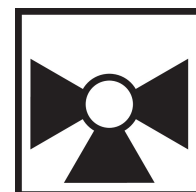


Butterfly Valve with Grooved types

- Disc electroless nickel coated ductile iron
- Bubble tight shut-off
- Resilient seat
- Valve face-to-face dimensions comply with AWWA (c606) & MSS-SP-67
- Completely assembled and tested, ready for installation
- VIC-300 Masterseal is manufactured by the Victaulic Company.



5-year warranty



Type overview

| | |
|---------|----|
| Type | DN |
| F765VIC | 65 |

Technical data

| | | |
|--------------------|--------------------------|--|
| Functional data | Valve size [mm] | 2.5" [65] |
| | Fluid | chilled or hot water, up to 60% glycol |
| | Fluid Temp Range (water) | -30...120°C [-22...250°F] |
| | Body Pressure Rating | ANSI Class Grooved AWWA, 300 psi |
| | Close-off pressure Δps | 200 psi |
| | Flow characteristic | modified linear |
| | Leakage rate | 0% |
| | Pipe connection | Grooved ANSI/AWWA (c606) |
| | Servicing | maintenance-free |
| | Flow Pattern | 3-way Mixing/Diverting |
| | Controllable flow range | 90° rotation |
| | Cv | 260 |
| | Maximum Velocity | 20 FPS |
| Materials | Valve body | Ductile cast iron ASTM A536 |
| | Body finish | black alkyd enamel |
| | Stem | 416 stainless steel |
| | Stem seal | fiberglass with TFE lining |
| | Seat | EPDM |
| | Disc | electroless nickel coated ductile iron |
| Suitable actuators | Non Fail-Safe | GMB(X) PRB(X) |
| | Spring | 2*AFB(X) |
| | Electrical fail-safe | GKRB(X) PKRB(X) |
| | | |

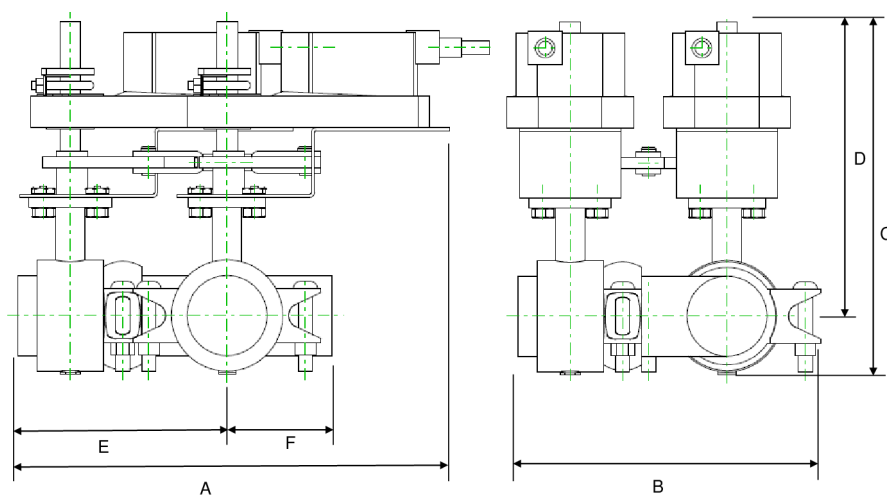
Product features

Flow/Mounting details



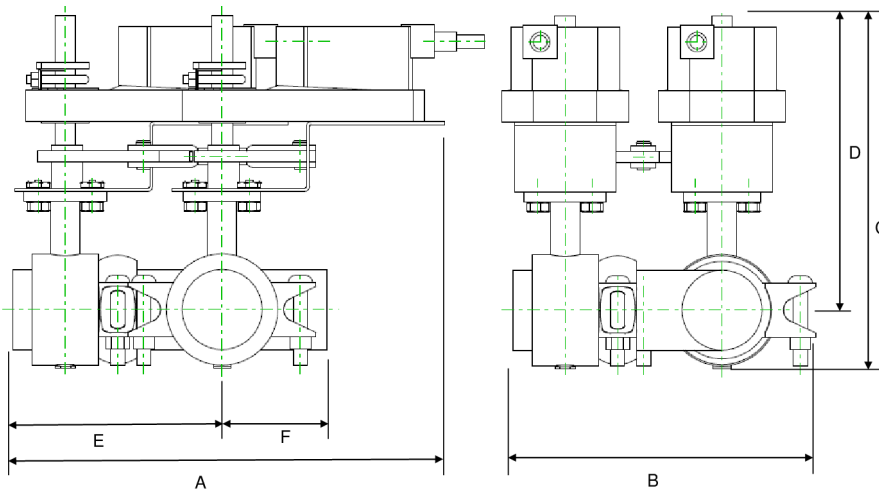
Dimensions

| Type | DN | Weight |
|---------|----|---------------|
| F765VIC | 65 | 42 lb [19 kg] |



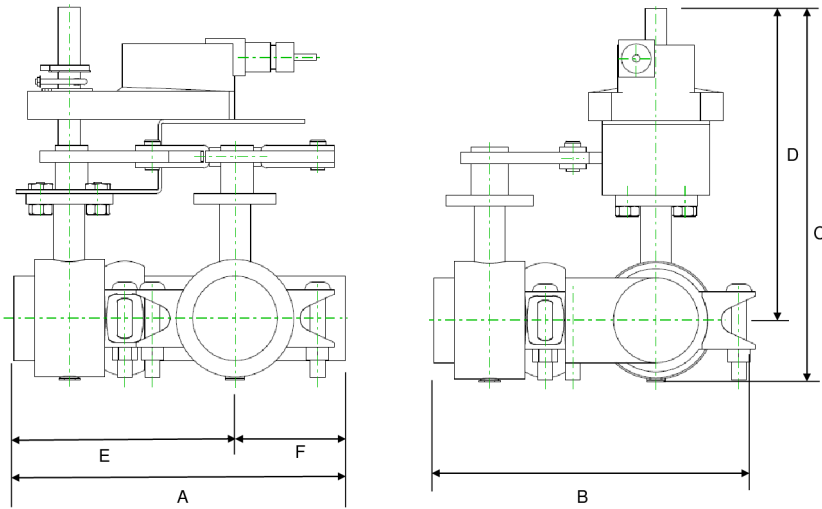
2GK

| A | B | C | D | E | F |
|-------------|-------------|-------------|-------------|------------|-----------|
| 13.0" [330] | 10.9" [277] | 14.0" [356] | 11.9" [302] | 9.7" [246] | 3.8" [97] |



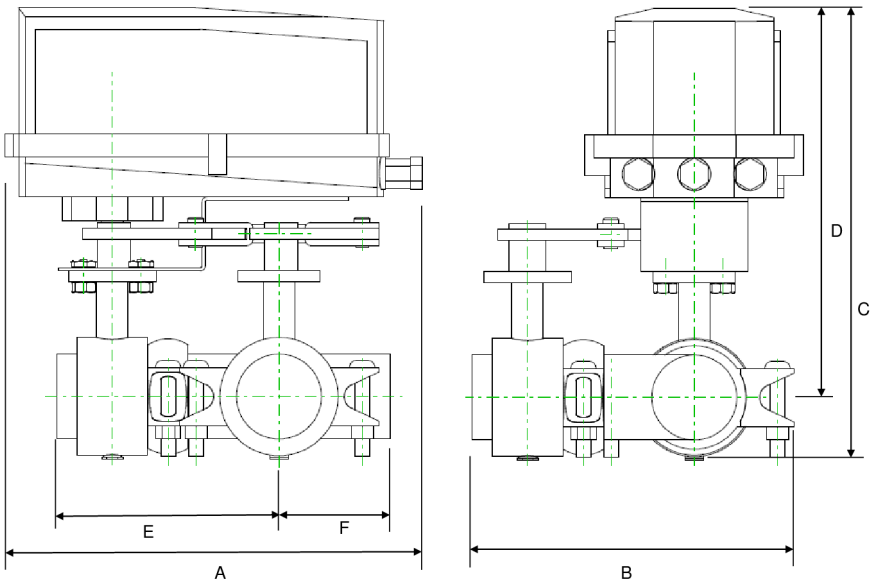
2GM

| A | B | C | D | E | F |
|-------------|-------------|-------------|-------------|------------|-----------|
| 13.0" [330] | 10.9" [277] | 14.0" [356] | 11.9" [302] | 9.7" [246] | 3.8" [97] |



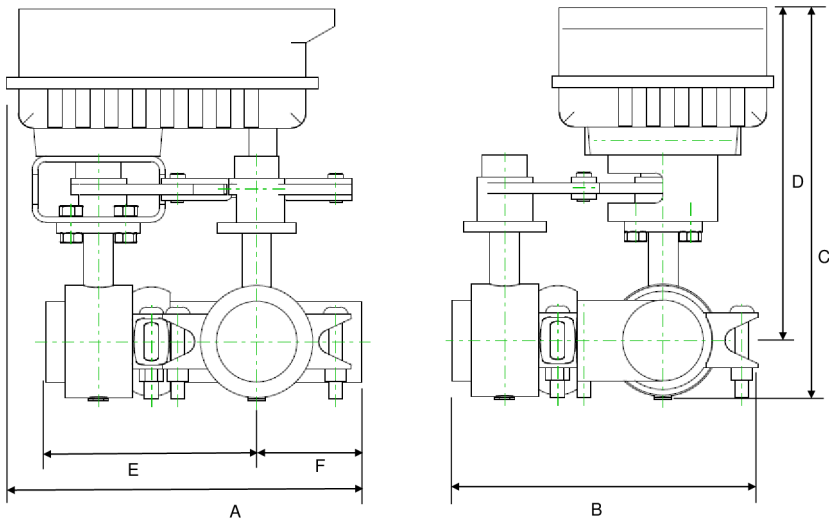
GM

| A | B | C | D | E | F |
|-------------|-------------|-------------|-------------|------------|-----------|
| 14.1" [358] | 10.9" [277] | 15.3" [389] | 10.6" [269] | 9.7" [246] | 3.8" [97] |



GM N4

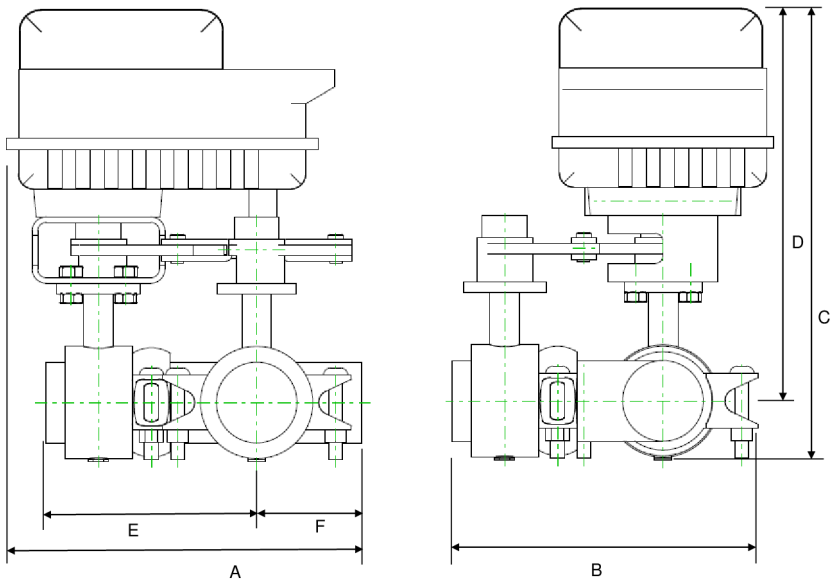
| A | B | C | D | E | F |
|-------------|-------------|-------------|-------------|------------|-----------|
| 14.1" [358] | 10.9" [277] | 15.3" [389] | 13.1" [334] | 9.7" [246] | 3.8" [97] |



PRB(X)

| A | B | C | D | E | F |
|-------------|-------------|-------------|-------------|------------|-----------|
| 13.0" [330] | 10.9" [277] | 14.0" [356] | 14.4" [366] | 9.7" [246] | 3.8" [97] |

Dimensions



PK

| A | B | C | D | E | F |
|-------------|-------------|-------------|-------------|------------|-----------|
| 13.0" [330] | 10.9" [277] | 16.5" [419] | 14.4" [366] | 9.7" [246] | 3.8" [97] |

MFT/programmable, Electrical fail-safe, 24 V



5-year warranty



Technical data

| | | |
|-----------------|------------------------------------|--|
| Electrical data | Nominal voltage | AC/DC 24 V |
| | Nominal voltage frequency | 50/60 Hz |
| | Nominal voltage range | AC 19.2...28.8 V / DC 21.6...28.8 V |
| | Power consumption in operation | 12 W |
| | Power consumption in rest position | 3 W |
| | Transformer sizing | 40 VA |
| | Electrical Connection | 18 GA plenum cable, 1 m, 3 m, or 5 m with 1/2" NPT conduit connector, degree of protection NEMA 2 / IP54 |
| | Overload Protection | electronic throughout 0...95° rotation |
| Functional data | Operating range Y | 2...10 V |
| | Operating range Y note | 4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor) |
| | Input impedance | 100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA, 1500 Ω for PWM, On/Off and Floating point |
| | Operating range Y variable | Start point 0.5...30 V End point 2.5...32 V |
| | Operating modes optional | variable (VDC, on/off, floating point) |
| | Position feedback U | 2...10 V |
| | Position feedback U note | Max. 0.5 mA |
| | Position feedback U variable | VDC variable |
| | Bridging time (PF) | 2 s |
| | Bridging time (PF) variable | 0...10 s |
| | Pre-charging time | 5...20 s |
| | Direction of motion motor | selectable with switch 0/1 |
| | Direction of motion fail-safe | reversible with switch |
| | Manual override | external push button |
| | Angle of rotation | Max. 95° |
| | Angle of rotation note | adjustable with mechanical stop |
| | Running Time (Motor) | 150 s / 90° |
| | Running time motor variable | 95...150 s |
| | Running time fail-safe | <35 s |
| | Noise level, motor | 52 dB(A) |
| | Noise level, fail-safe | 61 dB(A) |
| | Position indication | Mechanical, 30...65 mm stroke |
| Safety data | Power source UL | Class 2 Supply |
| | Degree of protection IEC/EN | IP54 |
| | Degree of protection NEMA/UL | NEMA 2 |

Technical data

| | | |
|-------------|---------------------|---|
| Safety data | 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 |
| | Quality Standard | ISO 9001 |
| | UL 2043 Compliant | Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC |
| | Ambient humidity | Max. 95% RH, non-condensing |
| | Ambient temperature | -22...122°F [-30...50°C] |
| | Storage temperature | -40...176°F [-40...80°C] |
| | Servicing | maintenance-free |
| Weight | Weight | □ |
| Materials | Housing material | Galvanized steel and plastic housing |

Footnotes †Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3

Product features

Bridging time Power failures can be bridged up to a maximum of 10 s.

In the event of a power failure, the actuator will remain stationary in accordance with the set bridging time. If the power failure is greater than the set bridging time, the actuator will move into the selected fail-safe position.

The bridging time set at the factory is 2 s. It can be modified on site in operation by means of the Belimo service tool MFT-P.

Settings: The rotary knob must not be set to the "PROG FAIL-SAFE" position!

For retroactive adjustments of the bridging time with the Belimo service tool MFT-P or with the ZTH EU adjustment and diagnostic device only the values need to be entered.

Accessories

| | | |
|------------------------|---|-------------|
| Gateways | Description | Type |
| | Gateway MP to BACnet MS/TP | UK24BAC |
| Electrical accessories | Gateway MP to Modbus RTU | UK24MOD |
| | Gateway MP to LonWorks | UK24LON |
| Electrical accessories | Description | Type |
| | Feedback potentiometer 140 Ω add-on, grey | P140A GR |
| | Feedback potentiometer 500 Ω add-on, grey | P500A GR |
| | Feedback potentiometer 1 kΩ add-on, grey | P1000A GR |
| | Feedback potentiometer 2.8 kΩ add-on, grey | P2800A GR |
| | Feedback potentiometer 5 kΩ add-on, grey | P5000A GR |
| | Feedback potentiometer 10 kΩ add-on, grey | P10000A GR |
| | Auxiliary switch 1x SPDT add-on | S1A |
| | Auxiliary switch 2x SPDT add-on | S2A |
| | Service tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices | ZTH US |
| Tools | Description | Type |
| | Connecting cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection | ZK4-GEN |
| | Service tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices | ZTH US |

Electrical installation

✂ INSTALLATION NOTES

- (A)** Actuators with appliance cables are numbered.
- 1** Provide overload protection and disconnect as required.
- 3** Actuators may also be powered by DC 24 V.
- 5** Only connect common to negative (-) leg of control circuits.
- 7** A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
- 8** Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 V line.
- 10** For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.
- 12** IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
- 46** Actuators may be controlled in parallel. Current draw and input impedance must be observed.
- 47** Master-Slave wiring required for piggy-back applications. Feedback from Master to control input(s) of Slave(s).
- ◆** Meets cULus requirements without the need of an electrical ground connection.

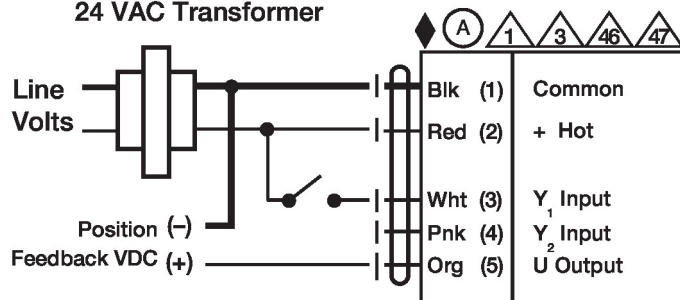
⚠ Warning! Live electrical components!

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.

Wiring diagrams

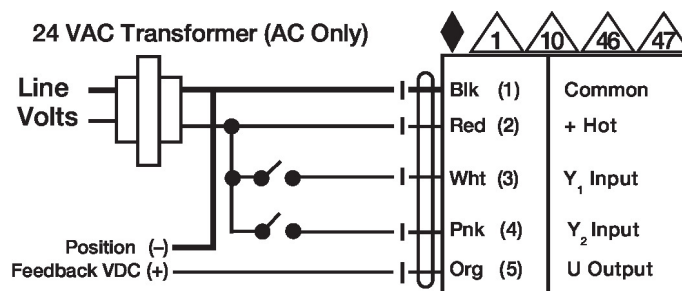
On/Off

24 VAC Transformer



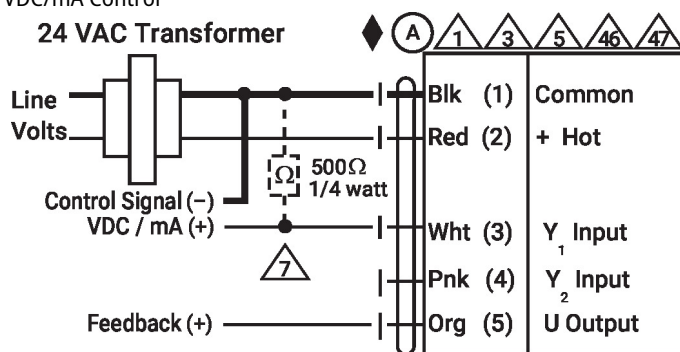
Floating Point

24 VAC Transformer (AC Only)



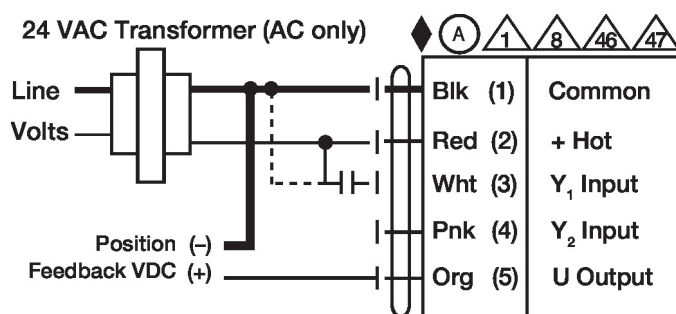
VDC/mA Control
















24 VAC Transformer



PWM Control

24 VAC Transformer (AC only)



| Functions | a | b | c |
|--|---|---|---|
| 0%  |  |  |  |
| 50%  |  |  |  |
| 100%  |  |  |  |
| Control mode acc. to Y_1 |  |  |  |