

## 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
F6100HD	100

## Technical data

<b>Functional data</b>	Valve size [mm]	4" [100]
	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 for use with ASME/ANSI class 125/150
	Servicing	maintenance-free
	Flow Pattern	2-way
	Controllable flow range	90° rotation
	Cv	600
	Maximum Velocity	12 FPS
	Lug threads	5/8-11 UNC
<b>Materials</b>	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
<b>Suitable actuators</b>	Non Fail-Safe	2*GMB(X) DRB(X) PRB(X)
	Electrical fail-safe	PKRB(X)

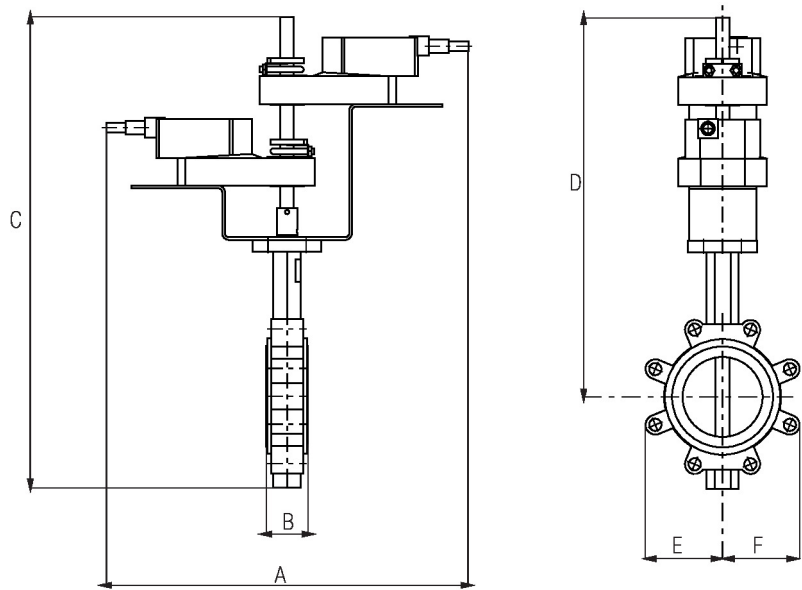
Product features

Flow/Mounting details



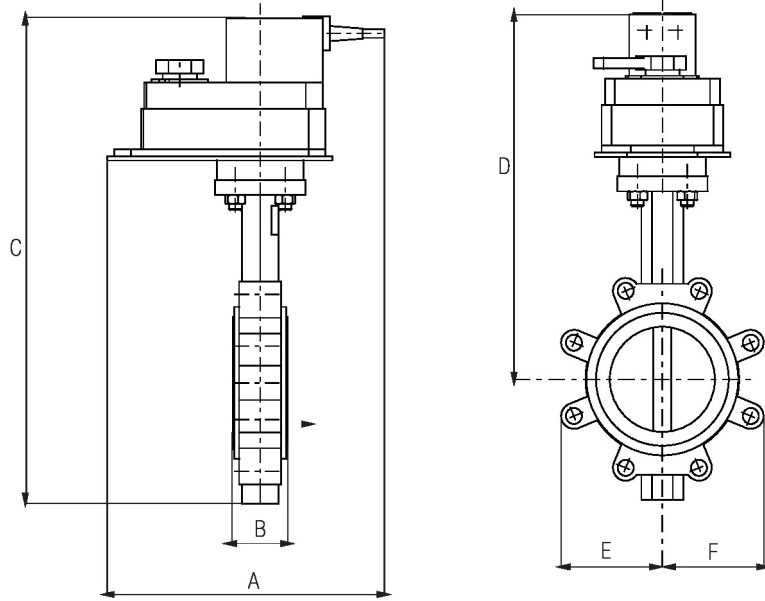
Dimensions

Type	DN	Weight
F6100HD	100	28 lb [13 kg]



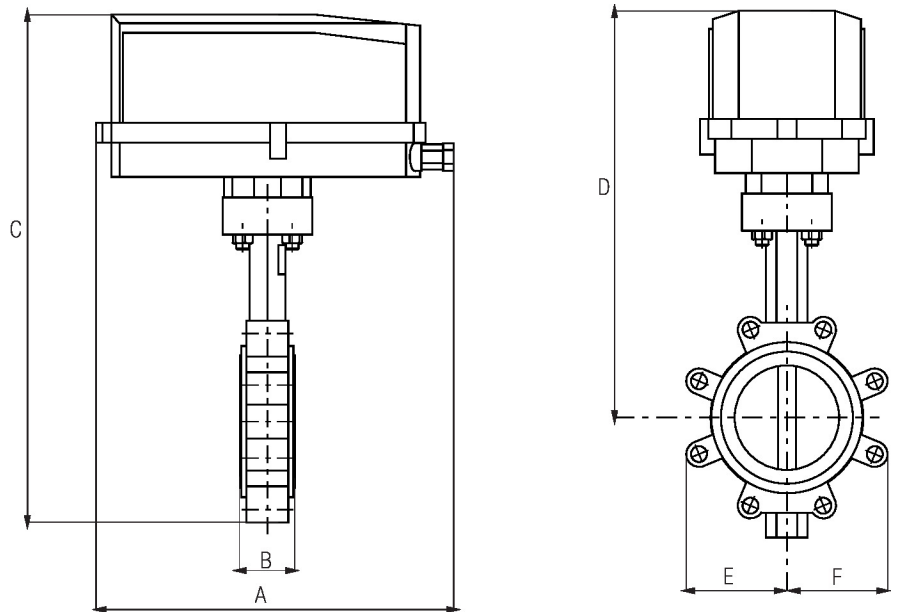
Valve with 2\*GK/2\*GM Actuator

A	B	C	D	E	F	Number of Bolt Holes
17.9" [454]	2.0" [52]	22.8" [578]	18.5" [470]	3.9" [100]	3.9" [100]	8



Valve with DK/DR Actuator

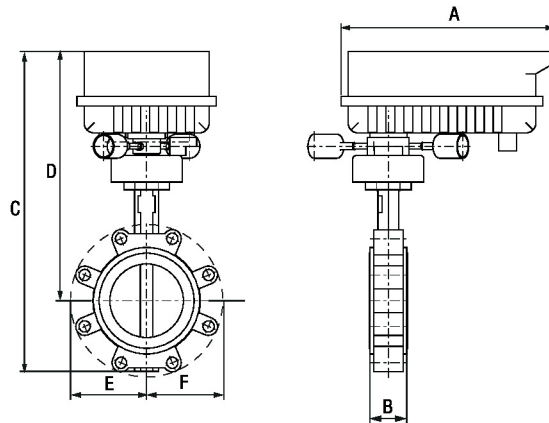
A	B	C	D	E	F	Number of Bolt Holes
11.3" [286]	2.0" [52]	17.0" [433]	13.0" [331]	4.3" [110]	4.3" [110]	8



Valve with DKR..N4, DR..N4 Actuator

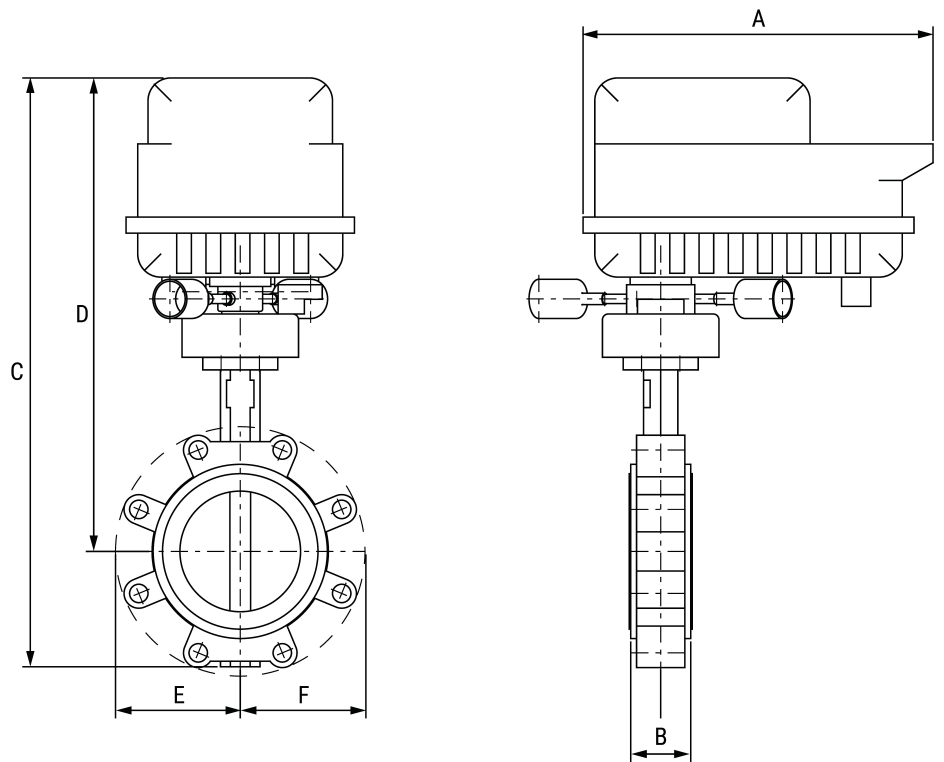
A	B	C	D	E	F	Number of Bolt Holes
14.1" [358]	2.0" [52]	19.0" [483]	15.2" [387]	4.3" [110]	4.3" [110]	8

Dimensions



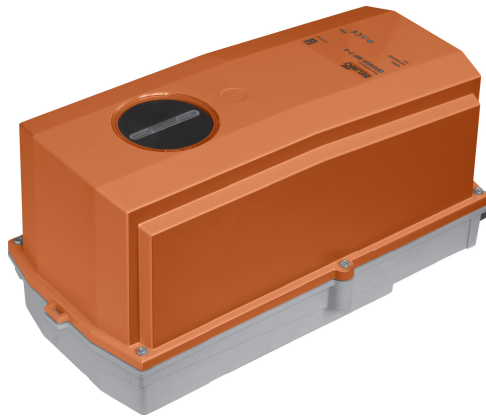
Valve with PRB(X) Actuator

A	B	C	D	E	F	Number of Bolt Holes
12.0" [304]	2.0" [52]	17.9" [454]	13.9" [354]	4.3" [110]	4.3" [110]	8



Valve with PKR Actuator

A	B	C	D	E	F	Number of Bolt Holes
12.0" [304]	2.0" [52]	20.0" [509]	16.2" [411]	4.3" [110]	4.3" [110]	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, 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	under cover	
	Running Time (Motor)	150 s / 90°	
	Running time motor variable	75...150 s	
	Noise level, motor	45 dB(A)	
Position indication	Mechanical, 5...20 mm stroke		
<b>Safety data</b>	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	
	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	
<b>Weight</b>	Weight	10 lb [4.6 kg]	
<b>Materials</b>	Housing material	Die cast aluminium and plastic casing	

**Accessories**

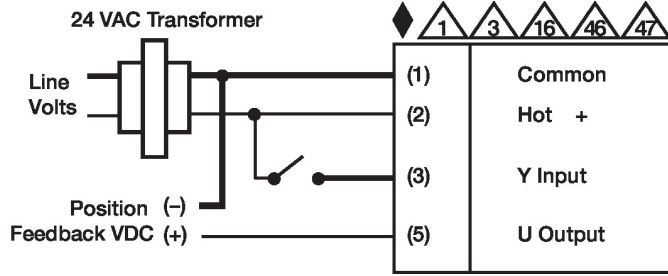
Gateways	Description	Type
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to Modbus RTU	UK24MOD
	Gateway MP to LonWorks	UK24LON
Electrical accessories	Description	Type
	Battery backup system, for non-spring return models	NSV24 US
	Battery, 12 V, 1.2 Ah (two required)	NSV-BAT
	Feedback potentiometer 140 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
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
Factory add-on option only	Description	Type
	Heater, with adjustable thermostat	ACT_PACK_H

**Electrical installation**
**INSTALLATION NOTES**

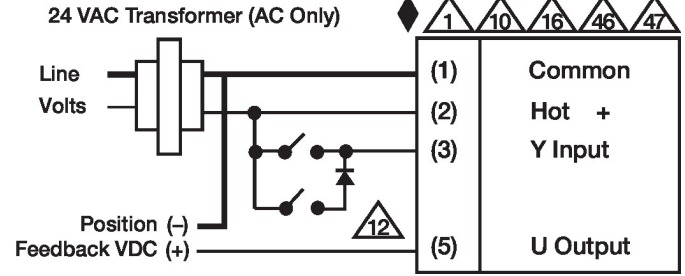
- Provide overload protection and disconnect as required.
- Actuators may also be powered by DC 24 V.
- Only connect common to negative (-) leg of control circuits.
- A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
- For triac sink the Common connection from the actuator 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.
- IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
- 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



VDC/mA Control

