

F680HD, 3", 2-Way Butterfly Valve

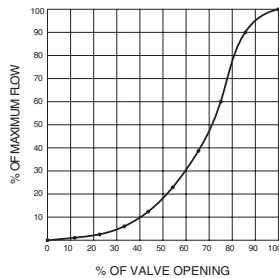
Resilient Seat, 304 Stainless Steel Disc



Technical Data

Media	chilled, hot water, up to 60% glycol
Flow characteristic	modified equal percentage
Controllable flow range	90° rotation
Valve Size	3 " [80]
Pipe connection	for use with ANSI class 125/150 flanges
Housing	ductile iron ASTM A536
Surface treatment	epoxy powder coated
Stem seal	EPDM (lubricated)
Seat	EPDM
Stem	416 stainless steel
Bearing	RPTFE
Disc	304 stainless steel
Body Pressure Rating	232 psi CWP
ANSI Class	Consistent with 125
Number of Bolt Holes	4
Lug threads	5/8-11 UNC
Close-Off Pressure	200 psi
Rangeability Sv	10:1 (for 30° to 70° range)
Maximum Velocity	12 FPS
Cv	302
Weight	6.91 lb [3.1 kg]
Leakage rate	0%
Maintenance	maintenance free

Flow Pattern



Application

Valve is designed for use in ANSI flanged piping systems to meet the needs of bi-directional high flow HVAC hydronic applications with 0% leakage. Typical applications include cooling tower bypass, primary flow change-over systems, and large air handler coil control. Valve face-to-face dimensions comply with API 609 & MSS-SP-67, Completely assembled and tested, Ready for installation.

Jobsite Note

Valve assembly should be stored in a weather protected area prior to installation. Reference the butterfly valve installation instruction for additional information.

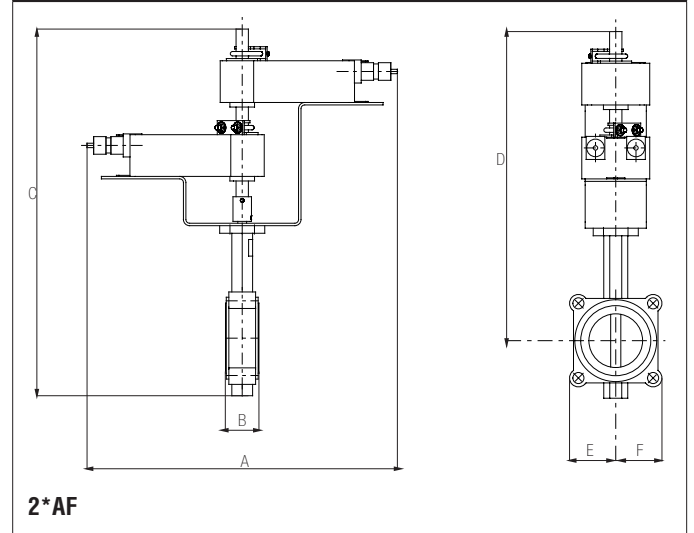
Flow/Cv

Cv 10°	Cv 20°	Cv 30°	Cv 40°	Cv 50°	Cv 60°	Cv 70°	Cv 80°	Cv 90°
0.2	9	18	39	70	116	183	275	302

Suitable Actuators

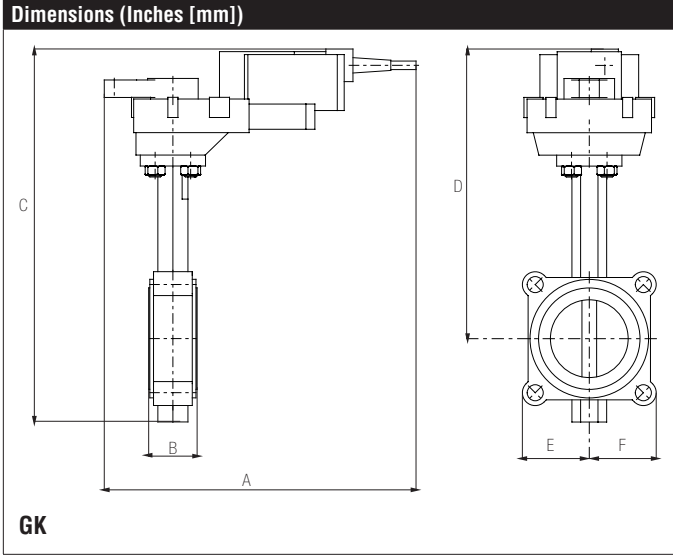
	Non-Spring	Spring	Electronic fail-safe
F680HD	GRB(X)	2*AFB(X)	GKRB(X)

Dimensions (Inches [mm])

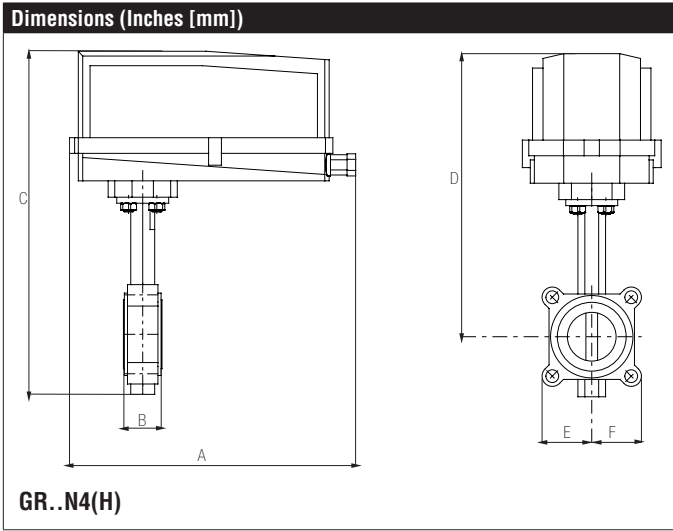


A	B	C	D	E	F
16.9" [429]	1.81" [46]	21.38" [544]	17.63" [448]	3.75" [95]	

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A	B	C	D	E	F
12.7" [323]	1.81" [46]	15.10" [384]	11.5" [292]	3.75" [95]	

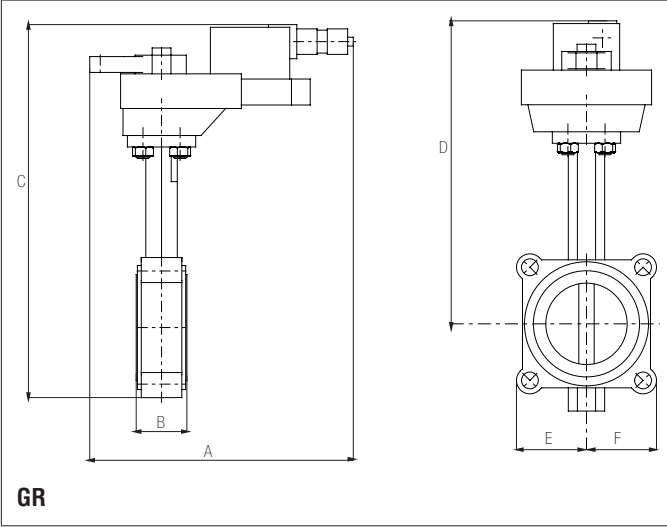


A	B	C	D	E	F
14.1" [358]	1.81" [46]	18.39" [467.1]	14.8" [328]	3.75" [95]	

F680HD, 3", 2-Way Butterfly Valve

Resilient Seat, 304 Stainless Steel Disc

Dimensions (Inches [mm])



GR

A	B	C	D	E	F
12.7" [323]	1.81" [46]	15.10" [384]	11.16" [283]	2.6" [66]	

GRCX120-3 N4

On/Off, Floating Point, Non-Spring Return, 100 to 240 VAC



Technical Data	
Power Supply	100...240 VAC, ±20%, 50/60 Hz, DC, ±10%
Power consumption in operation	6 W
Power consumption in rest position	2 W
Transformer sizing	11 VA (class 2 power source)
Electrical Connection	18 GA appliance cable, 3 ft [1 m], with 1/2" conduit connector
Overload Protection	electronic throughout 0° to 90° rotation
Input Impedance	600 Ω
Angle of rotation	90°, adjustable with mechanical stop
direction of rotation motor	reversible with built-in switch
Position indication	dial
Manual override	under cover
Running time motor	35 sec, constant, independent of load
Ambient humidity	5...95% r.H. non condensing (EN 60730-1)
Ambient temperature	-22...122°F [-30...50°C]
Non-operating temperature	-40...176°F [-40...80°C]
Degree of Protection	IP66/67, NEMA 4X, UL Enclosure Type 4X
Housing material	polycarbonate
Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level, motor	<45 dB (A)
Maintenance	maintenance free
Quality Standard	ISO 9001
Weight	9.92 lb [4.5 kg]

†Rated Impulse Voltage 2.5kV, Type of Action 1.AA, Control Pollution Degree 3.

Date created, 04/01/2019 - Subject to change. © Belimo Aircontrols (USA), Inc.

Wiring Diagrams
INSTALLATION NOTES

- Actuators with appliance cables are numbered.
- Provide overload protection and disconnect as required.
- Actuators may be connected in parallel. 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.

