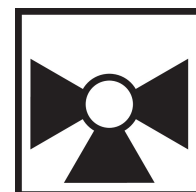


### Butterfly Valve with Grooved types

- Disc electroless nickel coated ductile iron
- Bubble tight shut-off
- Resilient seat
- Valve face-to-face dimensions comply with AWWA (c606) & MSS-SP-67
- Completely assembled and tested, ready for installation
- VIC-300 Masterseal is manufactured by the Victaulic Company.



5-year warranty



### Type overview

Type	DN
F765VIC	65

### Technical data

Functional data	Valve size [mm]	2.5" [65]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	-30...120°C [-22...250°F]
	Body Pressure Rating	ANSI Class Grooved AWWA, 300 psi
	Close-off pressure Δps	200 psi
	Flow characteristic	modified linear
	Leakage rate	0%
	Pipe connection	Grooved ANSI/AWWA (c606)
	Servicing	maintenance-free
	Flow Pattern	3-way Mixing/Diverting
	Controllable flow range	90° rotation
	Cv	260
	Maximum Velocity	20 FPS
Materials	Valve body	Ductile cast iron ASTM A536
	Body finish	black alkyd enamel
	Stem	416 stainless steel
	Stem seal	fiberglass with TFE lining
	Seat	EPDM
	Disc	electroless nickel coated ductile iron
Suitable actuators	Non Fail-Safe	GMB(X) PRB(X)
	Spring	2*AFB(X)
	Electrical fail-safe	GKRB(X) PKRB(X)

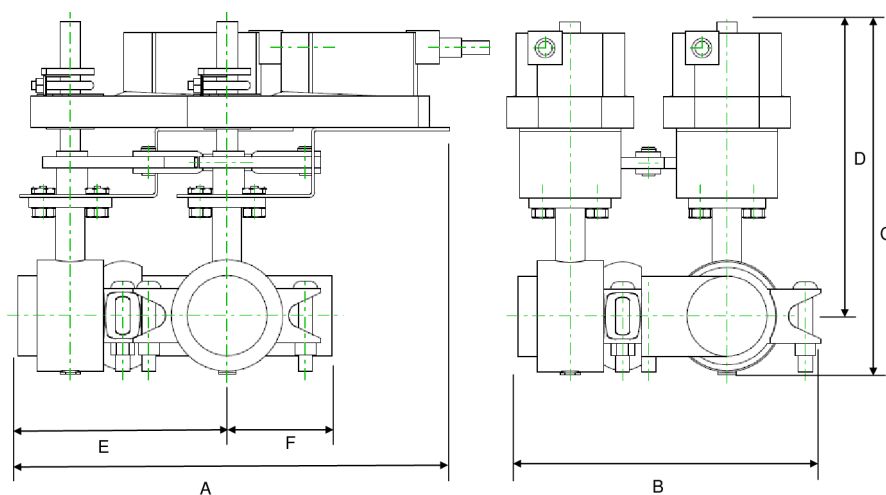
## Product features

## Flow/Mounting details



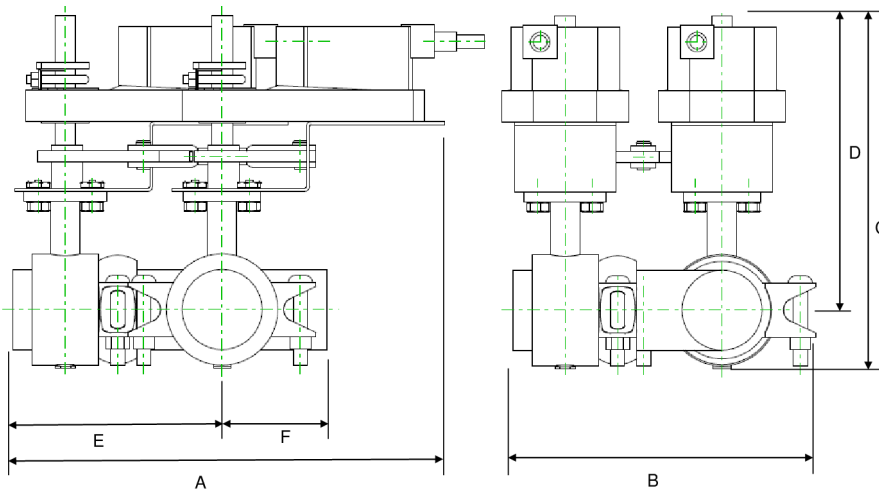
## Dimensions

Type	DN	Weight
F765VIC	65	42 lb [19 kg]



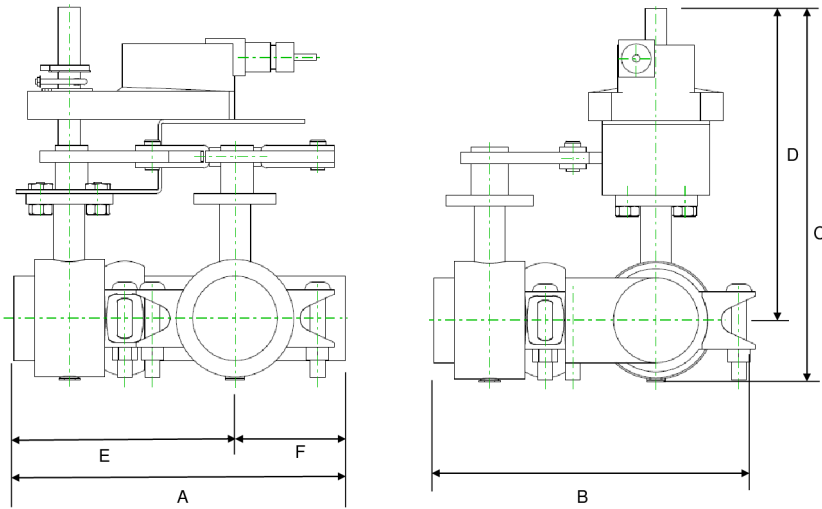
2GK

A	B	C	D	E	F
13.0" [330]	10.9" [277]	14.0" [356]	11.9" [302]	9.7" [246]	3.8" [97]



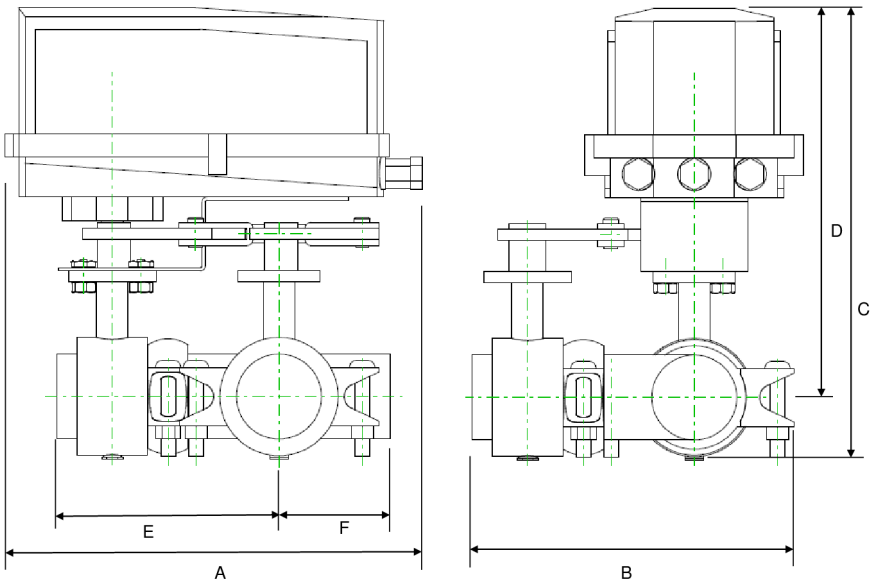
2GM

A	B	C	D	E	F
13.0" [330]	10.9" [277]	14.0" [356]	11.9" [302]	9.7" [246]	3.8" [97]



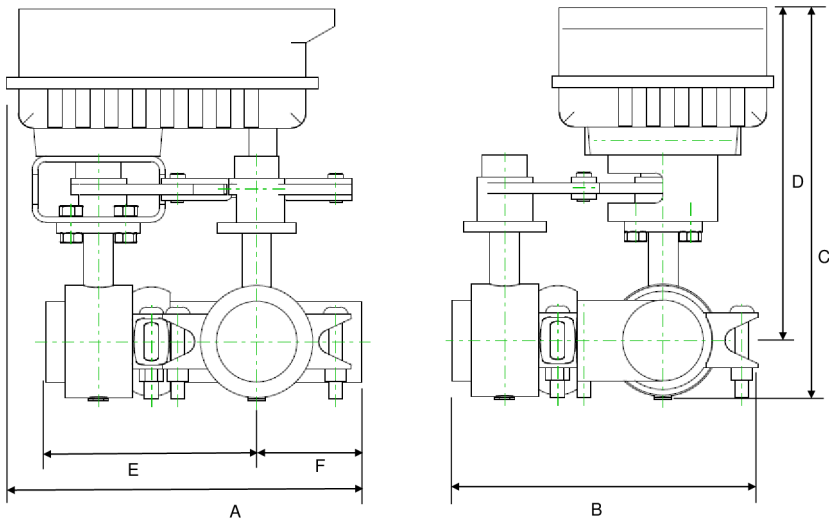
GM

A	B	C	D	E	F
14.1" [358]	10.9" [277]	15.3" [389]	10.6" [269]	9.7" [246]	3.8" [97]



GM N4

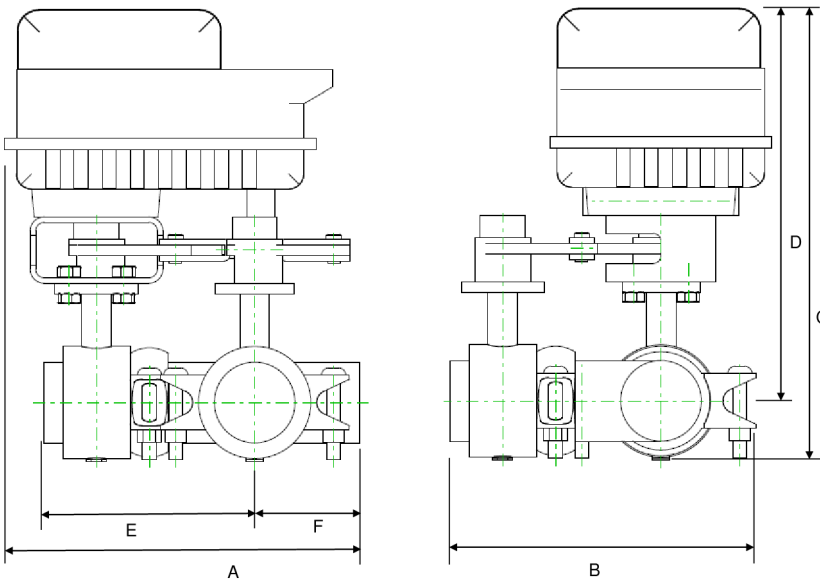
A	B	C	D	E	F
14.1" [358]	10.9" [277]	15.3" [389]	13.1" [334]	9.7" [246]	3.8" [97]



PRB(X)

A	B	C	D	E	F
13.0" [330]	10.9" [277]	14.0" [356]	14.4" [366]	9.7" [246]	3.8" [97]

Dimensions



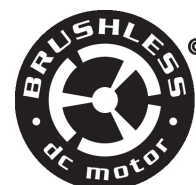
PK

A	B	C	D	E	F
13.0" [330]	10.9" [277]	16.5" [419]	14.4" [366]	9.7" [246]	3.8" [97]

MFT/programmable, Non fail-safe, 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	8 W
	Power consumption in rest position	2.5 W
	Transformer sizing	11 VA
	Electrical Connection	Terminal blocks
	Overload Protection	electronic throughout 0...90° 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	600 Ω
	Operating range Y variable	Start point 0.5...30 V End point 2.5...32 V
	Operating modes optional	variable (VDC, 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
	Manual override	under cover
	Angle of rotation	90°
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	35 s / 90°
	Running time motor variable	35...150 s
	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	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Housing	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

<b>Safety data</b>	Quality Standard	ISO 9001
	Ambient humidity	Max. 100% RH
	Ambient temperature	-22...122°F [-30...50°C]
	Ambient temperature note	-40...50°C [104...122°F] for actuator with integrated heating
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
<b>Weight</b>	Weight	5.2 lb [2.3 kg]
<b>Materials</b>	Housing material	Die cast aluminium and plastic casing

**Footnotes** †Rated Impulse Voltage 800V, Type of action 1.AA, 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
	Service tool, with ZIP-USB function, for configurable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
Factory add-on option only	Description	Type
	Heater, with adjustable thermostat	ACT_PACK_H

## Electrical installation



### INSTALLATION NOTES



#### 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.



1 Provide overload protection and disconnect as required.



3 Actuators may also be powered by DC 24 V.



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).



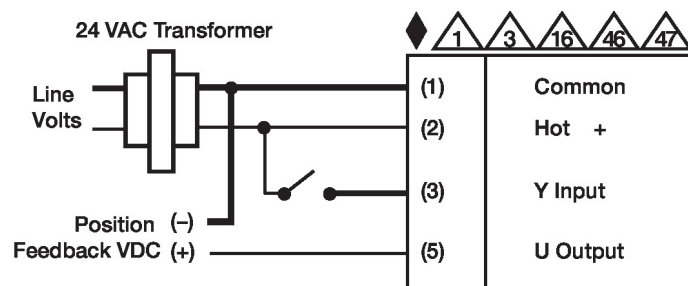
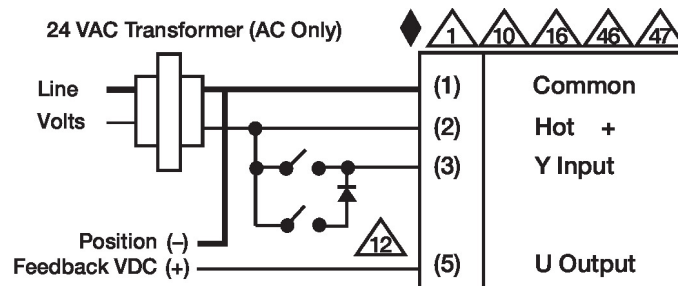
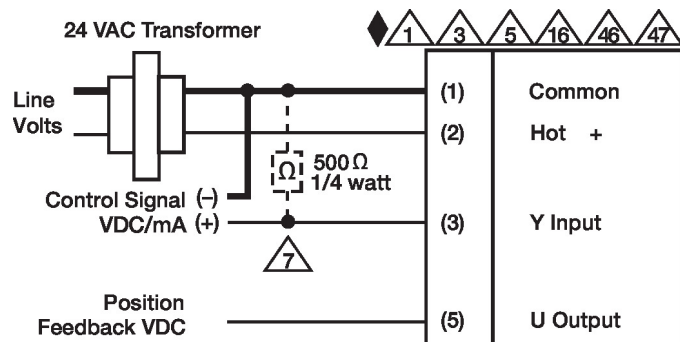
16 Actuators are provided with a numbered screw terminal strip instead of a cable.



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).

**Electrical installation**
**Wiring diagrams**
**On/Off**

**Floating Point**

**VDC/mA Control**

**Primary - Secondary**
