

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 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 |
| 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 |
| | Bearing | RPTFE |
| | Disc | 304 stainless steel |
| Suitable actuators | Non Fail-Safe | ARB(X) GRB(X) |
| | Spring | AFRB(X) |

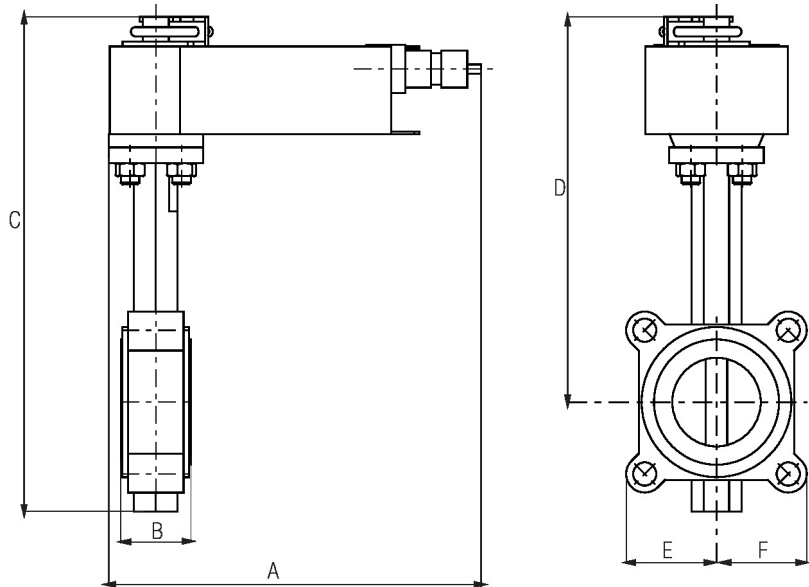
Product features

Flow/Mounting details



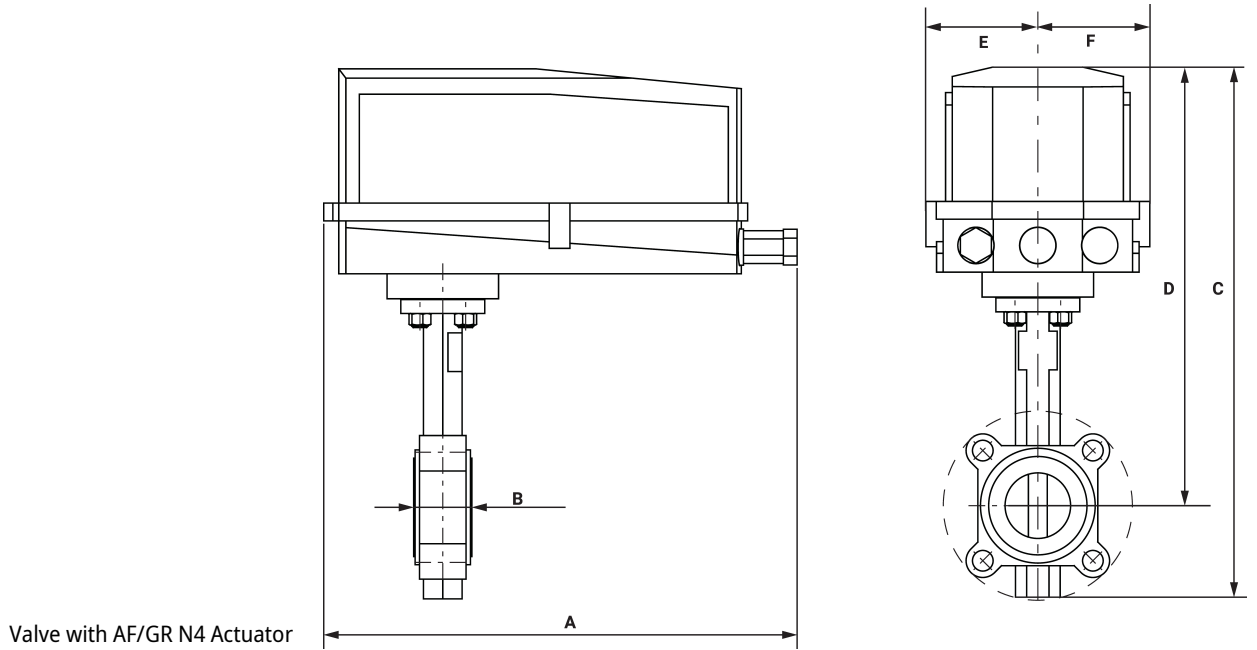
Dimensions

| Type | DN | Weight |
|--------|----|---------------|
| F665HD | 65 | 22 lb [10 kg] |



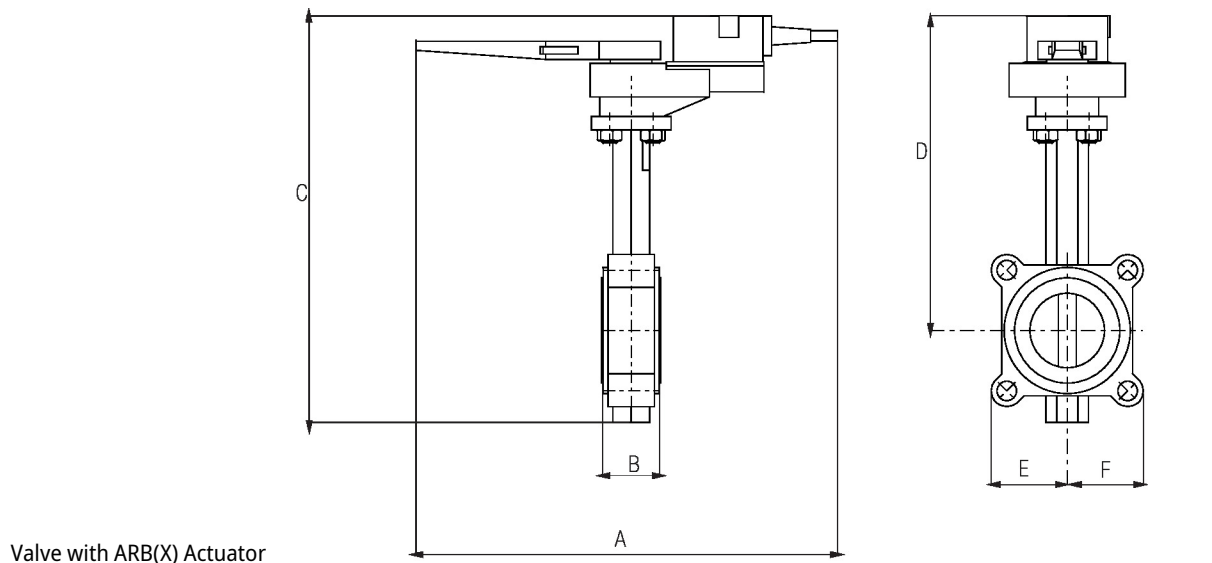
Valve with AFR Actuator

| 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 |



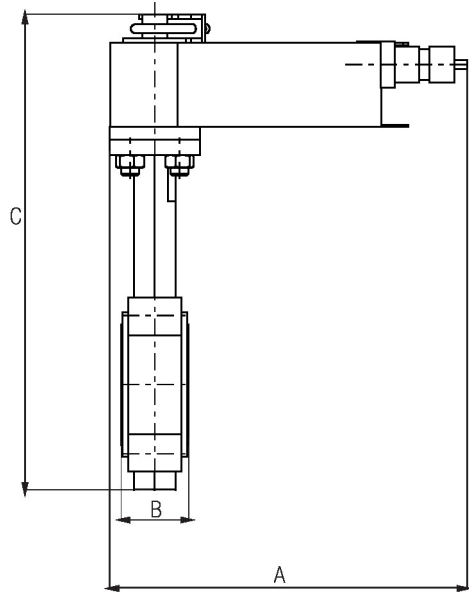
Valve with AF/GR N4 Actuator

| 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 |



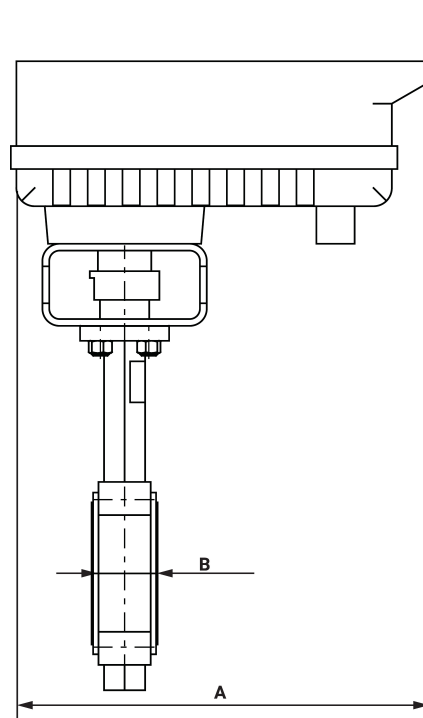
Valve with ARB(X) Actuator

| 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

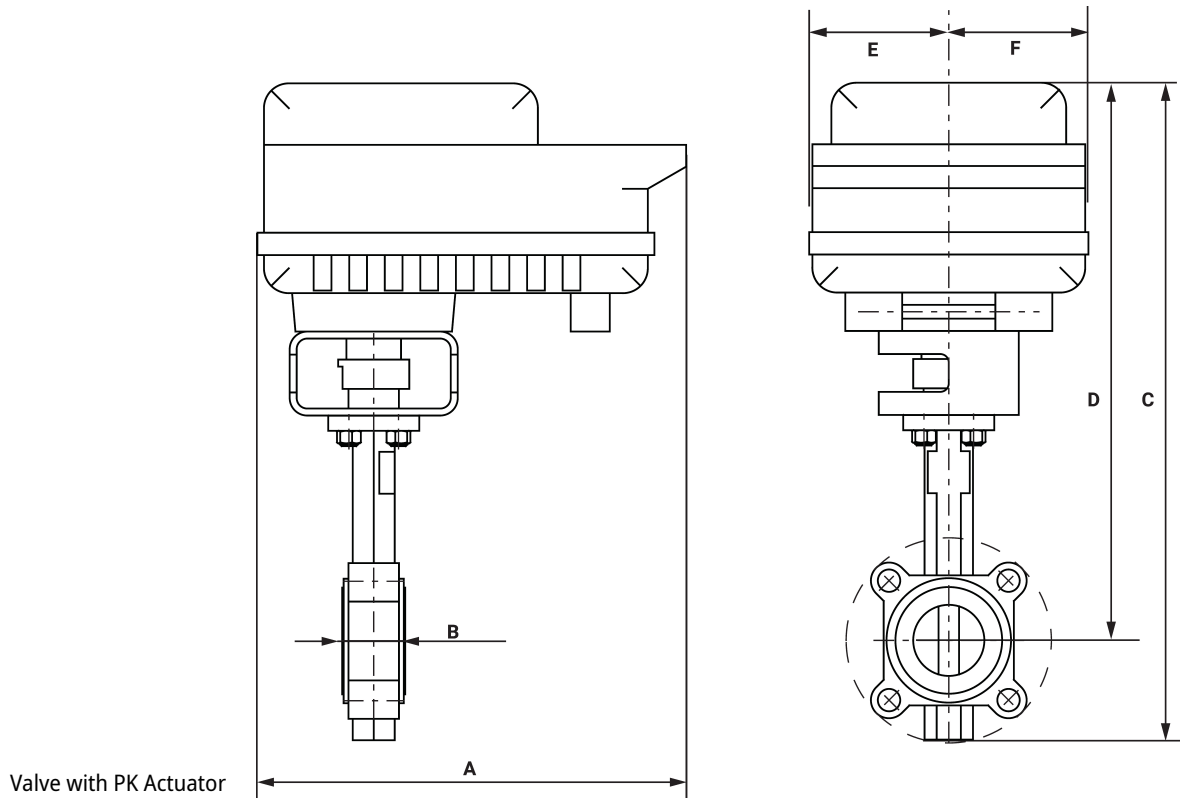
| A | B | C | D | E | F | Number of Bolt Holes |
|-------------|-----------|-------------|-------------|-----------|-----------|----------------------|
| 10.1" [257] | 1.9" [49] | 16.0" [406] | 12.9" [328] | 3.3" [85] | 3.3" [85] | 4 |



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 |
| 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 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, one set at 10°, one adjustable 10...90° |
| | Switching capacity auxiliary switch | 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V |
| | Electrical Connection | (2) 18 GA 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 |
| | 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 | 10 lb [4.5 kg] |
| | Materials | Housing material |

Footnotes †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 24 VAC up to 240 VAC, or 24 VDC up to 125 VDC.
- 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

