

Butterfly Valve with ANSI Class 150 Lug types

- Disc 316 stainless steel
- Bubble tight shut-off
- Teflon seat
- Valve face-to-face dimensions comply with API 609 & MSS-SP-67
- For use with dead-end service
- Completely assembled and tested, ready for installation
- The SHP series are Flowseal® valves manufactured by the Crane Company.



Picture may differ from product



5-year warranty

Type overview

Type	DN
F6100-150SHP	100

Technical data

Functional data	Valve size [mm]	4" [100]
Fluid		chilled or hot water, up to 60% glycol, steam
Fluid Temp Range (water)		-22...400°F [-30...204°C]
Body Pressure Rating		ANSI Class 150
Close-off pressure Δps		285 psi
Flow characteristic		modified equal percentage, unidirectional
Leakage rate		0%
Pipe connection		Flange for use with ASME/ANSI class 150
Servicing		maintenance-free
Flow Pattern		2-way
Controllable flow range		quarter turn, mechanically limited
Cv		451
Maximum Inlet Pressure (Steam)		50 psi
Maximum Velocity		32 FPS
Lug threads		5/8-11 UNC
Materials	Valve body	Carbon steel full lug (ASME B16.34)
	Stem	17-4 PH stainless steel
	Seat	RPTFE
	Bearing	glass backed PTFE
	Disc	316 stainless steel
Suitable actuators	Non Fail-Safe	PRB(X) GMB(X)
	Spring	2*AFB(X)
	Electronic fail-safe	PKRB(X) GKRB(X)

Safety notes



- **WARNING:** This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov

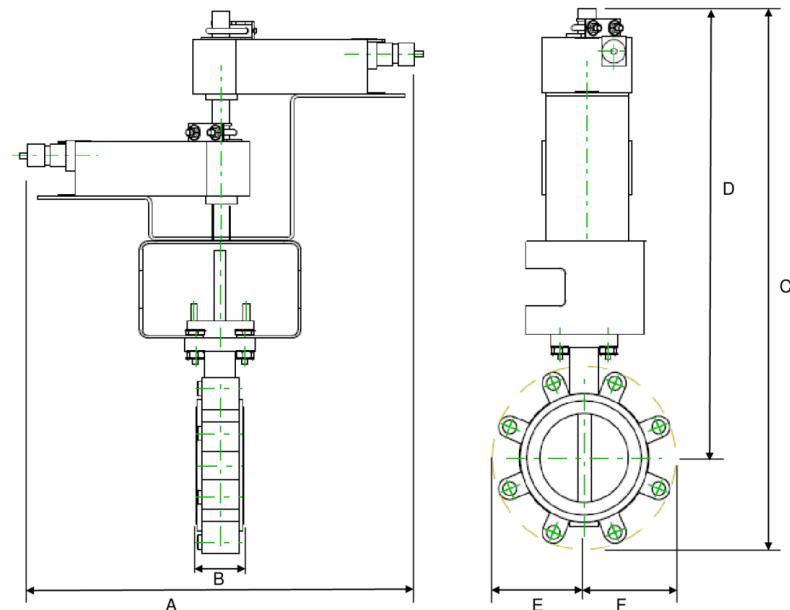
Product features

Flow/Mounting details

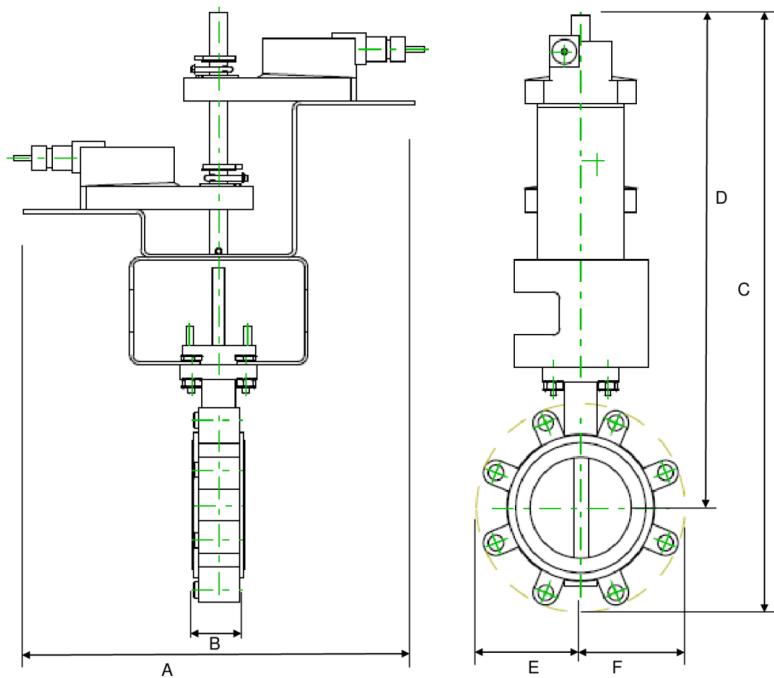


Dimensions

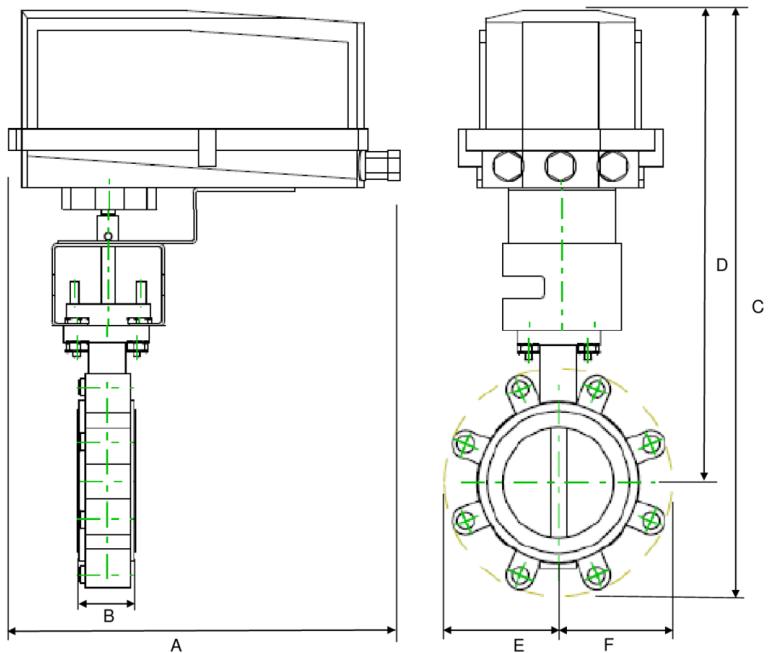
Type	DN	Weight
F6100-150SHP	100	10 lb [4.5 kg]



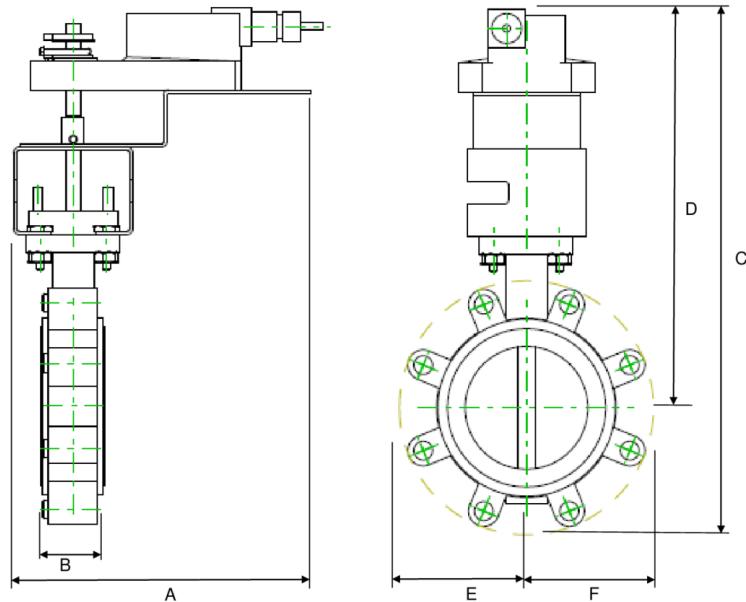
A	B	C	D	E	F	Number of Bolt Holes
18.0" [457]	2.1" [54]	24.0" [610]	20.5" [521]	4.3" [110]	4.3" [110]	8



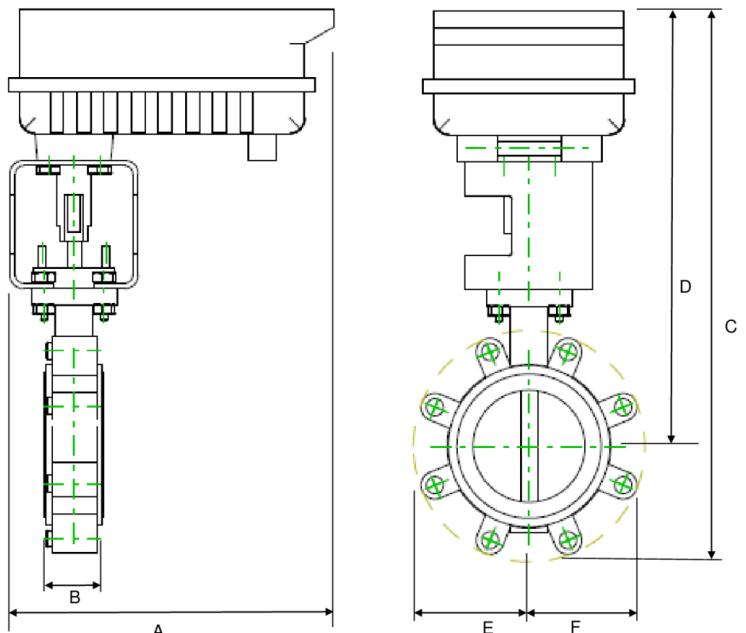
A	B	C	D	E	F	Number of Bolt Holes
18.9" [480]	2.2" [56]	24.3" [616]	20.1" [511]	4.3" [110]	4.3" [110]	8



A	B	C	D	E	F	Number of Bolt Holes
15.3" [388]	2.2" [56]	18.7" [476]	14.8" [377]	3.9" [100]	3.9" [100]	8

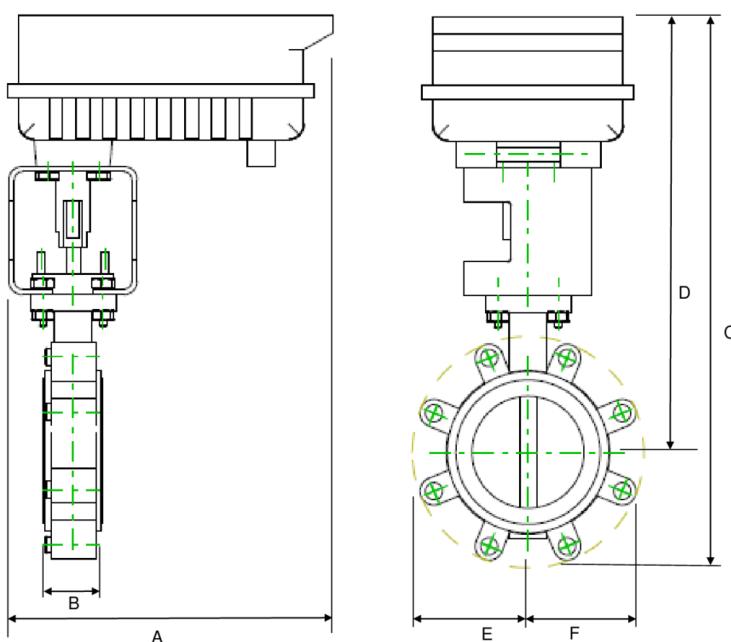


A	B	C	D	E	F	Number of Bolt Holes
10.9" [277]	2.2" [56]	20.3" [515]	15.5" [394]	4.9" [124]	4.9" [125]	8



A	B	C	D	E	F	Number of Bolt Holes
9.1" [231]	2.2" [56]	17.2" [438]	13.3" [338]	3.9" [100]	3.9" [100]	8

Dimensions



A	B	C	D	E	F	Number of Bolt Holes
14.1" [358]	2.2" [56]	24.9" [632]	19.6" [498]	5.4" [137]	5.4" [137]	8

MFT/programmable, Spring return, 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	7.5 W
	Power consumption in rest position	3 W
	Transformer sizing	20 VA
	Electrical Connection	18 GA appliance 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, 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
	Direction of motion fail-safe	reversible with cw/ccw mounting
	Manual override	5 mm hex crank (3/16" Allen), supplied
	Angle of rotation	95°
	Angle of rotation note	adjustable with mechanical end stop, 35...95°
	Running Time (Motor)	150 s / 90°
	Running time motor variable	70...220 s
	Running time fail-safe	<20 s
	Override control	MIN (minimum position) = 0% MID (intermediate position) = 50% MAX (maximum position) = 100%
	Noise level, motor	40 dB(A)

Technical data

Functional data	Noise level, fail-safe	62 dB(A)
	Position indication	Mechanical
Safety data	Power source UL	Class 2 Supply
	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
	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 *Variable when configured with MFT options.

Accessories

	Description	Type
Gateways	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to Modbus RTU	UK24MOD
	Gateway MP to LonWorks	UK24LON
Electrical accessories	Description	Type
	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



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.



Actuators with appliance cables are numbered.



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



Provide overload protection and disconnect as required.



Actuators may also be powered by DC 24 V.

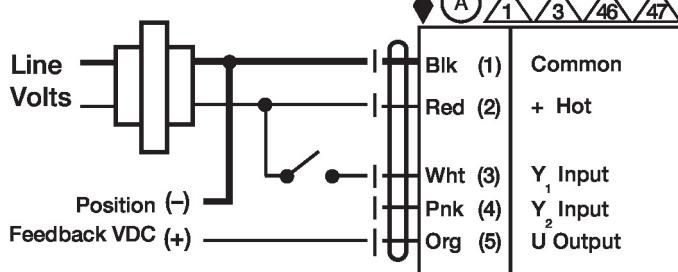
Electrical installation

- 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).

Wiring diagrams

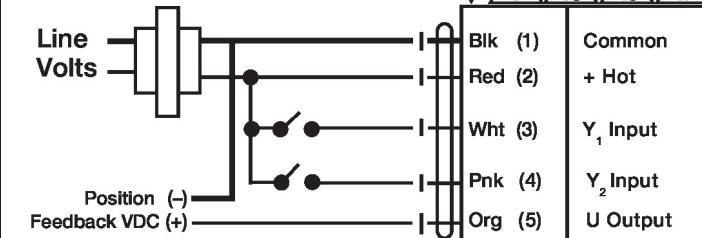
On/Off

24 VAC Transformer



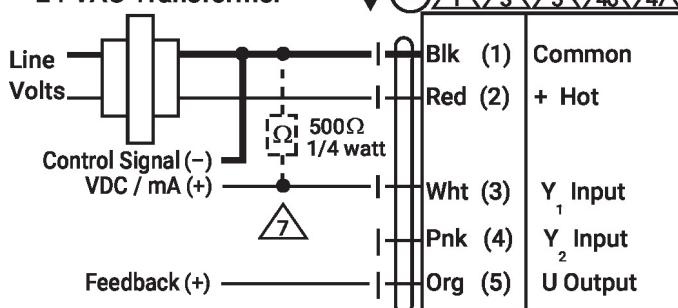
Floating Point

24 VAC Transformer (AC Only)



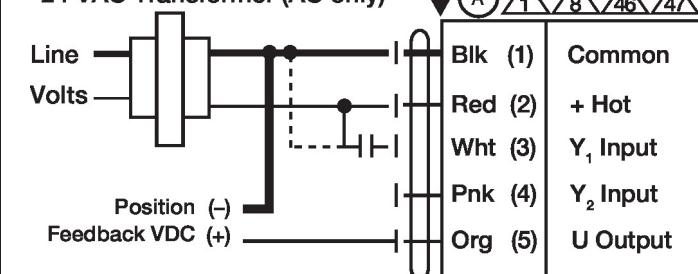
VDC/mA Control

24 VAC Transformer



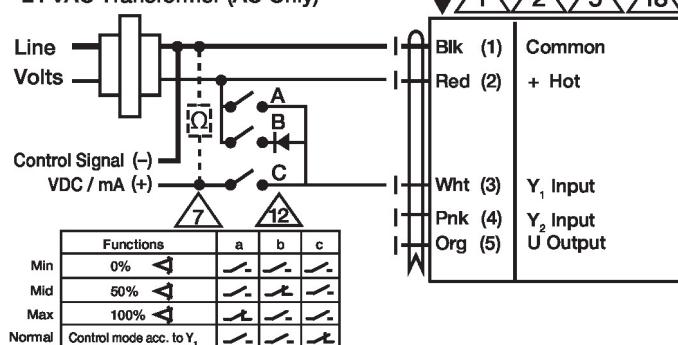
PWM Control

24 VAC Transformer (AC only)



Override Control

24 VAC Transformer (AC Only)



Primary - Secondary

