

Butterfly Valve with Lug types

- Disc 304 stainless steel
- Bubble tight shut-off
- Resilient seat
- Valve face-to-face dimensions comply with API 609 & MSS-SP-67
- Completely assembled and tested, ready for installation



5-year warranty

Type overview

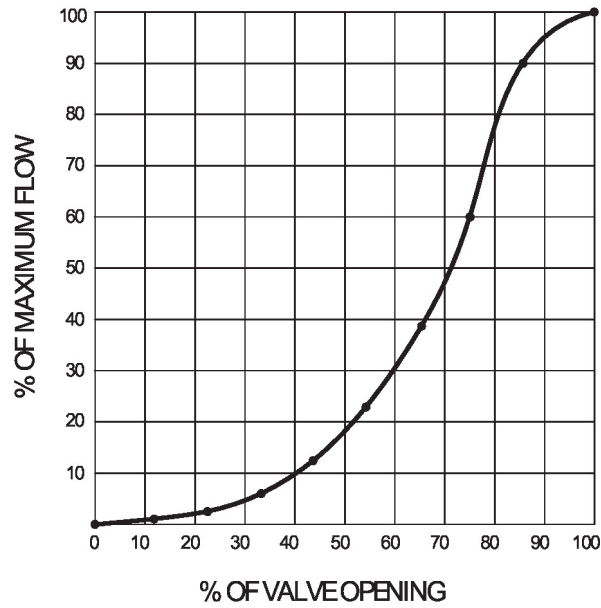
| | |
|-------------|-----------|
| Type | DN |
| F680HDU | 80 |

Technical data

| | | |
|---------------------------|--------------------------|--|
| Functional data | Valve size [mm] | 3" [80] |
| | Fluid | chilled or hot water, up to 60% glycol |
| | Fluid Temp Range (water) | -22...250°F [-30...120°C] |
| | Body Pressure Rating | ANSI Class Consistent with 125, 232 psi CWP |
| | Close-off pressure Δps | 50 psi |
| | Flow characteristic | modified equal percentage |
| | Leakage rate | 0% |
| | Pipe connection | Flange for use with ASME/ANSI class 125/150 |
| | Servicing | maintenance-free |
| | Flow Pattern | 2-way |
| | Controllable flow range | 90° rotation |
| | Cv | 302 |
| | Maximum Velocity | 12 FPS |
| | Lug threads | 5/8-11 UNC |
| Materials | Valve body | Ductile cast iron ASTM A536 |
| | Body finish | epoxy powder coating (blue RAL 5002) |
| | Stem | 416 stainless steel |
| | Stem seal | EPDM (lubricated) |
| | Seat | EPDM |
| | Bearing | RPTFE |
| | Disc | 304 stainless steel |
| Suitable actuators | Non Fail-Safe | ARB(X) |

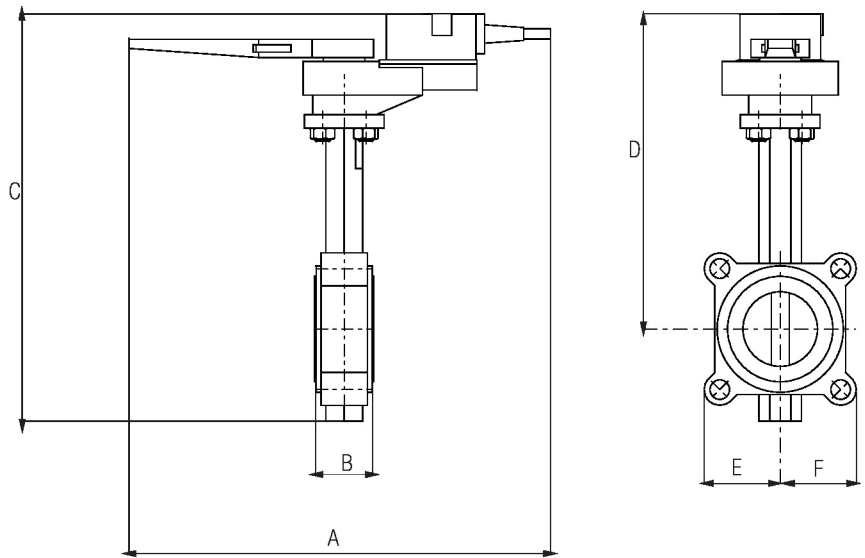
Product features

Flow/Mounting details



Dimensions

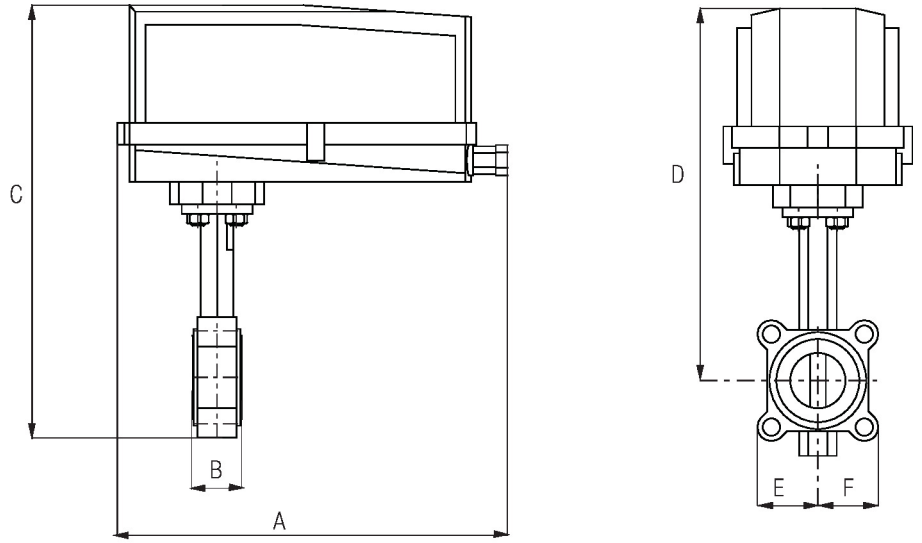
| Type | DN | Weight |
|---------|----|-----------------|
| F680HDU | 80 | 6.9 lb [3.2 kg] |



Valve with ARB/ARX Actuator

| A | B | C | D | E | F | Number of Bolt Holes |
|-------------|-----------|-------------|-------------|-----------|-----------|----------------------|
| 14.5" [368] | 1.9" [49] | 13.9" [354] | 10.4" [264] | 3.5" [89] | 3.5" [89] | 4 |

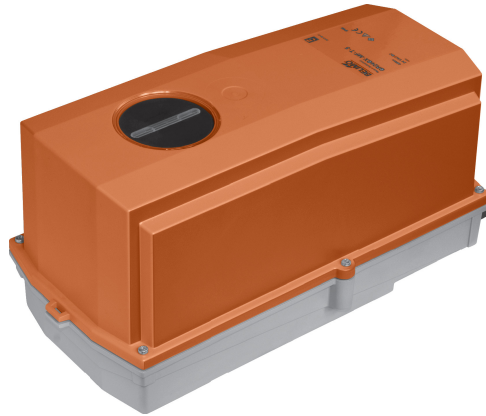
Dimensions



Valve with GR N4 Actuator

| A | B | C | D | E | F | Number of Bolt Holes |
|-------------|-----------|-------------|-------------|-----------|-----------|----------------------|
| 14.5" [368] | 1.9" [49] | 17.5" [445] | 14.2" [361] | 3.5" [89] | 3.5" [89] | 4 |

On/Off, Floating point, Non 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 | 8 W |
| | Power consumption in rest position | 2.5 W |
| | Transformer sizing | 11 VA |
| | Electrical Connection | Terminal blocks |
| | Overload Protection | electronic throughout 0...90° rotation |
| Functional data | Direction of motion motor | selectable with switch 0/1 |
| | Manual override | under cover |
| | Angle of rotation | 90° |
| | Angle of rotation note | adjustable with mechanical stop |
| | Running Time (Motor) | 35 s / 90° |
| | Running time motor note | constant, independent of load |
| | Noise level, motor | 45 dB(A) |
| | Position indication | Mechanical, 5...20 mm stroke |
| Safety data | Power source UL | Class 2 Supply |
| | Degree of protection IEC/EN | IP66/67 |
| | Degree of protection NEMA/UL | NEMA 4X |
| | Enclosure | UL Enclosure Type 4X |
| | 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 |
| | Ambient humidity | Max. 100% RH |
| | Ambient temperature | -22...122°F [-30...50°C] |
| | Ambient temperature note | -40...50°C for actuator with integrated heating |
| | Storage temperature | -40...176°F [-40...80°C] |
| | Servicing | maintenance-free |
| Weight | Weight | 6.9 lb [3.1 kg] |
| Materials | Housing material | Die cast aluminium and plastic casing |

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

Accessories

| Electrical accessories | Description | Type |
|----------------------------|---|------------|
| | Battery backup system, for non-spring return models | NSV24 US |
| | Battery, 12 V, 1.2 Ah (two required) | NSV-BAT |
| | Auxiliary switch 1x SPDT add-on | S1A |
| | Auxiliary switch 2x SPDT add-on | S2A |
| | Feedback potentiometer 140 Ω add-on, grey | P140A GR |
| | Feedback potentiometer 1 kΩ add-on, grey | P1000A GR |
| | Feedback potentiometer 10 kΩ add-on, grey | P10000A GR |
| | Feedback potentiometer 2.8 kΩ add-on, grey | P2800A GR |
| | Feedback potentiometer 500 Ω add-on, grey | P500A GR |
| | Feedback potentiometer 5 kΩ add-on, grey | P5000A GR |
| Factory add-on option only | Description | Type |
| | Heater, with adjustable thermostat | ACT_PACK_H |

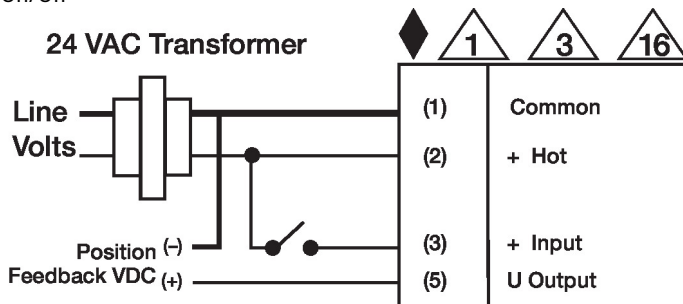
Electrical installation

✂ INSTALLATION NOTES

- 1** Provide overload protection and disconnect as required.
- 3** Actuators may also be powered by DC 24 V.
- 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).
- 16** Actuators are provided with a numbered screw terminal strip instead of a cable.
- ◆** 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



Electrical installation

Wiring diagrams

Floating Point

