V46C   | Flanged  | 1"           | 14  | 5.50"<br>(140 mm)        | 5.49"<br>(139 mm) | 3.36"<br>(85 mm)  | 2.75"<br>(70 mm)  | 4.25"<br>(108 mm) |
| V46E   | Flanged  | 1-1/2"       | 33  | 6.50"<br>(165 mm)        | 6.45"<br>(164 mm) | 3.95"<br>(100 mm) | 3.50"<br>(89 mm)  | 5.00"<br>(127 mm) |
| V46F   | Flanged  | 2"           | 54  | 8.50"<br>(216 mm)        | 8.16"<br>(207 mm) | 5.16"<br>(131 mm) | 4.84"<br>(123 mm) | 6.00"<br>(152 mm) |



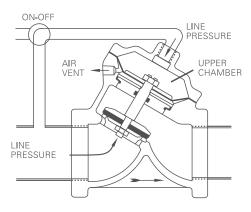


# **PRINCIPLES OF OPERATION**

### **DRIP-TIGHT CLOSING**

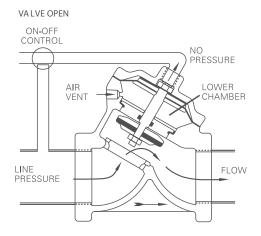
Closure is obtained by directing line pressure or equivalent independent pressure into the upper chamber. This pressure on the large diaphragm area causes the valve disc to seal against the seat.





### **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.

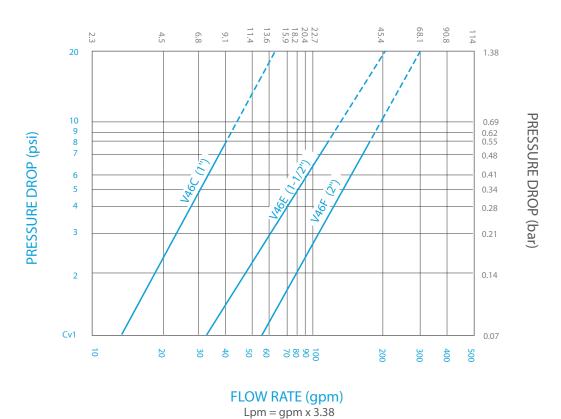


 $<sup>^{\</sup>star}$ Cv is the flow rate in gallons per minute of water at 60°F at 1 pound pressure drop. Liters per minute = Gal/Min x 3.78

| OPERATING SPECIFICATIONS | THREADED VALVE                                   | FLANGED VALVES                                 |
|--------------------------|--|--|
| Maximum Working Pressure | 250 psi (17 bar)                                 | 150 psi (10.3 bar)                             |
| Temperature              | Standard: 150°F (65°C)<br>Maximum: 250°F (120°C) | Standard: 150°F(65°C)<br>Maximum: 250°F(120°C) |
| Pipe Sizes               | 1", 1 ½", and 2" threaded (NPT, BSPP, JIS)       | 1", 1 ½", and 2" flanged (U.S. or ISO)         |

## **PERFORMANCE DATA**

## FLOW RATE (m <sup>3</sup>/hr)



----- Maximum Intermittent Flow
----- Maximum Continuous Flow



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