

COMMERCIAL
CONTROL
VALVES



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

**COMMERCIAL
CONTROL
VALVES**

AquaMatic® Stainless Steel Valves

V46 Series


Options

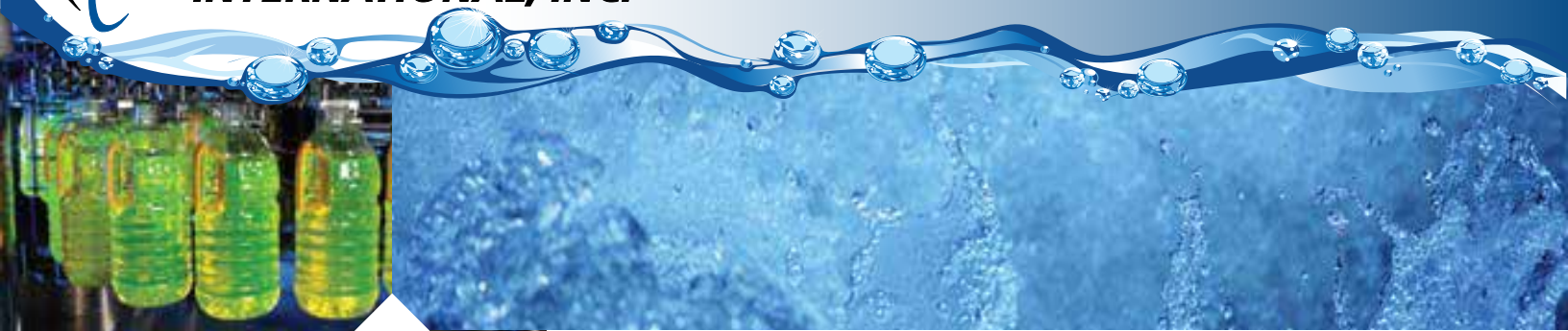
- Spring-assist closed
- Spring-assist open
- Adjustable flow rate control
- Seal and diaphragm materials for special applications
- Position indicator

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**

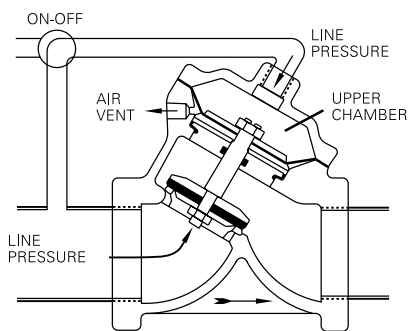
Operating Specifications

| | |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 |



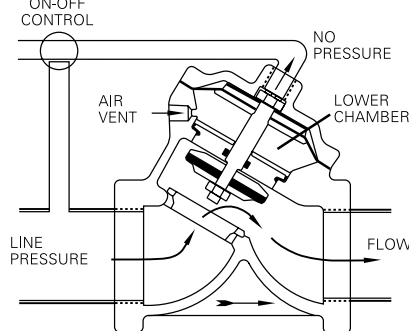
Principles of Operation

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 ¹ | 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 |

¹ 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

