

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



5-year warranty

Type overview

Type	DN
F680-150SHP	80

Technical data

Functional data	Valve size [mm]	3" [80]
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
Pipe connection		Flange for use with ASME/ANSI class 150
Servicing		maintenance-free
Flow Pattern		2-way
Leakage rate		0%
Controllable flow range		quarter turn, mechanically limited
Cv		228
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)
	Electrical fail-safe	PKRB(X) GKRB(X)

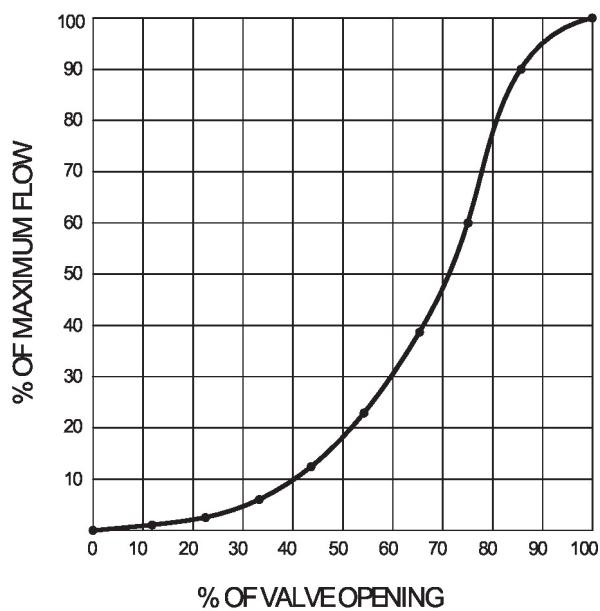
Safety notes



- 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

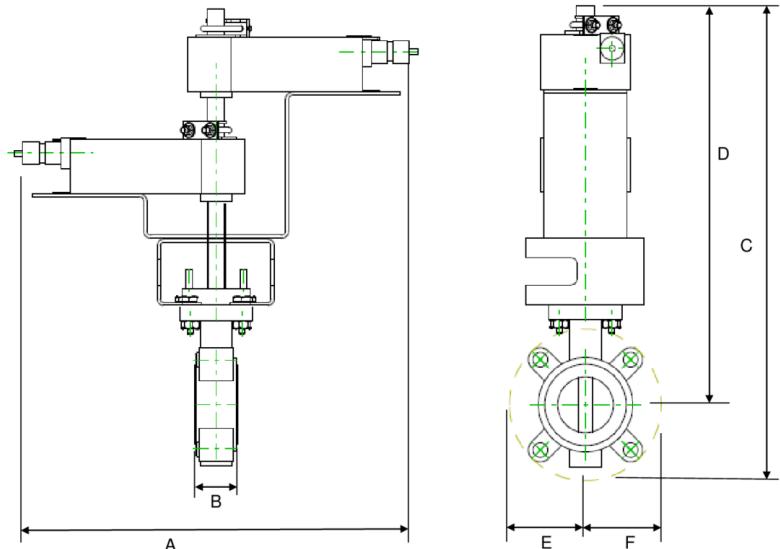
Product features

Flow/Mounting details

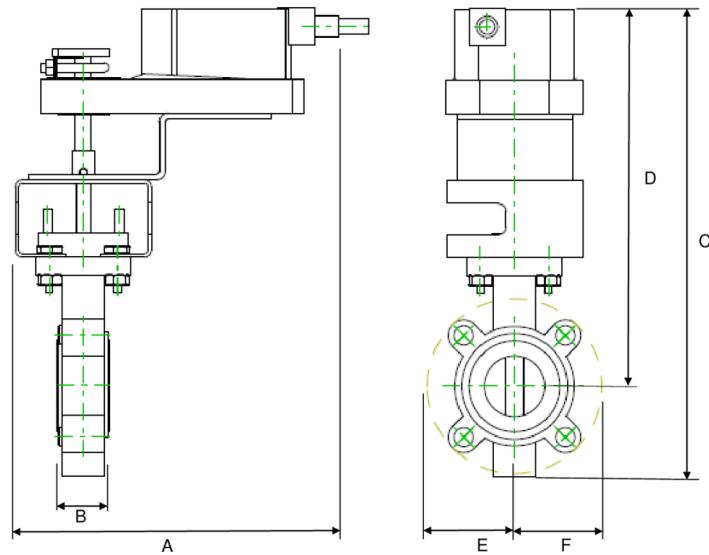


Dimensions

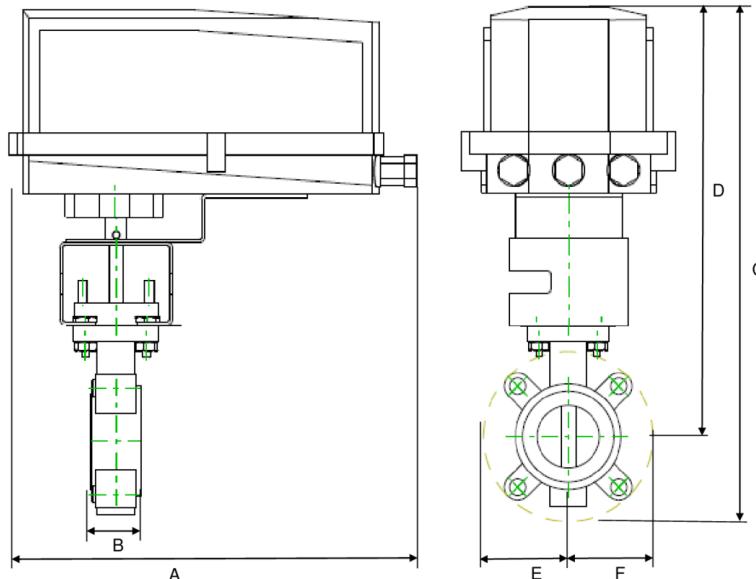
Type	DN	Weight
F680-150SHP	80	4.8 lb [2.2 kg]



A	B	C	D	E	F	Number of Bolt Holes
18.0" [457]	1.9" [49]	20.0" [509]	17.0" [431]	3.5" [89]	3.5" [89]	4



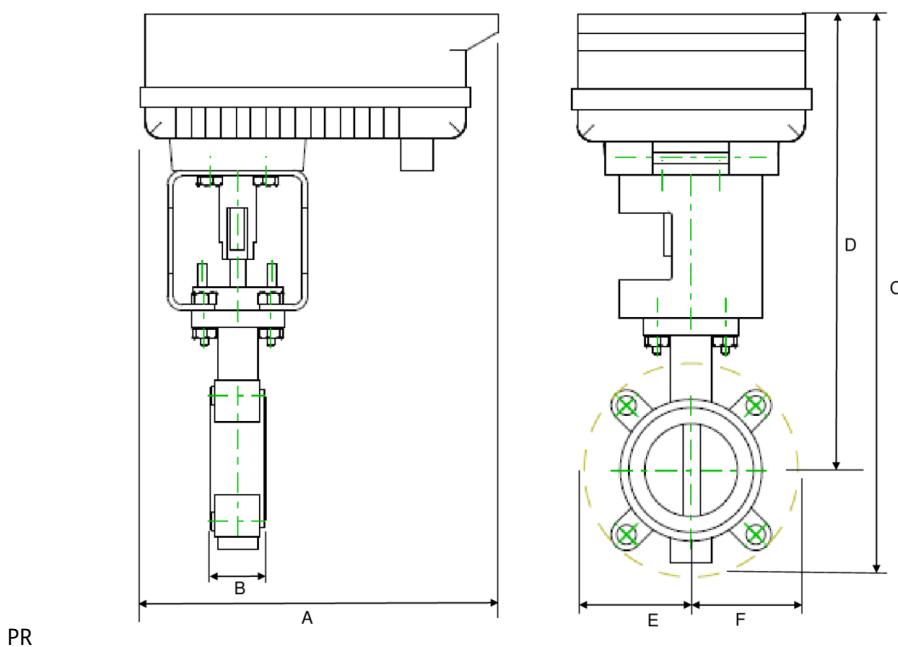
A	B	C	D	E	F	Number of Bolt Holes
10.9" [277]	1.9" [49]	17.9" [454]	13.2" [336]	4.9" [124]	4.9" [125]	4



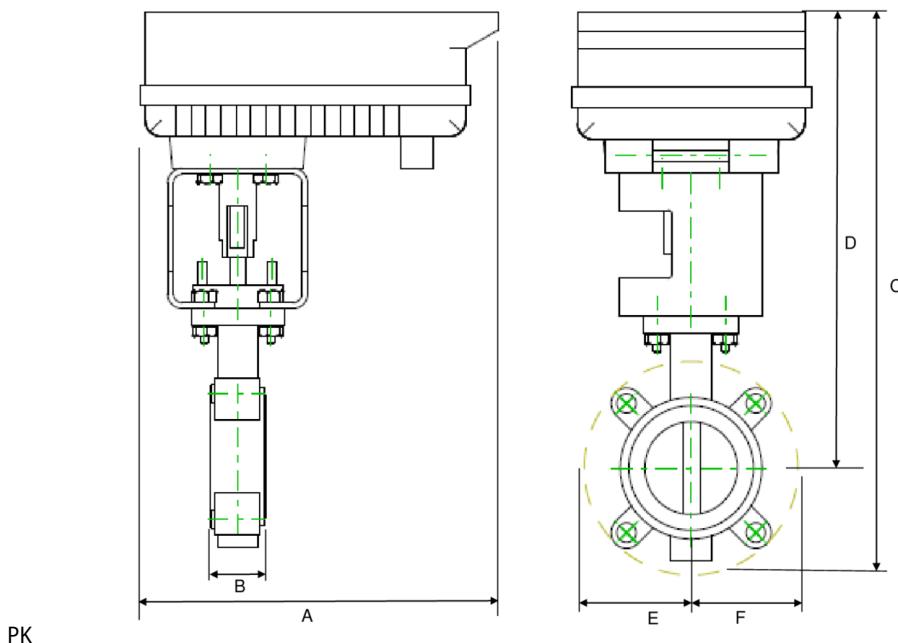
GM N4

A	B	C	D	E	F	Number of Bolt Holes
9.1" [231]	1.9" [49]	13.9" [354]	10.0" [254]	3.9" [100]	3.9" [100]	4

Dimensions

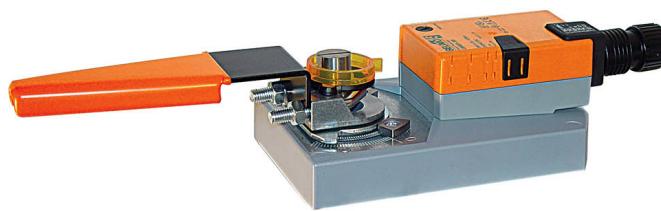


A	B	C	D	E	F	Number of Bolt Holes
14.1" [358]	1.9" [49]	19.8" [502]	14.5" [368]	5.2" [133]	5.2" [133]	4



A	B	C	D	E	F	Number of Bolt Holes
12.0" [304]	1.9" [49]	22.4" [570]	17.5" [445]	4.9" [124]	4.9" [125]	4
A	B	C	D	E	F	Number of Bolt Holes
11.7" [298]	1.9" [49]	18.5" [470]	15.0" [381]	3.5" [89]	3.5" [89]	4

On/Off, Floating point, Non fail-safe, 24 V



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	4 W
	Power consumption in rest position	2 W
	Transformer sizing	6 VA
	Electrical Connection	18 GA plenum cable, 1 m, with 1/2" NPT conduit connector, degree of protection NEMA 2 / IP54
	Overload Protection	electronic throughout 0...95° rotation
Functional data	Torque motor	40 Nm
	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)	150 s / 90°
	Running time motor note	constant, independent of load
	Noise level, motor	45 dB(A)
	Position indication	Mechanical, 30...65 mm stroke
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 and 2014/35/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	4.1 lb [1.9 kg]
Materials	Housing material	Galvanized steel and plastic housing

Technical data

Footnotes [†]Rated Impulse Voltage 800V, Type action 1, 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
Feedback potentiometer 140 Ω add-on, grey		P140A GR
Feedback potentiometer 500 Ω add-on, grey		P500A GR
Feedback potentiometer 1 k Ω add-on, grey		P1000A GR
Feedback potentiometer 2.8 k Ω add-on, grey		P2800A GR
Feedback potentiometer 5 k Ω add-on, grey		P5000A GR
Feedback potentiometer 10 k Ω add-on, grey		P10000A GR
Auxiliary switch 1x SPDT add-on		S1A
Auxiliary switch 2x SPDT add-on		S2A

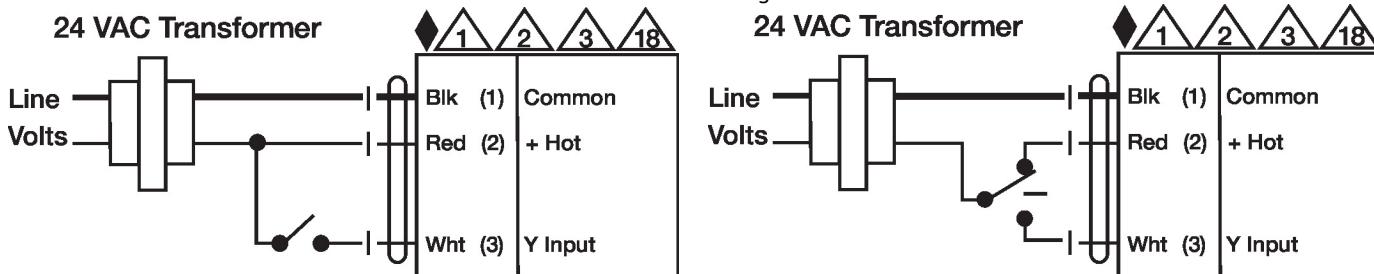
Electrical installation

INSTALLATION NOTES

- (A)** Actuators with appliance cables are numbered.
- (1)** Provide overload protection and disconnect as required.
- (3)** Actuators may also be powered by DC 24 V.
- (6)** 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.
- (11)** Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.
- 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

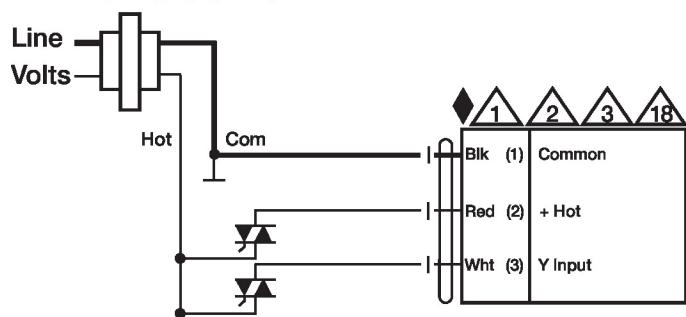
On/Off



Electrical installation

Wiring diagrams

24 VAC Transformer

Floating Point - Triac Sink
24 VAC Transformer