

### 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



Picture may differ from product



5-year warranty

### Type overview

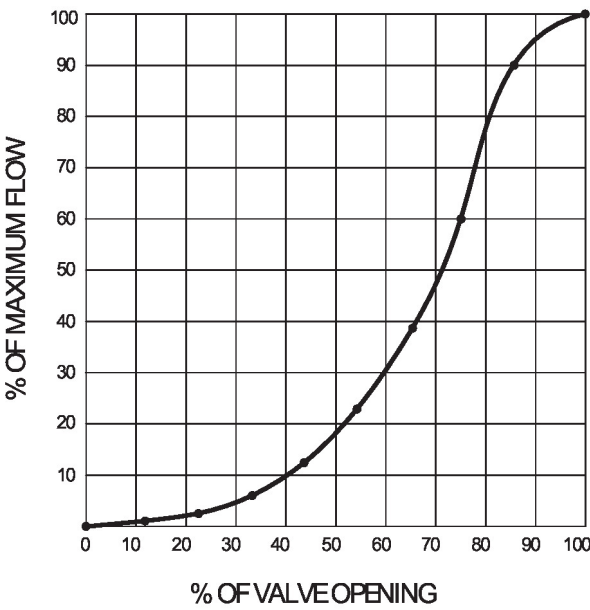
Type	DN
F665HD	2 1/2" [65]

### Technical data

<b>Functional data</b>	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 Δps	200 psi
	Flow characteristic	modified equal percentage
	Leakage rate	0% leakage, leakage rateA
	Pipe connection	Flange for use with ASME/ANSI class 125/150
	Servicing	maintenance-free
	Flow Pattern	2-way
	Controllable flow range	90° rotation
	Cv	196
	Maximum Velocity	12 FPS
	Lug threads	5/8-11 UNC
<b>Materials</b>	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
	Bearing	RPTFE
	Disc	304 stainless steel
<b>Suitable actuators</b>	Non Fail-Safe	ARB(X) GRB(X)
	Spring	AFRB(X)

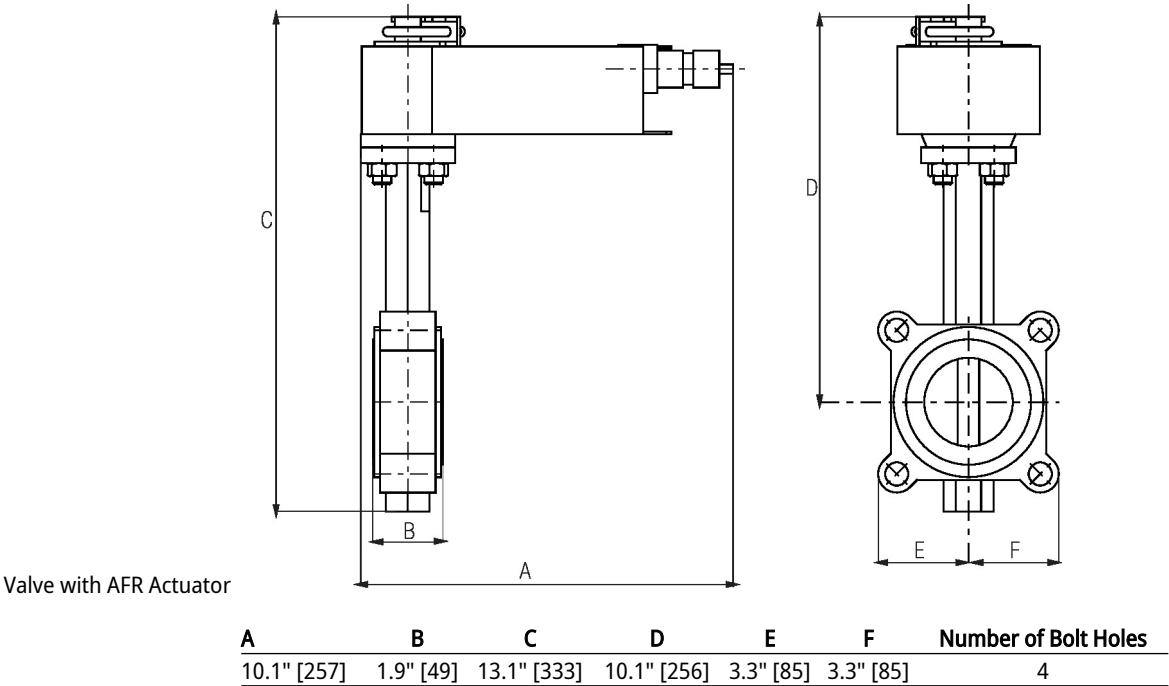
Product features

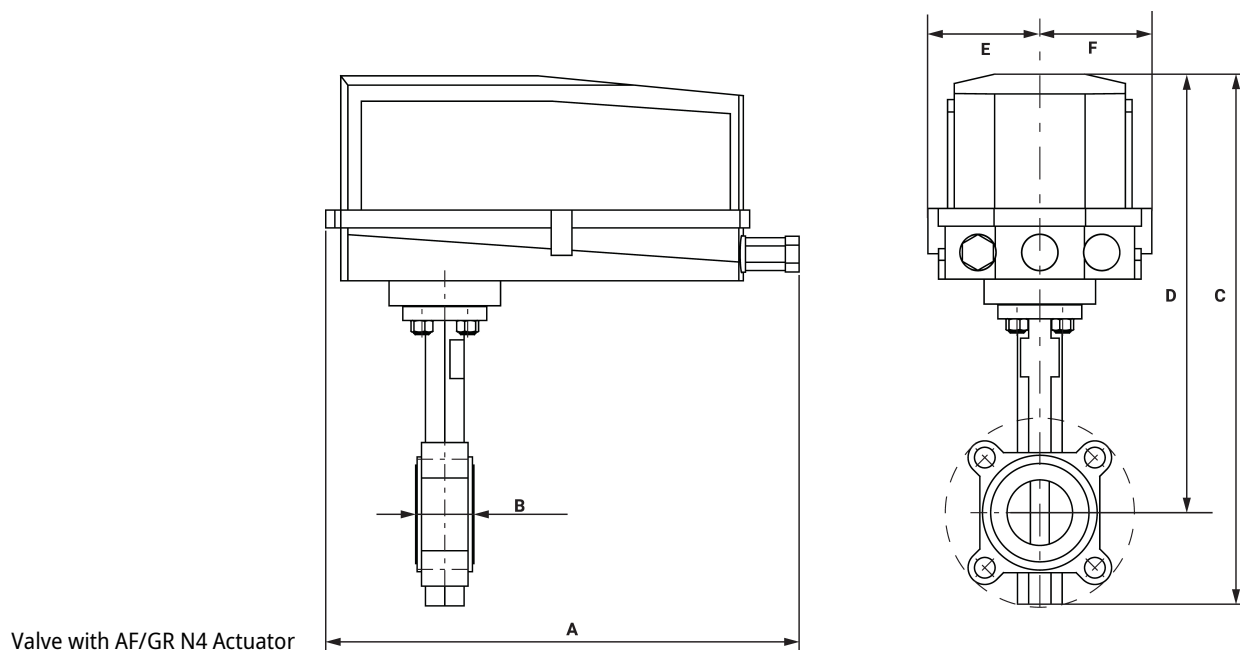
Flow/Mounting details



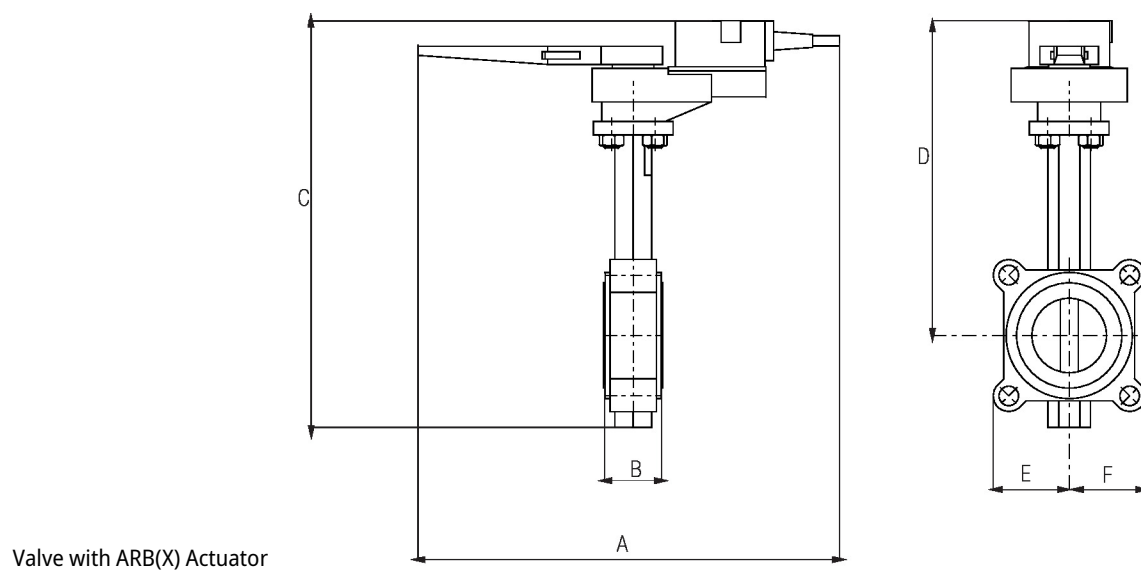
Dimensions

Type	DN	Weight
F665HD	2 1/2" [65]	22 lb [10 kg]

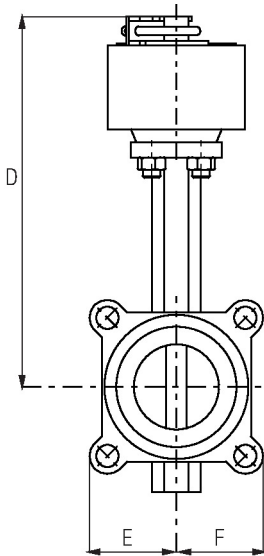
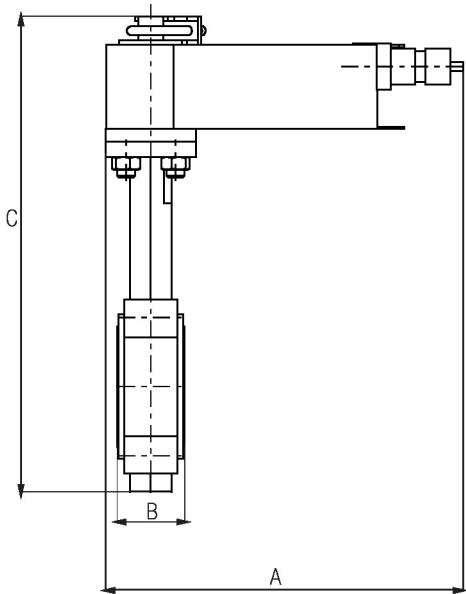




A	B	C	D	E	F	Number of Bolt Holes
14.5" [368]	1.9" [49]	17.0" [433]	13.9" [354]	3.4" [86]	3.4" [86]	4

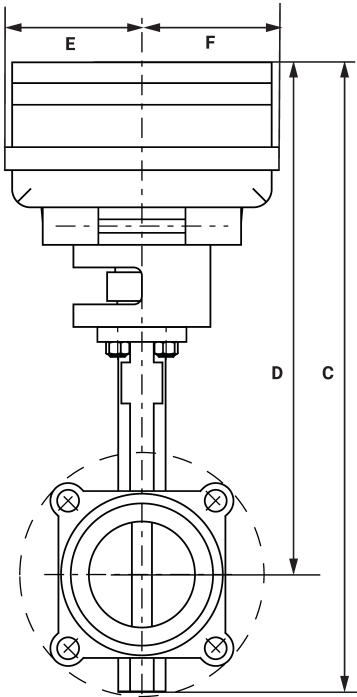
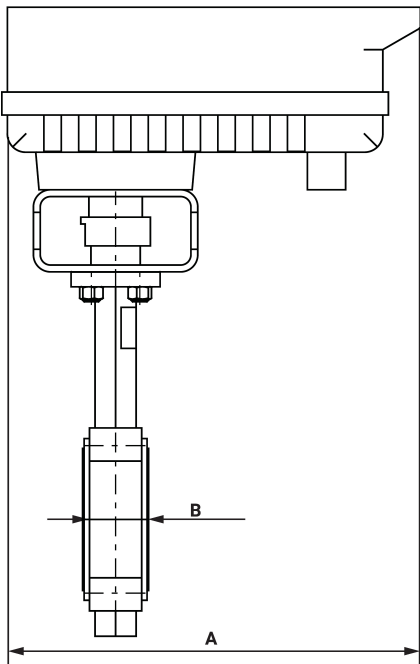


A	B	C	D	E	F	Number of Bolt Holes
14.5" [368]	1.9" [49]	13.3" [337]	10.2" [260]	3.3" [85]	3.3" [85]	4



Valve with AFX24-MFT(-S) Actuator

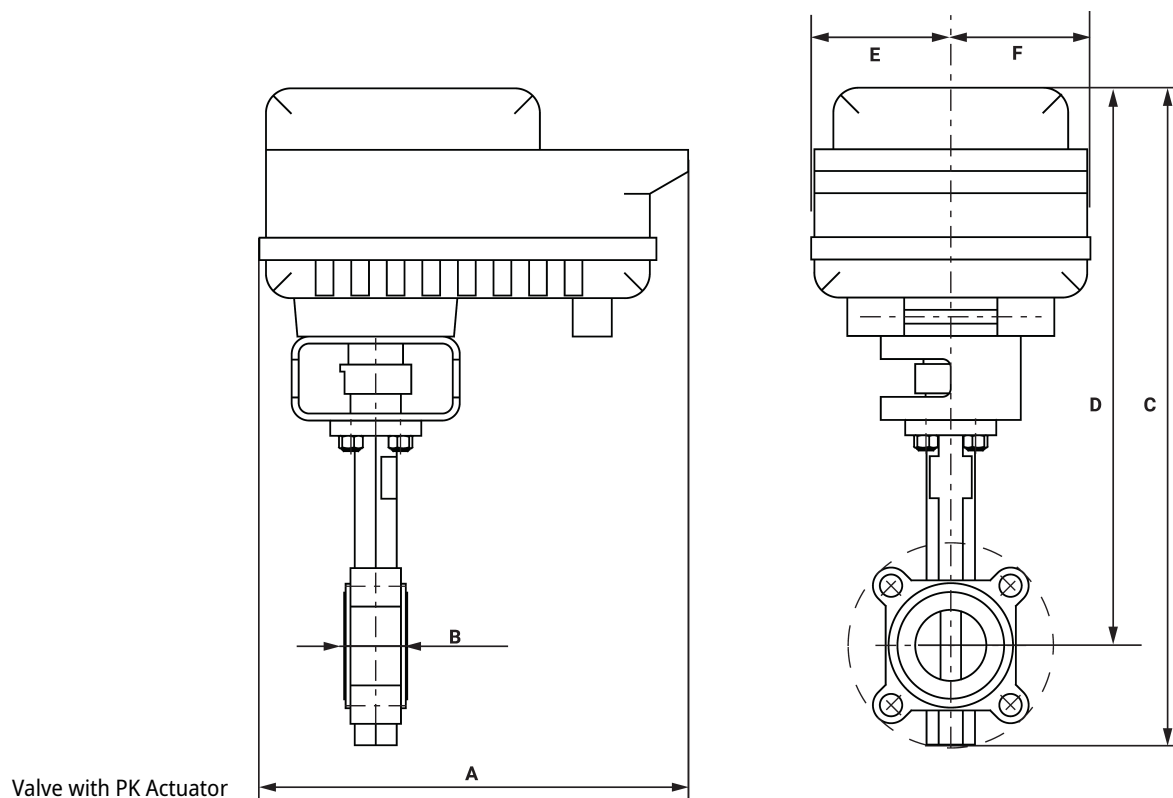
A	B	C	D	E	F	Number of Bolt Holes
10.1" [257]	1.9" [49]	16.0" [406]	12.9" [328]	3.3" [85]	3.3" [85]	4



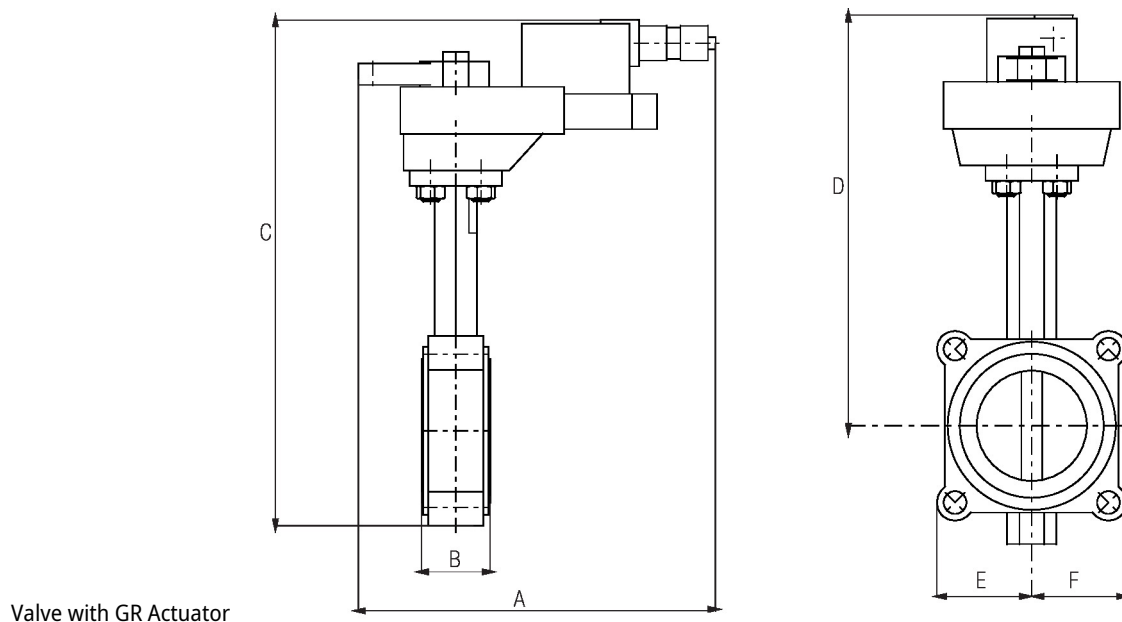
Valve with PR Actuator

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

## Dimensions



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
9.3" [236]	1.9" [49]	13.7" [347]	10.8" [274]	2.4" [62]	2.4" [62]	4

On/Off, Spring return, 24...240 V



5-year warranty



## Technical data

Electrical data	Nominal voltage	AC 24...240 V / DC 24...125 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...264 V / DC 21.6...137.5 V
	Power consumption in operation	7 W
	Power consumption in rest position	3.5 W
	Auxiliary switch	2x SPDT, 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V, 1x 10% / 1x 11...90%
	Switching capacity auxiliary switch	1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V
	Electrical Connection	(2) 18 AWG appliance cables, 1 m, with 1/2" NPT conduit connectors
	Overload Protection	electronic throughout 0...95° rotation
Functional data	Direction of motion motor	selectable by ccw/cw mounting
	Direction of motion fail-safe	reversible with cw/ccw mounting
	Manual override	5 mm hex crank (3/16" Allen), supplied
	Angle of rotation	90°
	Running Time (Motor)	75 s / 90°
	Running time fail-safe	<20 s
	Noise level, motor	45 dB(A)
	Noise level, fail-safe	62 dB(A)
	Position indication	Mechanical
Safety data	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP66
	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
	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]

<b>Safety data</b>	Servicing	maintenance-free
<b>Weight</b>	Weight	10 lb [4.5 kg]
<b>Materials</b>	Housing material	Die cast aluminium and plastic casing
<b>Footnotes</b>	†Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3	

## Accessories

Factory add-on option only	Description	Type
	Heater, with adjustable thermostat	ACT_PACK_H
	Heater, with adjustable thermostat	ACT_PACK_Y

## Electrical installation

### ✂ INSTALLATION NOTES

- (A) Actuators with appliance cables are numbered.
- (UP) Universal Power Supply (UP) models can be supplied with AC 24...240 V, or DC 24...125 V.
- 1 Provide overload protection and disconnect as required.
- 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.
- ⚡ 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.
- ◆ 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

