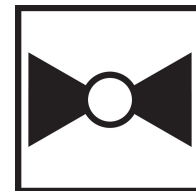




2-year warranty

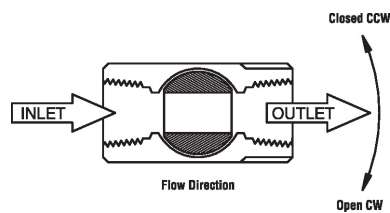
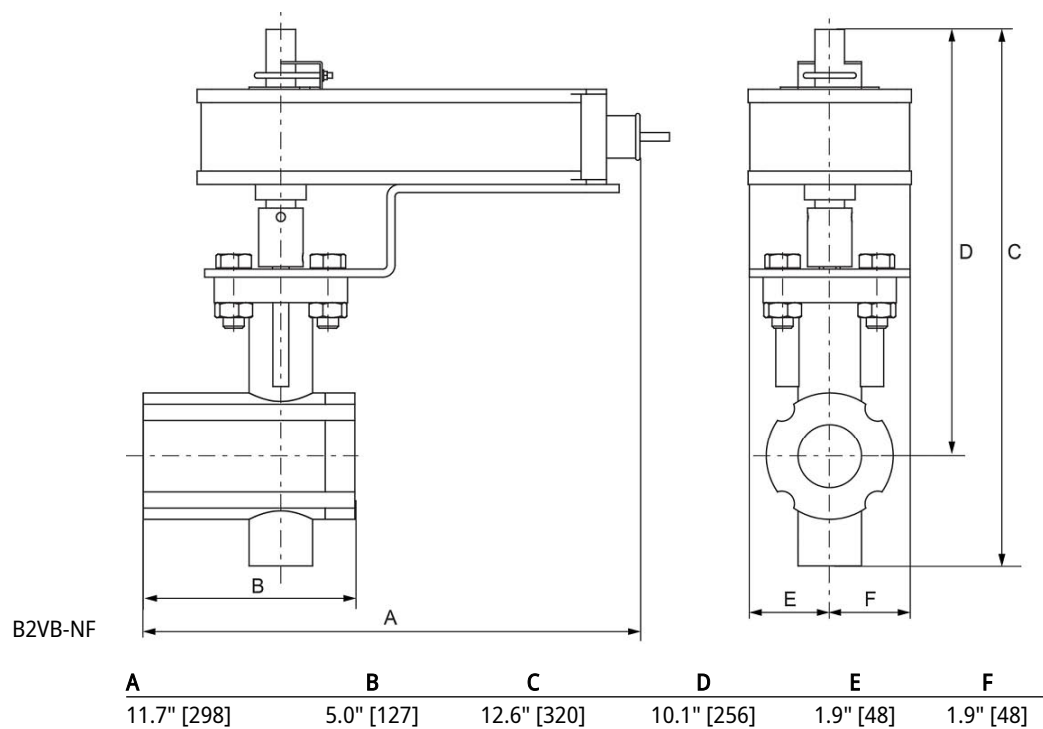
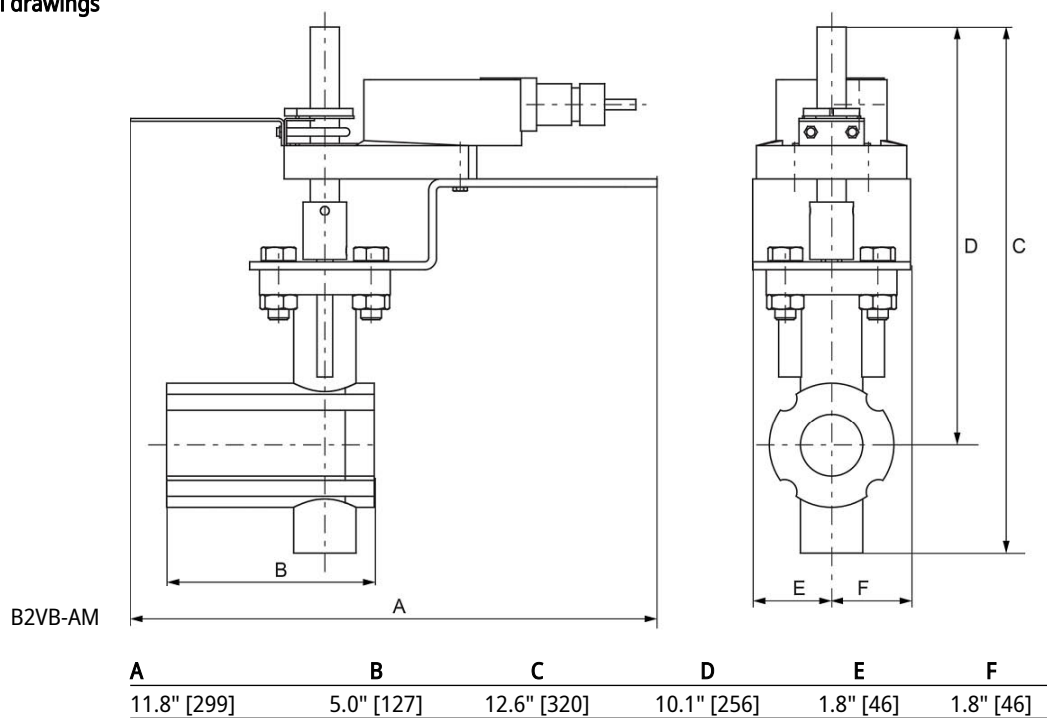


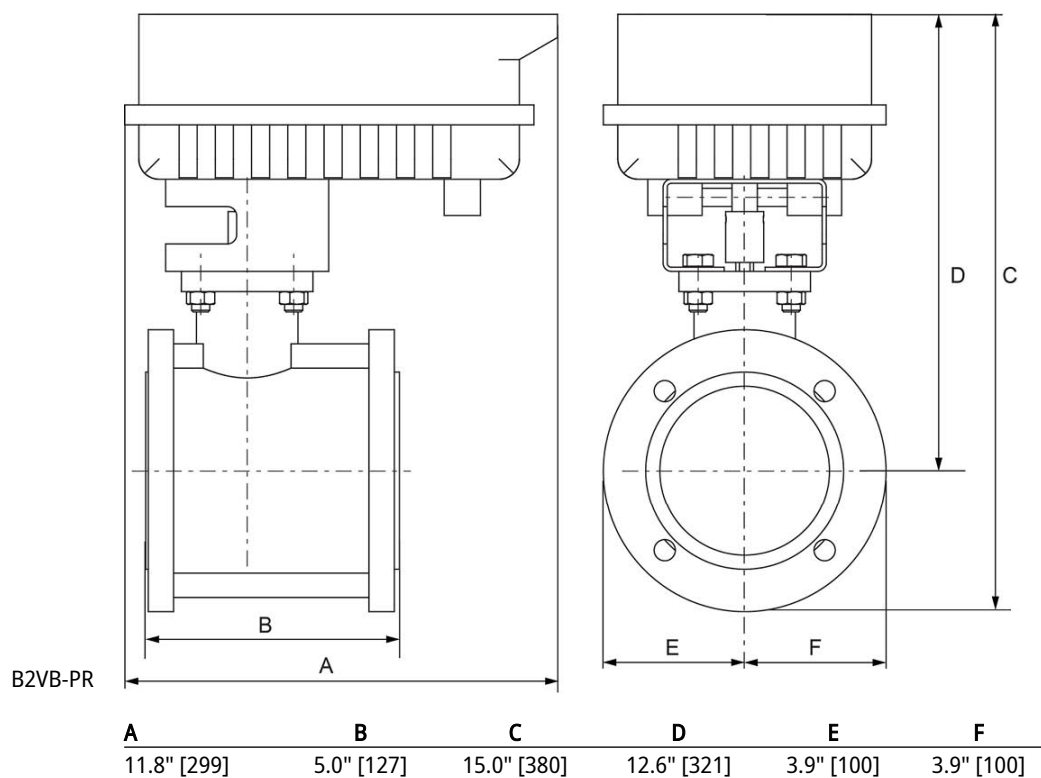
## Technical data

|                           |                                       |                                               |
|---------------------------|---------------------------------------|-----------------------------------------------|
| <b>Functional data</b>    | Valve Size                            | 1" [25]                                       |
|                           | Fluid                                 | chilled or hot water, up to 60% glycol, steam |
|                           | Fluid Temp Range (water)              | -22...380°F [-30...193°C]                     |
|                           | Fluid Temp Range (steam)              | -22...380°F [-30...193°C]                     |
|                           | Body Pressure Rating                  | ANSI Class 300                                |
|                           | Close-off pressure Δps                | 250 psi                                       |
|                           | Flow characteristic                   | equal percentage                              |
|                           | Rangeability Sv                       | 300:1                                         |
|                           | Maximum differential pressure (water) | 150 psi                                       |
|                           | Max Differential Pressure (Steam)     | 100 psi                                       |
|                           | Close-Off Pressure (Steam)            | 150 psi                                       |
|                           | Flow Pattern                          | 2-way                                         |
|                           | Leakage rate                          | ANSI Class IV                                 |
|                           | Controllable flow range               | 75°                                           |
|                           | Cv                                    | 24                                            |
|                           | Maximum Inlet Pressure (Steam)        | 150 psi                                       |
| <b>Materials</b>          | Valve body                            | WCC grade carbon steel                        |
|                           | Body finish                           | matt black body finish                        |
|                           | Stem                                  | stainless steel                               |
|                           | Stem seal                             | PTFE V-ring                                   |
|                           | Seat                                  | PTFE                                          |
|                           | Pipe connection                       | NPT female ends                               |
|                           | Ball                                  | stainless steel                               |
| <b>Suitable actuators</b> | Non-Spring                            | SY1                                           |
|                           |                                       | AMB(X)                                        |
|                           |                                       | PRB(X)                                        |
|                           | Spring                                | NF                                            |
|                           | Electronic fail-safe                  | PKRB(X)                                       |

## Product features

|                         |                                                                                                                                                                                                                                                                                    |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product features</b> | Fast quarter turn open or closed operation, stainless-steel ball and stem, positive isolation, two-piece body construction                                                                                                                                                         |
| <b>Application</b>      | Water-side control of air handling apparatus in ventilation and air-conditioning system.<br>Water/Steam control in heating system.<br>300:1 rangeability.<br>The dimensions and drilling of end flanges conform to the American cast iron flange standard, Class 150 (ANSI B16.1). |

**Flow/Mounting details**

**Dimensions**
**Dimensional drawings**






5-year warranty



## Technical data

|                        |                                    |                                                                                                                                                                                                              |
|------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Electrical data</b> | Nominal voltage                    | AC/DC 24 V                                                                                                                                                                                                   |
|                        | Nominal voltage frequency          | 50/60 Hz                                                                                                                                                                                                     |
|                        | Power consumption in operation     | 6 W                                                                                                                                                                                                          |
|                        | Power consumption in rest position | 2.5 W                                                                                                                                                                                                        |
|                        | Power consumption for wire sizing  | 8.5 VA                                                                                                                                                                                                       |
|                        | Transformer sizing                 | 8.5 VA (class 2 power source)                                                                                                                                                                                |
|                        | Electrical Connection              | 18 GA appliance cable, 3 ft [1 m], with 1/2" conduit connector                                                                                                                                               |
|                        | Overload Protection                | electronic throughout 0...95° rotation                                                                                                                                                                       |
| <b>Functional data</b> | Direction of motion motor          | selectable by ccw/cw mounting                                                                                                                                                                                |
|                        | Direction of motion fail-safe      | reversible with cw/ccw mounting                                                                                                                                                                              |
|                        | Manual override                    | 5 mm hex crank (3/16" Allen), supplied                                                                                                                                                                       |
|                        | Angle of rotation                  | 90°, adjustable with mechanical stop                                                                                                                                                                         |
|                        | Angle of rotation note             | adjustable with mechanical stop                                                                                                                                                                              |
|                        | Running Time (Motor)               | 75 s                                                                                                                                                                                                         |
|                        | Running time fail-safe             | <20 s @ -4...122°F [-20...50°C], <60 s @ -22°F [-30°C]                                                                                                                                                       |
|                        | Noise level, motor                 | 50 dB(A)                                                                                                                                                                                                     |
|                        | Noise level, fail-safe             | 62 dB(A)                                                                                                                                                                                                     |
|                        | Position indication                | Mechanical                                                                                                                                                                                                   |
| <b>Safety data</b>     | Degree of protection IEC/EN        | IP54                                                                                                                                                                                                         |
|                        | Degree of protection NEMA/UL       | NEMA 2                                                                                                                                                                                                       |
|                        | Enclosure                          | UL Enclosure Type 2                                                                                                                                                                                          |
|                        | Agency Listing                     | cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU; Listed to UL 2043 - suitable for use in air plenums per Section 300.22(c) of the NEC and Section 602.2 of the IMC |
|                        | Quality Standard                   | ISO 9001                                                                                                                                                                                                     |
|                        | Ambient temperature                | -22...122°F [-30...50°C]                                                                                                                                                                                     |
|                        | Storage temperature                | -40...176°F [-40...80°C]                                                                                                                                                                                     |
|                        | Ambient humidity                   | Max. 95% RH, non-condensing                                                                                                                                                                                  |
|                        | Servicing                          | maintenance-free                                                                                                                                                                                             |
|                        | Weight                             | 4.1 lb [1.9 kg]                                                                                                                                                                                              |
|                        | Housing material                   | Galvanized steel and plastic housing                                                                                                                                                                         |
|                        |                                    |                                                                                                                                                                                                              |

## Product features

**Mode of operation** Weathershield for VS/VSS (LM/NM/LF)



**⚠ Warning! Live electrical components!**

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

**✂ INSTALLATION NOTES**

Ⓐ Actuators with appliance cables are numbered.

1 Provide overload protection and disconnect as required.

3 Actuators may also be powered by DC 24 V.

11 Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

◆ Meets cULus requirements without the need of an electrical ground connection.

**Wiring diagrams**

On/Off

