

## 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

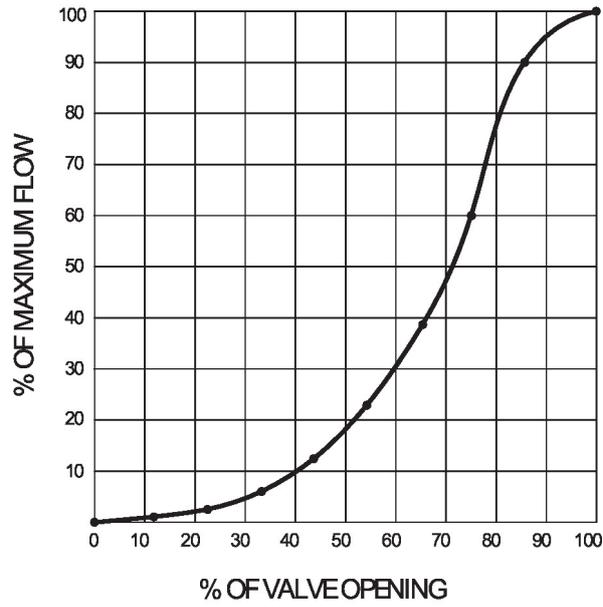
| Type    | DN  |
|---------|-----|
| F6125HD | 125 |

## Technical data

|                           |                          |  |
|---------------------------|--------------------------|--|
| <b>Functional data</b>    | Valve size [mm]          | 5" [125]                                       |
|                           | 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   | 200 psi  |
|                           | Flow characteristic      | modified equal percentage                      |
|                           | Leakage rate             | 0% leakage, leakage rateA                      |
|                           | Pipe connection          | Flange<br>for use with ASME/ANSI class 125/150 |
|                           | Servicing                | maintenance-free                               |
|                           | Flow Pattern             | 2-way  |
|                           | Controllable flow range  | 90° rotation                                   |
|                           | Cv                       | 1022   |
|                           | Maximum Velocity         | 12 FPS   |
|                           | Lug threads              | 3/4-10 UNC                                     |
|                           | <b>Materials</b>         | Valve body                                     |
| Body finish               |                          | epoxy powder coating (blue RAL 5002)           |
| Stem                      |                          | 416 stainless steel                            |
| Stem seal                 |                          | EPDM (lubricated)                              |
| Seat                      |                          | EPDM   |
| Bearing                   |                          | RPTFE  |
| <b>Suitable actuators</b> | Disc                     | 304 stainless steel                            |
|                           | Non Fail-Safe            | DRB(X)<br>PRB(X)                               |
|                           | Electrical fail-safe     | PKRB(X)  |

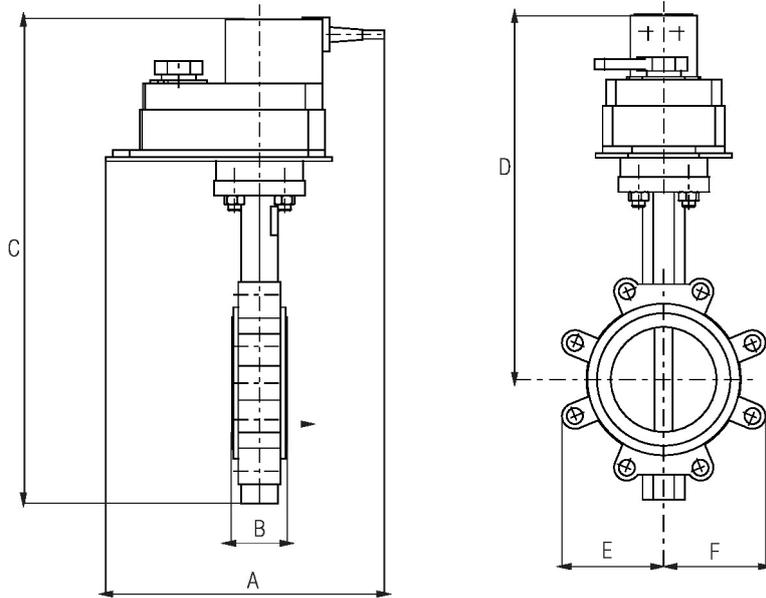
Product features

Flow/Mounting details



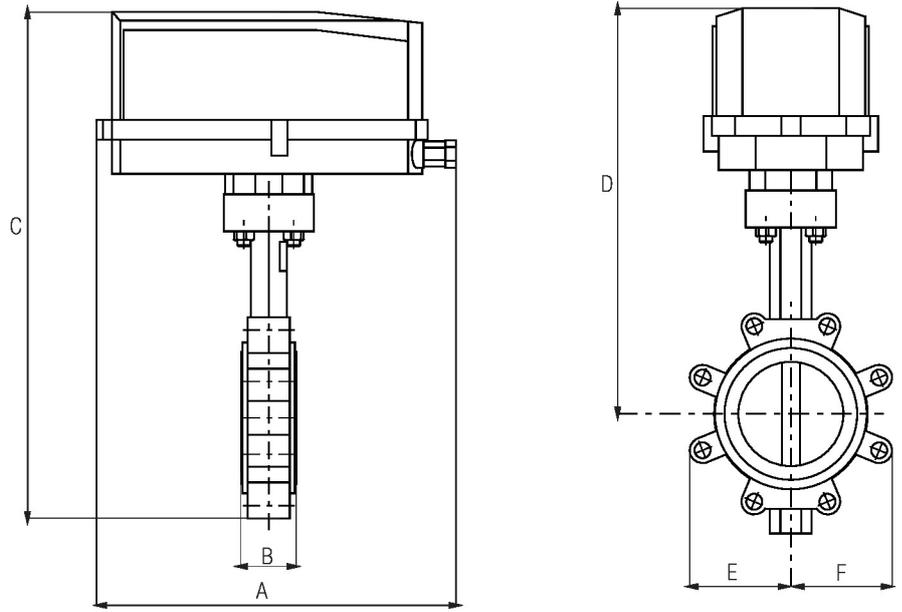
Dimensions

| Type    | DN  | Weight        |
|---------|-----|---------------|
| F6125HD | 125 | 30 lb [14 kg] |



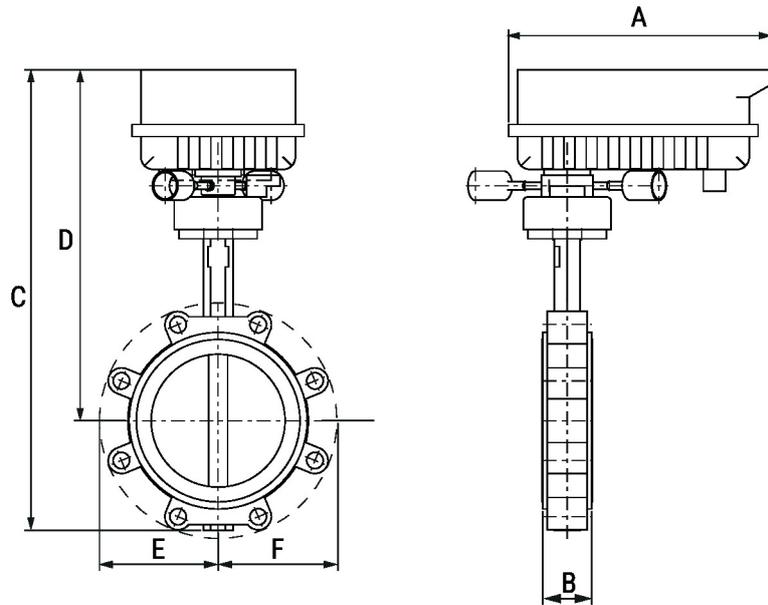
Valve with DRB, DKRB Actuator

| A           | B         | C           | D           | E          | F          | Number of Bolt Holes |
|-------------|-----------|-------------|-------------|------------|------------|----------------------|
| 11.3" [286] | 2.3" [58] | 17.9" [454] | 13.6" [345] | 4.9" [124] | 4.9" [125] | 8                    |



Valve with DRB..N4, DKRB..N4 Actuator

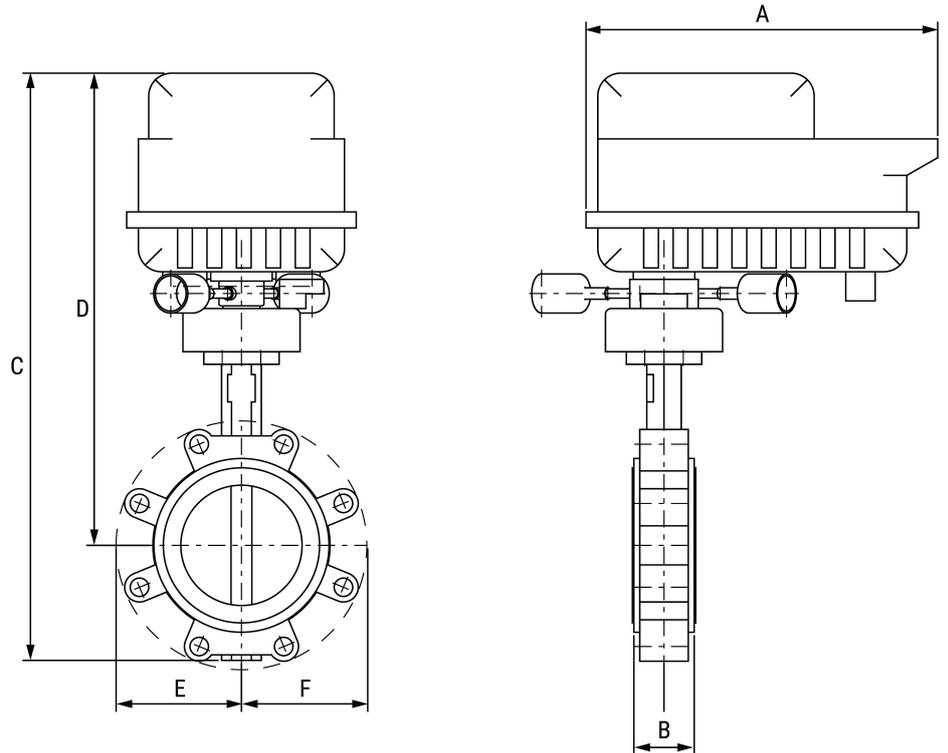
| A           | B         | C           | D           | E          | F          | Number of Bolt Holes |
|-------------|-----------|-------------|-------------|------------|------------|----------------------|
| 14.1" [358] | 2.3" [58] | 20.0" [509] | 15.7" [399] | 4.9" [124] | 4.9" [125] | 8                    |



Valve with PRB(X) Actuator

| A           | B         | C           | D           | E          | F          | Number of Bolt Holes |
|-------------|-----------|-------------|-------------|------------|------------|----------------------|
| 12.0" [304] | 2.3" [58] | 19.9" [506] | 15.5" [394] | 4.9" [124] | 4.9" [125] | 8                    |

Dimensions



Valve with PKR Actuator

| A           | B         | C           | D           | E          | F          | Number of Bolt Holes |
|-------------|-----------|-------------|-------------|------------|------------|----------------------|
| 12.0" [304] | 2.3" [58] | 22.1" [562] | 17.8" [453] | 4.9" [124] | 4.9" [125] | 8                    |



5-year warranty



Technical data

|                        |                                    |   |            |
|------------------------|------------------------------------|---|------------|
| <b>Electrical data</b> | 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                 | 21 VA   |            |
|                        | Electrical Connection              | Screw terminal (for 22 to 12 AWG wire)  |            |
|                        | Overload Protection                | electronic throughout 0...90° rotation  |            |
| <b>Functional data</b> | 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 On/Off                        |            |
|                        | Operating range Y variable         | Start point   | 0.5...30 V |
|                        |                                    | End point   | 2.5...32 V |
|                        | Operating modes optional           | variable (VDC, PWM, on/off, floating point)   |            |
|                        | Position feedback U                | 2...10 V  |            |
|                        | Position feedback U note           | Max. 0.5 mA   |            |
|                        | Position feedback U variable       | VDC variable  |            |
|                        | Direction of motion motor          | selectable with switch 0/1  |            |
|                        | Manual override                    | external push button  |            |
|                        | Running Time (Motor)               | 150 s / 90°   |            |
|                        | Running time motor variable        | 90...150 s  |            |
|                        | Noise level, motor                 | 45 dB(A)  |            |
| Position indication    | integrated into handle             |   |            |
| <b>Safety data</b>     | Power source UL                    | Class 2 Supply  |            |
|                        | Degree of protection IEC/EN        | IP54  |            |
|                        | Degree of protection NEMA/UL       | NEMA 2  |            |
|                        | Enclosure                          | UL Enclosure Type 2   |            |
|                        | 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  |            |
| <b>Weight</b>          | Weight                             | □   |            |
| <b>Materials</b>       | Housing material                   | Die cast aluminium and plastic casing   |            |

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    |
|                        | Feedback potentiometer 140 Ω add-on, grey   | P140A GR   |
|                        | Feedback potentiometer 5 kΩ add-on, grey  | P5000A GR  |
|                        | Feedback potentiometer 1 kΩ add-on, grey  | P1000A GR  |
|                        | Feedback potentiometer 2.8 kΩ add-on, grey  | P2800A GR  |
|                        | Feedback potentiometer 500 Ω add-on, grey   | P500A GR   |
|                        | Feedback potentiometer 10 kΩ add-on, grey   | P10000A GR |
|                        | Auxiliary switch 1x SPDT add-on   | S1A        |
|                        | Auxiliary switch 2x SPDT add-on   | S2A        |
|                        | Connecting cable 16 ft [5 m], A: RJ11 6/4 ZTH EU, B: 6-pin for connection to service socket   | ZK1-GEN    |
|                        | Service tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices | ZTH US     |
| Mechanical accessories | Description   | Type       |
|                        | Terminal-strip cover for NEMA 2 rating (-T models).   | ZS-T       |

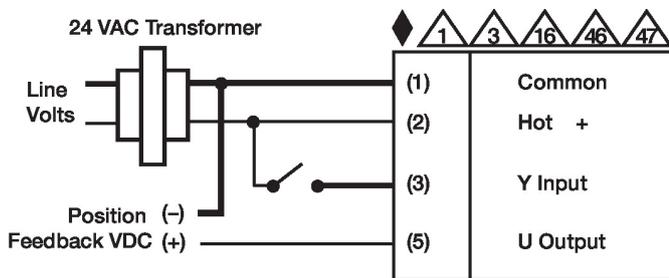
Electrical installation

**✂ INSTALLATION NOTES**

- 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.
- 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



Floating Point

