

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.



5-year warranty

Picture may differ from product

Type overview

Type	DN
F780-150SHP	80

Technical data

Functional data	Valve size [mm]	3" [80]
Fluid		chilled or hot water, up to 60% glycol
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 linear, unidirectional
Leakage rate		0%
Pipe connection		Flange for use with ASME/ANSI class 150
Servicing		maintenance-free
Flow Pattern		3-way Mixing/Diverting
Controllable flow range		quarter turn, mechanically limited
Cv		228
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	2*GMB(X) PRB(X) GMB(X)
	Electronic fail-safe	2*GKB(X) PKRB(X)

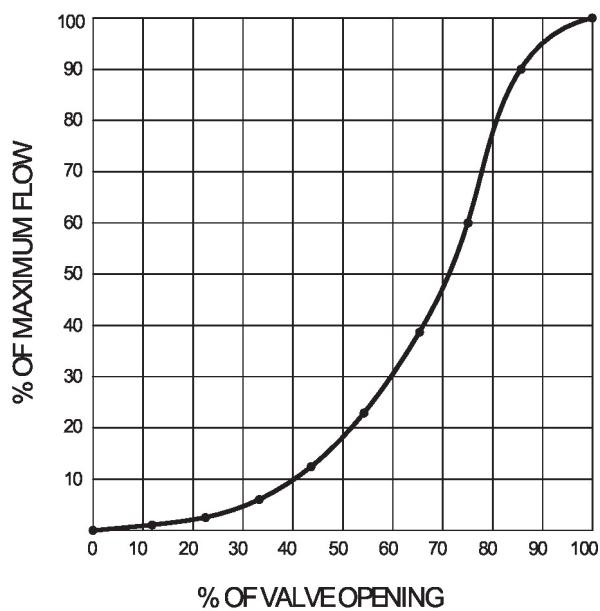
Safety notes



- 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

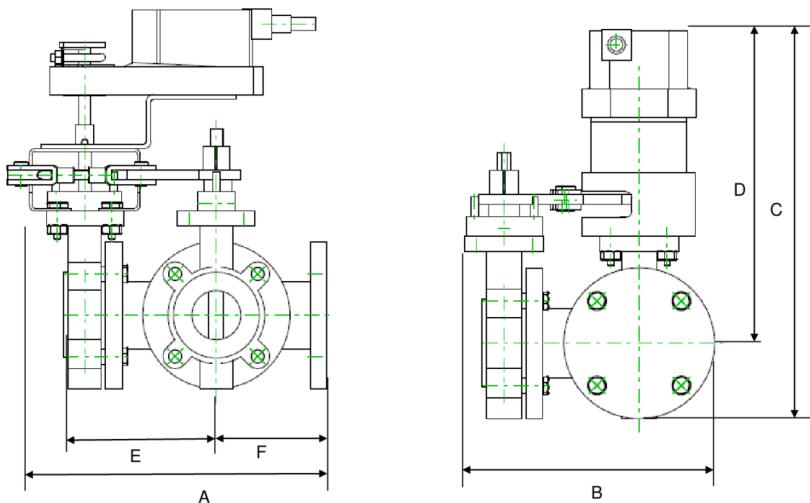
Product features

Flow/Mounting details

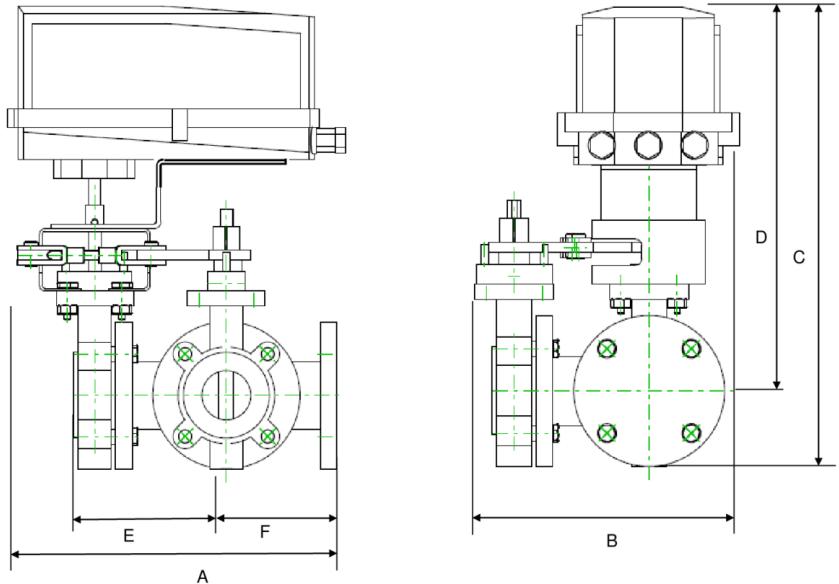


Dimensions

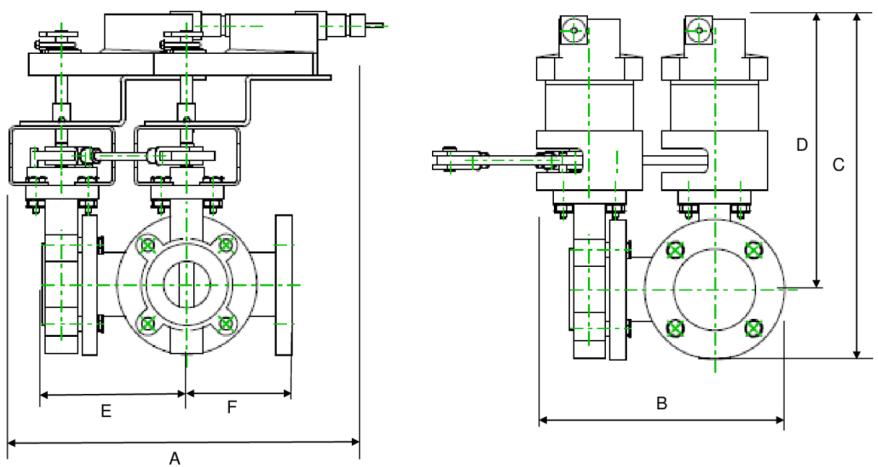
Type	DN	Weight
F780-150SHP	80	19 lb [8.5 kg]



A	B	C	D	E	F	Number of Bolt Holes
13.4" [340]	11.2" [284]	17.0" [433]	13.2" [336]	7.8" [199]	5.5" [140]	4

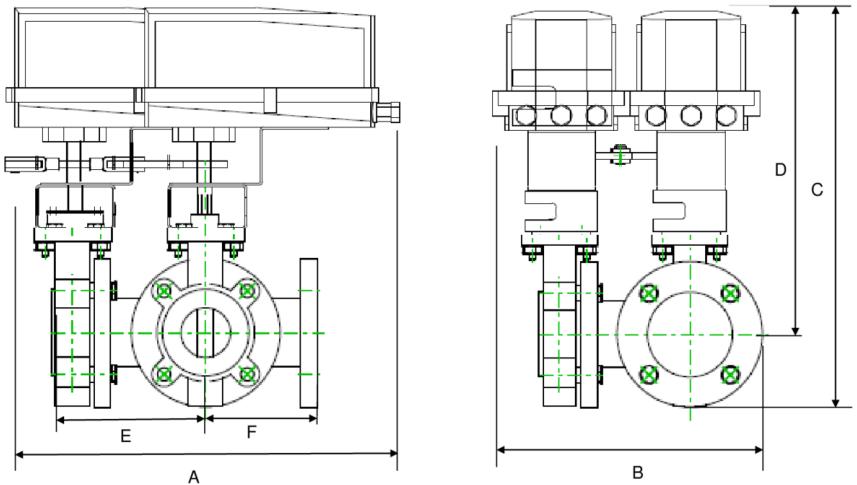


A	B	C	D	E	F	Number of Bolt Holes
17.3" [440]	11.2" [284]	16.3" [415]	12.5" [318]	7.4" [187]	5.5" [140]	4



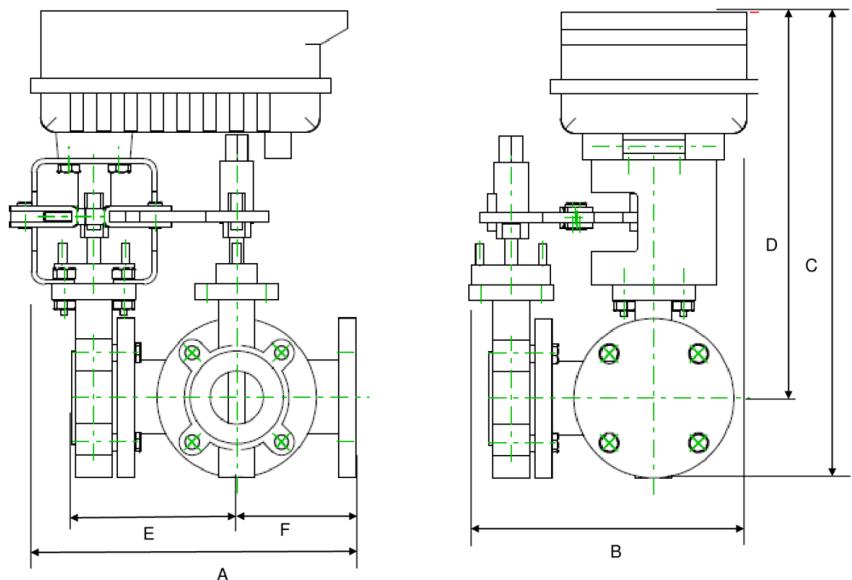
2*GM/2*GK

A	B	C	D	E	F	Number of Bolt Holes
20.6" [522]	11.2" [284]	18.3" [464]	14.5" [368]	7.4" [187]	5.5" [140]	4



2*GM

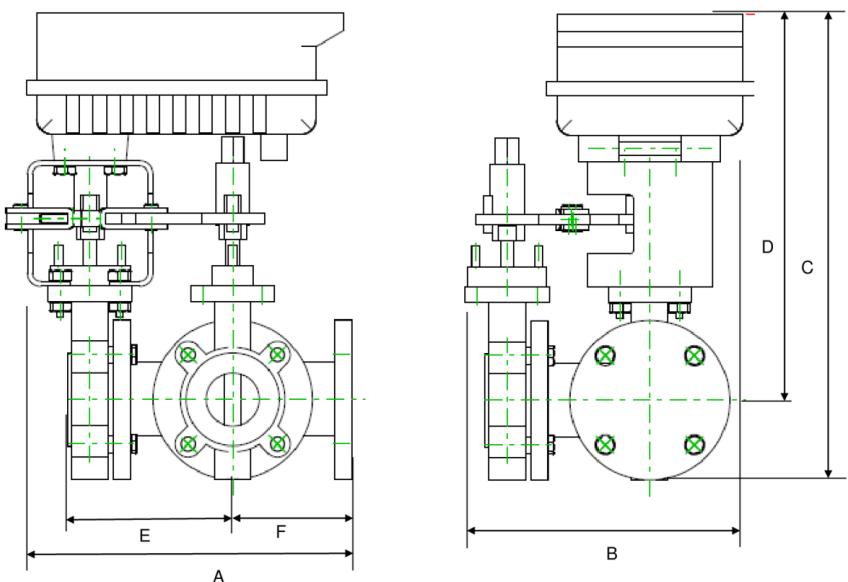
A	B	C	D	E	F	Number of Bolt Holes
15.1" [383]	11.2" [284]	17.0" [433]	13.2" [336]	7.4" [187]	5.5" [140]	4



PR

A	B	C	D	E	F	Number of Bolt Holes
15.1" [383]	11.2" [284]	16.3" [415]	12.5" [318]	7.4" [187]	5.5" [140]	4

Dimensions



PK

A	B	C	D	E	F	Number of Bolt Holes
15.6" [396]	11.2" [284]	18.3" [464]	14.5" [368]	7.4" [187]	5.5" [140]	4



2-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	12 VA
	Electrical Connection	Terminal blocks
	Overload Protection	electronic throughout 0...95° rotation
Functional data	Direction of motion motor	selectable with switch 0/1
	Manual override	external push button
	Angle of rotation	Max. 95°
	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
	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	[]
Materials	Housing material	Die cast aluminium and plastic casing

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

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 k Ω add-on, grey		P1000A GR
Feedback potentiometer 10 k Ω add-on, grey		P10000A GR
Feedback potentiometer 2.8 k Ω add-on, grey		P2800A GR
Feedback potentiometer 500 Ω add-on, grey		P500A GR
Feedback potentiometer 5 k Ω add-on, grey		P5000A GR
Factory add-on option only	Description	Type
Heater, with adjustable thermostat		ACT_PACK_H

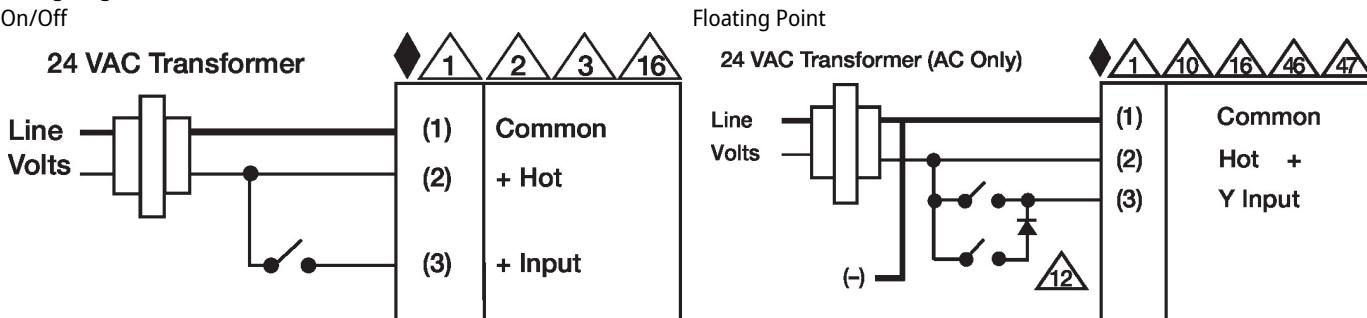
Electrical installation

 **INSTALLATION NOTES**

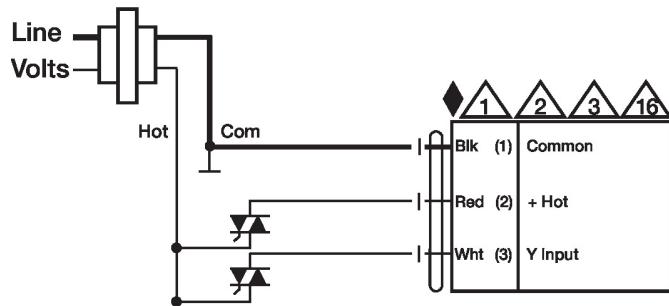
-  Actuators with appliance cables are numbered.
-  Provide overload protection and disconnect as required.
-  Actuators may also be powered by DC 24 V.
-  Actuators Hot wire must be connected to the control board common. Only connect common to neg. (-) leg of control circuits. Terminal models (-T) have no-feedback.
-  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.
-  Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.
-  IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
-  Actuators are provided with a numbered screw terminal strip instead of a cable.
-  Actuators may be controlled in parallel. Current draw and input impedance must be observed.
-  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



Floating Point - Triac Source
24 VAC Transformer



Floating Point - Triac Sink
24 VAC Transformer

