

Butterfly Valve with Lug types

- Disc 304 stainless steel
- Bubble tight shut-off
- Resilient seat
- Valve face-to-face dimensions comply with API 609 & MSS-SP-67
- Completely assembled and tested, ready for installation



5-year warranty

Type overview

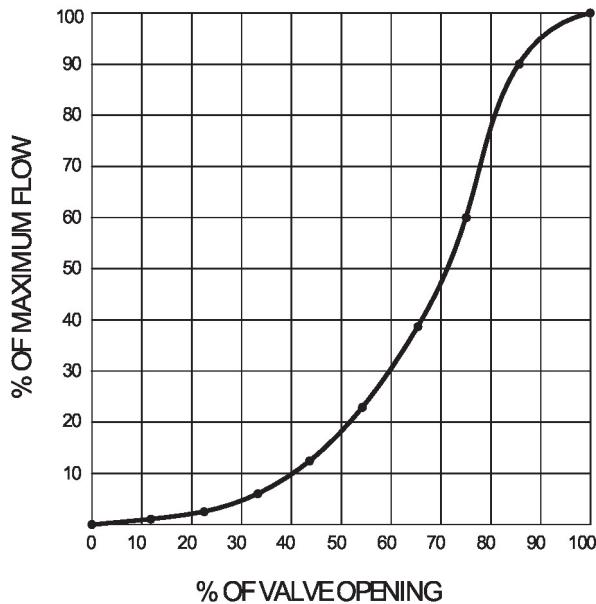
Type	DN
F665HD	65

Technical data

Functional data	
Valve size [mm]	2.5" [65]
Fluid	chilled or hot water, up to 60% glycol
Fluid Temp Range (water)	-22...250°F [-30...120°C]
Body Pressure Rating	ANSI Class Consistent with 125, 232 psi CWP
Close-off pressure Δ ps	200 psi
Flow characteristic	modified equal percentage
Leakage rate	0% leakage, leakage rate A
Servicing	maintenance-free
Flow Pattern	2-way
Controllable flow range	90° rotation
Cv	196
Maximum Velocity	12 FPS
Lug threads	5/8-11 UNC
Materials	
Valve body	Ductile cast iron ASTM A536
Body finish	epoxy powder coating (blue RAL 5002)
Stem	416 stainless steel
Stem seal	EPDM (lubricated)
Seat	EPDM
Pipe connection	for use with ANSI class 125/150 flanges
Bearing	RPTFE
Disc	304 stainless steel
Gear operator materials	Gears - hardened steel
Suitable actuators	
Non-Spring	ARB(X) GRB(X)
Spring	AFRB(X)

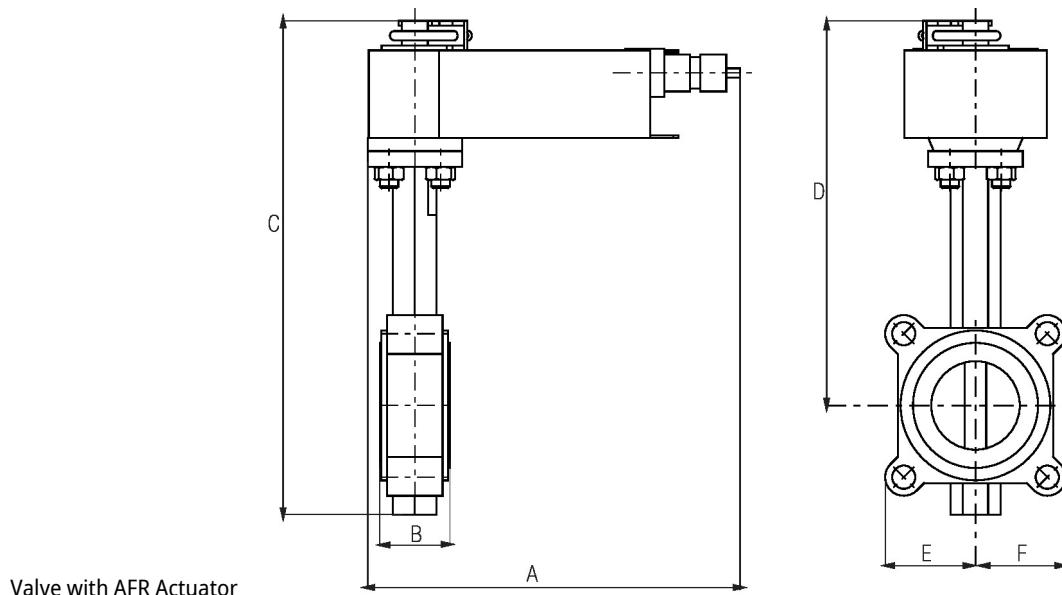
Product features

Flow/Mounting details



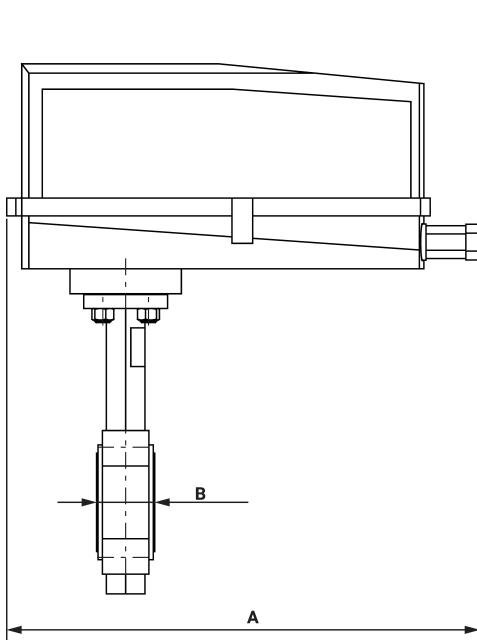
Dimensions

Type	DN	Weight
F665HD	65	6.2 lb [2.8 kg]

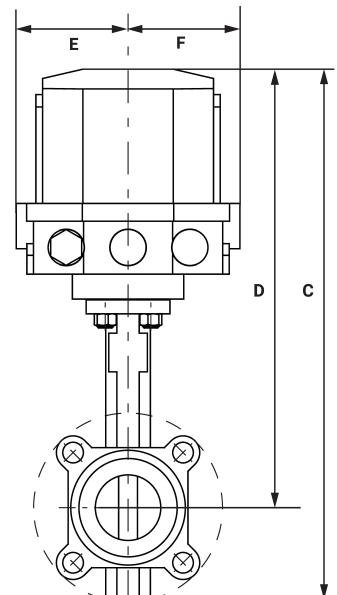


Valve with AFR Actuator

A	B	C	D	E	F	Number of Bolt Holes
10.1" [257]	1.9" [49]	13.1" [333]	10.1" [256]	3.3" [85]	3.3" [85]	4

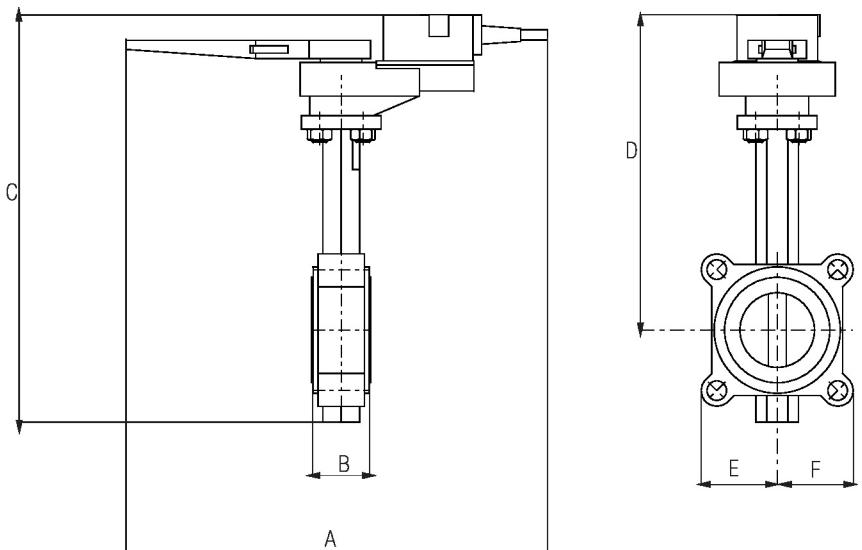


Valve with AF/GR N4 Actuator

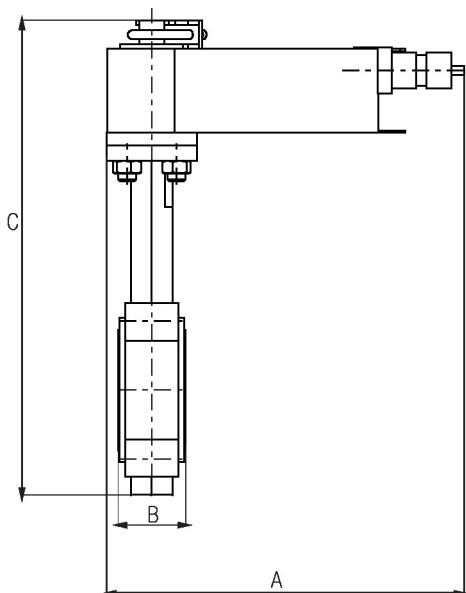


Valve with ARB(X) Actuator

A	B	C	D	E	F	Number of Bolt Holes
14.5" [368]	1.9" [49]	17.0" [433]	13.9" [354]	3.4" [86]	3.4" [86]	4

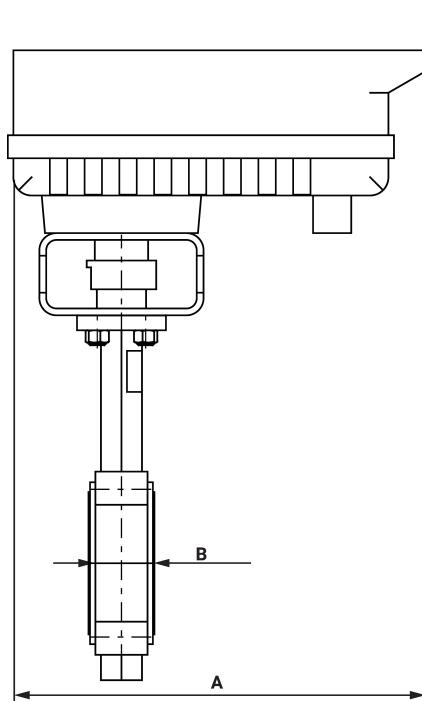


A	B	C	D	E	F	Number of Bolt Holes
14.5" [368]	1.9" [49]	13.3" [337]	10.2" [260]	3.3" [85]	3.3" [85]	4



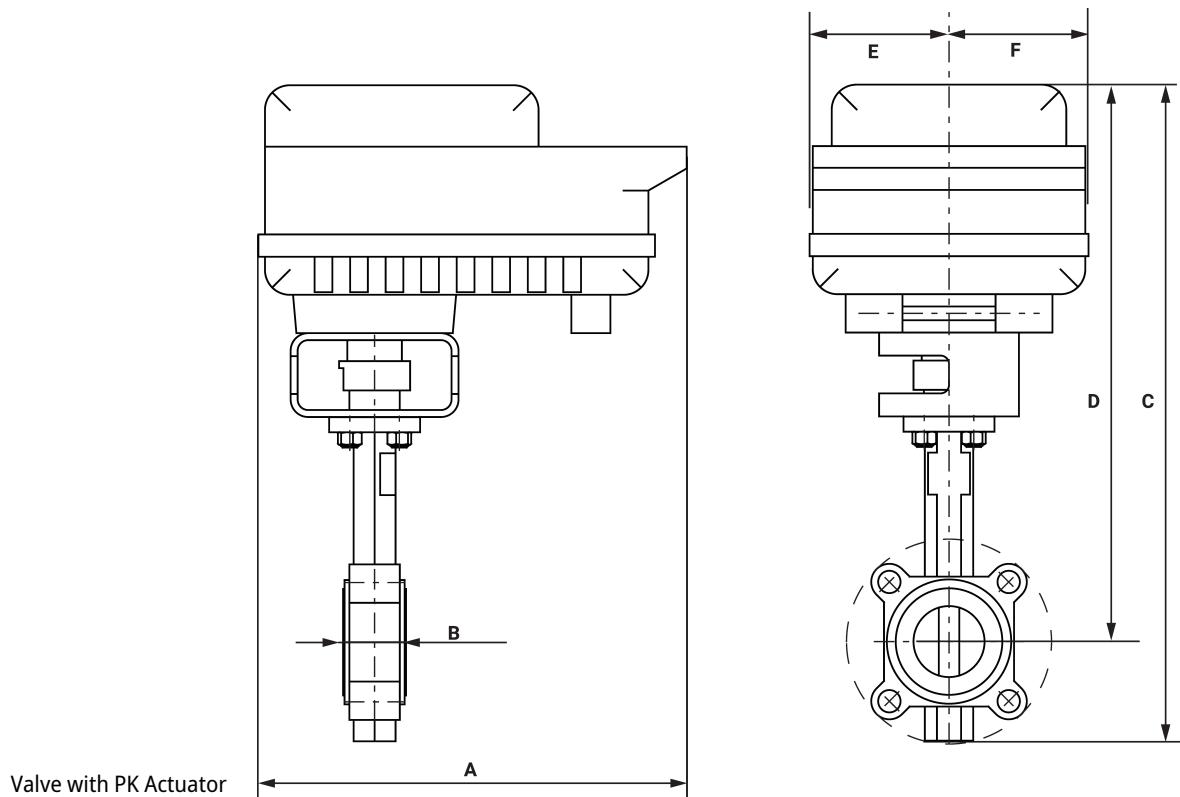
Valve with AFX24-MFT(-S) Actuator

A	B	C	D	E	F	Number of Bolt Holes
10.1" [257]	1.9" [49]	16.0" [406]	12.9" [328]	3.3" [85]	3.3" [85]	4



Valve with PR Actuator

A	B	C	D	E	F	Number of Bolt Holes
12.0" [304]	1.9" [49]	17.6" [448]	14.5" [368]	3.9" [100]	3.9" [100]	4



A	B	C	D	E	F	Number of Bolt Holes
12.0" [304]	1.9" [49]	19.3" [490]	16.2" [411]	3.9" [100]	3.9" [100]	4
A	B	C	D	E	F	Number of Bolt Holes
8.4" [213]	1.9" [49]	16.0" [406]	12.9" [328]	3.3" [85]	3.3" [85]	4
A	B	C	D	E	F	Number of Bolt Holes
10.8" [275]	1.9" [49]	13.9" [354]	10.8" [274]	3.3" [85]	3.3" [85]	4



5-year warranty

**Technical data**

Electrical data	
Nominal voltage	AC 100...240 V
Nominal voltage frequency	50/60 Hz
Nominal voltage range	AC 85...265 V
Power consumption in operation	6 W
Power consumption in rest position	2 W
Electrical Connection	1/2" conduit connector, screw terminals
Overload Protection	electronic throughout 0...90° rotation
Functional data	
Input Impedance	500 Ω
Position feedback U	2...10 V
Position feedback U note	Max. 0.5 mA
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 note	constant, independent of load
Noise level, motor	60 dB(A)
Position indication	Mechanically, 5...20 mm stroke
Safety data	
Degree of protection IEC/EN	IP66/67
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	9.92 lb [4.5 kg]
Materials	
Housing material	Die cast aluminium and plastic casing

Footnotes †Rated Impulse Voltage 4kV, Type of action 1, Control Pollution Degree 3.

Accessories

Factory add-on option only	Description	Type
	Heater, with adjustable thermostat	N4 Heater Add-on 24V (-H)
	Heater, with adjustable thermostat	N4 Heater Add-on 230V (-Y)

Electrical installation

☒ INSTALLATION NOTES

- ⚠ 1 Provide overload protection and disconnect as required.
- ⚠ 2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- ⚠ 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.
- ⚠ 16 Actuators are provided with a numbered screw terminal strip instead of a cable.
- ⚠ Diamond 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

2...10 V / 4...20 mA Control AC 100...240 V

