

# F665VIC Technical Data Sheet

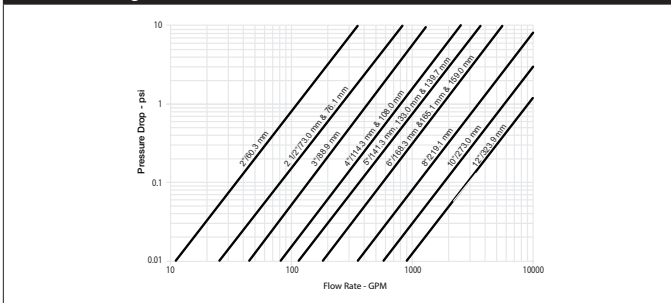
## Pressure Enhanced Rubber Seat



Technical Data	
Fluid	chilled, hot water, up to 60% glycol
Flow characteristic	modified equal percentage
Controllable flow range	90° rotation
Valve Size [mm]	2.5" [65]
Pipe connection	grooved ANSI/AWWA (c606)
Housing	Ductile cast iron ASTM A536
Body finish	black alkyd enamel
Stem	416 stainless steel
Spindle bearing	fiberglass with TFE lining
Seat	EPDM
Disc	electroless nickel coated ductile iron
Body Pressure Rating	ANSI Class Grooved AWWA, 300 psi
ANSI Class	Grooved AWWA
Rangeability Sv	100:1
Maximum Velocity	20 FPS
Cv	260
Weight	4.9 lb [2.2 kg]
Fluid Temp Range (water)	-22...250°F [-30...120°C]
Leakage rate	0%
Maintenance	maintenance-free

Close-off pressures are variable and actuator dependent, consult Select Pro and/or Price Guide for specifics.

### Flow/Mounting Details



### Application

These valves are designed to meet the needs of HVAC and commercial applications requiring bubble tight shut-off for liquids. Typical applications include chiller isolation, cooling tower isolation, change-over systems, large air handler coil control, bypass and process control applications. The large Cv values provide for an economical control valve solution for larger flow applications. Designed for use in Victaulic® piping systems.

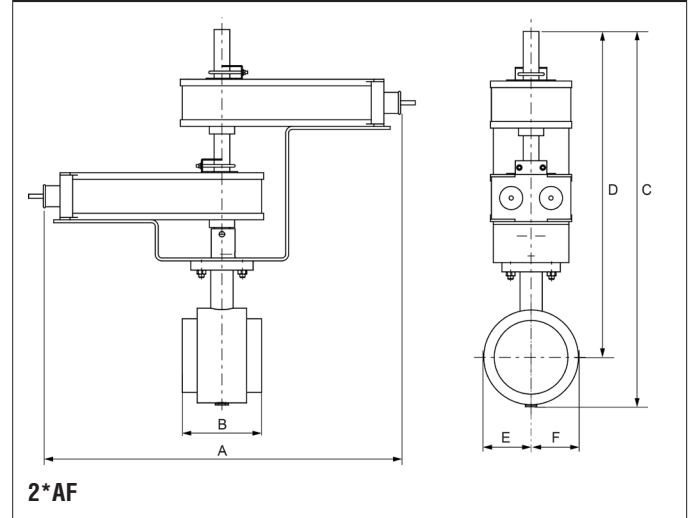
### Jobsite Note

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 30°	Cv 40°	Cv 50°	Cv 60°	Cv 70°	Cv 90°
16	30	50	80	140	260

Suitable Actuators		
	Non-Spring	Spring
F665VIC	AMB(X), GRCB(X), GMB(X)	AFB(X)

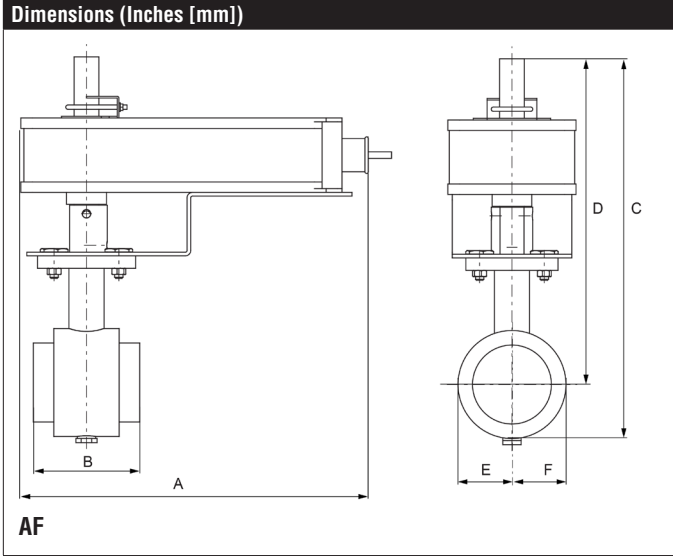
### Dimensions (Inches [mm])



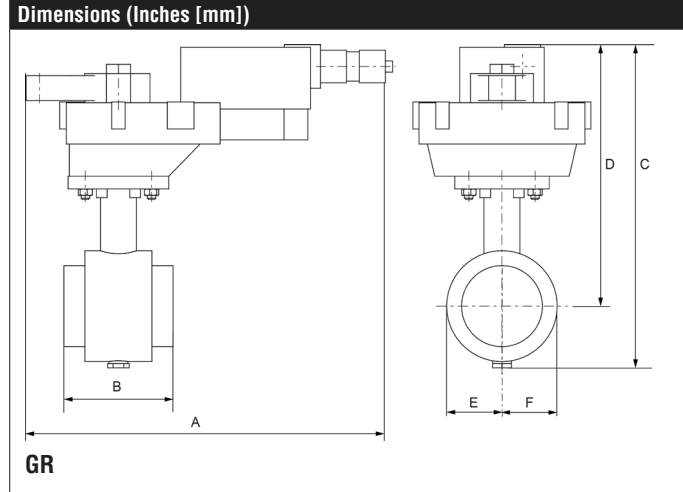
A	B	C	D	E	F
17.0" [433]	3.8" [97]	16.4" [416]	14.3" [363]	2.0" [51]	

### Safety Notes

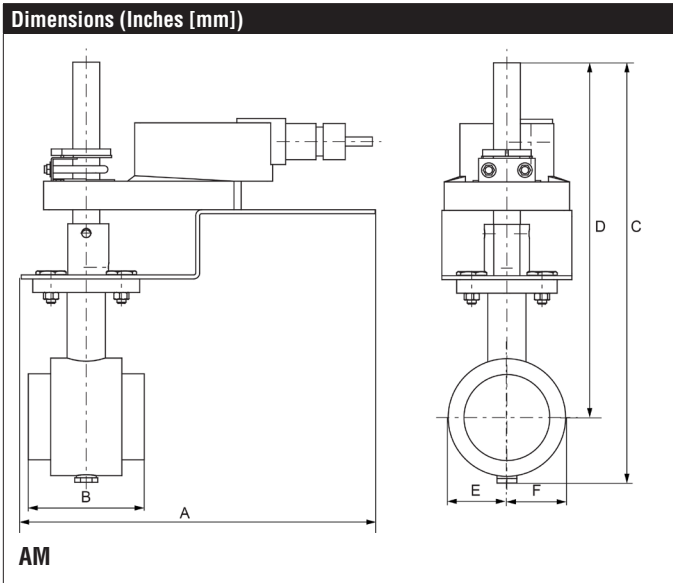
**WARNING:** For Belimo products sold in California: these products do or may contain chemicals which are known to the State of California to cause cancer and or birth defects or other reproductive harms. For more information see [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).



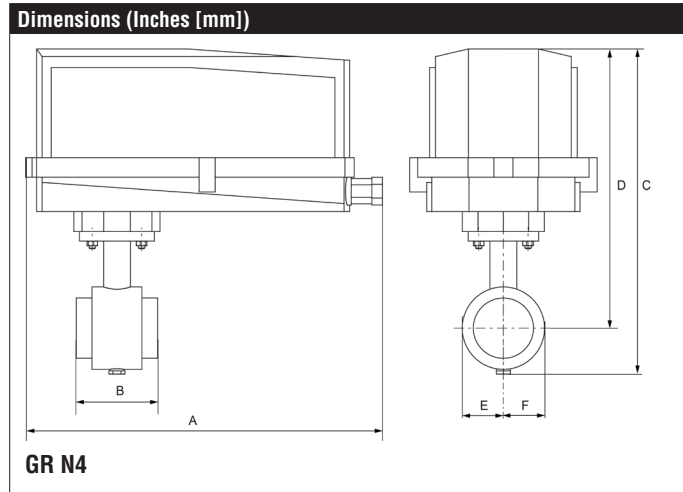
A	B	C	D	E	F
10.5" [267]	3.8" [97]	12.3" [312]	10.2" [260]	2.0" [51]	



A	B	C	D	E	F
10.8" [275]	3.8" [97]	10.2" [260]	8.1" [206]	2.0" [51]	



A	B	C	D	E	F
9.8" [249]	3.8" [97]	12.3" [312]	10.2" [260]	2.0" [51]	



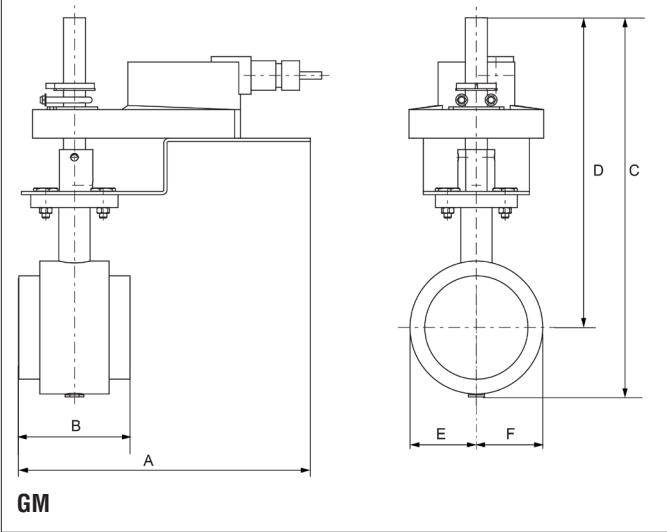
A	B	C	D	E	F
14.1" [358]	3.8" [97]	13.6" [345]	11.5" [292]	2.0" [51]	

# F665VIC Technical Data Sheet

## Pressure Enhanced Rubber Seat



### Dimensions (Inches [mm])



A	B	C	D	E	F
9.9" [251]	3.8" [97]	12.3" [312]	10.2" [260]	2.0" [51]	

Date created, 09/11/2019 - Subject to change. © Belimo Aircontrols (USA), Inc.

# AFBUP-S-X1 Technical Data Sheet

## On/Off, Spring Return, AC/DC 24 V



5-year warranty



### Technical Data

Power Supply	24...240 VAC, -20% / +10%, 50/60 Hz, 24...125 VDC, ±10%
Power consumption in operation	7.5 W
Power consumption in rest position	3.5 W
Transformer sizing	7 VA @ 24 VAC (class 2 power source), 8.5 VA @ 120 VAC, 18 VA @ 240 VAC
Electrical Connection	(2) 18 GA appliance cables with 1/2" conduit connectors, 3 ft [1 m].
Overload Protection	electronic throughout 0...95° rotation
Position Feedback	No Feedback
Angle of rotation	95°
Torque motor	180 in-lb [20 Nm]
Direction of rotation motor	reversible with CW/CCW mounting
Direction of motion fail-safe	reversible with cw/ccw mounting
Position indication	Mechanical
Manual override	5 mm hex crank (3/16" Allen), supplied
Running Time (Motor)	<75 s
Running time fail-safe	<20 s
Ambient humidity	max. 95% r.H., non-condensing
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Degree of Protection	IP54, NEMA 2, UL Enclosure Type 2
Housing material	Galvanized steel and plastic housing
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	50 dB(A)
Noise level, fail-safe	62 dB(A)
Maintenance	maintenance-free
Quality Standard	ISO 9001
Weight	4.6 lb [2.1 kg]
Auxiliary switch	2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, one set at 10°, one adjustable 10...90°

†Rated Impulse Voltage 4kV, Type of Action 1.AA.B, Control Pollution Degree 3.

### Safety Notes

**WARNING:** For Belimo products sold in California: these products do or may contain chemicals which are known to the State of California to cause cancer and or birth defects or other reproductive harms. For more information see [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

## Wiring Diagrams

**! 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.

- ◆** Meets cULus requirements without the need of an electrical ground connection.
- (A)** Actuators with appliance cables are numbered.
- (UP)** Universal Power Supply (UP) models can be supplied with 24 VAC up to 240 VAC, or 24 VDC up to 125 VDC.
- ⚡** Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.
- 1** Provide overload protection and disconnect as required.
- 3** Actuators may also be powered by 24 VDC.
- 4** Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.
- 45** Actuators may be powered in parallel. Power consumption must be observed.
- 48** Parallel wiring required for piggy-back applications.

