# AQUAMATIC V46 SERIES

## *STAINLESS STEEL DIAPHRAGM VALVES*

***AquaMatic V46 Series Diaphragm Valves*** *are constructed of stainless steel and designed for water applications. Their unique Y-pattern design with a large seat opening and high lift disc permits higher flow rates at lower pressure loss than competitive valves. This product is manufactured in the USA with foreign and domestic parts.*

### Features and Benefits

- Larger diaphragm area than seat area permits drip-tight closing without any springs
- All components can be serviced while the valve is inline
- Separate flow and control chambers permit positive closing without springs
- Reinforced diaphragms are pre-formed and stress relieved to maximize responsiveness and product life
- Adaptable to a wide variety of control devices
- Diaphragm acts as actuator, eliminating need for electric or pneumatic actuators
- Durable stainless steel (CF8M) corrosion-resistant alloy, all metal internal parts machined from 316 stainless steel alloy
- Available in 1 to 2 inch sizes with either threaded (NPT) or flanged (ASTM) ends

### Options

- Spring-assist closed
- Spring-assist open
- Limit stop for flow control
- Position indicator
- Normally closed
- Seal and diaphragm materials for special applications

### 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

**Certified by**
IAPMO R&T to NSF/ANSI 61 and NSF/ANSI 372 for lead free compliance.

### Operating Specifications

**THREADED VALVE**

Max Pressure . . . . . 250 psi (17 bar)
Std Temperature . . . . . 150°F (65°C)
Max Temperature . . . . . 250°F (120°C)

**FLANGED VALVE**

Max Pressure . . . . . 150 psi (10.3 bar)
Std Temperature . . . . . 150°F (65°C)
Max Temperature . . . . . 250°F (120°C)

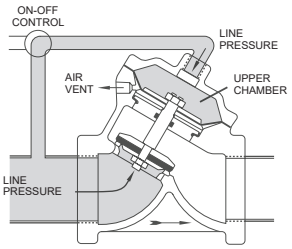
**NOTE:** IAPMO R&T NSF/ANSI 61 and NSF/ANSI 372 certifications are limited to restrictions below. Other options were not tested for certification.

Cold water applications below 73°F (23°C).

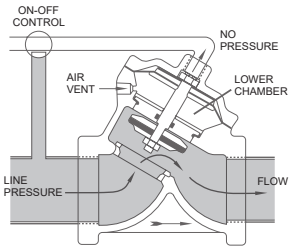
Normally Open valves.

Buna-N seal material (seal option #1).

### 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.

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EFFECTIVE
AUGUST 2019

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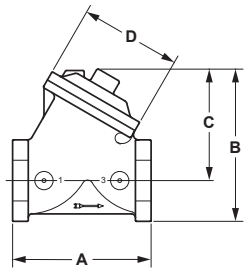
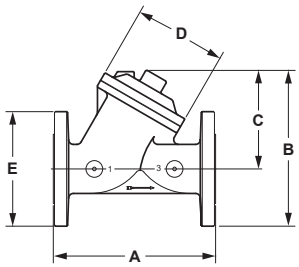



**Threaded Connectors**

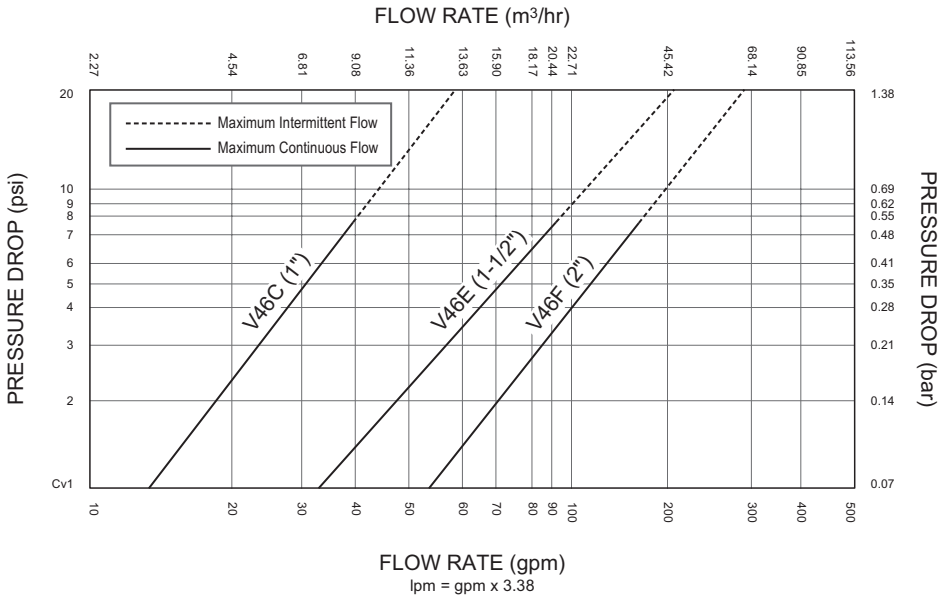



**Flanged Connectors**

### Dimensions and Weights

| Model Number | Pipe Size | Cv* | End Connector Style | Approximate Dimensions | | | | | Approximate Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | | A | B | C | D | E | |
| V46C | 1" (25 mm) | 14.0 (12.1 Kv) | Threaded | 3.75" (95 mm) | 4.45" (113 mm) | 3.21" (82 mm) | 2.75" (70 mm) | — | 4 lb (1.8 kg) |
| V46E | 1-1/2" (40 mm) | 33.0 (28.5 Kv) | Threaded | 4.75" (121 mm) | 5.00" (127 mm) | 3.50" (89 mm) | 3.50" (89 mm) | — | 7 lb (3.1 kg) |
| V46F | 2" (50 mm) | 54.0 (47.0 Kv) | Threaded | 6.62" (168 mm) | 7.28" (185 mm) | 5.34" (136 mm) | 4.84" (123 mm) | — | 15 lb (6.8 kg) |
| V46C | 1" (25 mm) | 14.0 (12.1 Kv) | Flanged | 5.50" (140 mm) | 5.49" (139 mm) | 3.36" (85 mm) | 2.75" (70 mm) | 4.25" (108 mm) | 6 lb (2.7 kg) |
| V46E | 1-1/2" (40 mm) | 33.0 (28.5 Kv) | Flanged | 6.50" (165 mm) | 6.45" (164 mm) | 3.95" (100 mm) | 3.50" (89 mm) | 5.00" (127 mm) | 10 lb (4.5 kg) |
| V46F | 2" (50 mm) | 54.0 (47.0 Kv) | Flanged | 8.50" (216 mm) | 8.16" (207 mm) | 5.16" (131 mm) | 4.84" (123 mm) | 6.00" (152 mm) | 18 lb (8.2 kg) |

* Cv is the flowrate in gallons per minute of water at 60°F at 1 psi pressure drop. (Kv is the flowrate in cubic meters per hour of water at 15.5°C at 1 bar pressure drop.)

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