



5-year warranty

Type overview

| | |
|-------------|----|
| Type | DN |
| F680-300SHP | 80 |

Technical data

| | | |
|---------------------------|--------------------------------|---|
| Functional data | Valve Size | 3" [80] |
| | Fluid | chilled or hot water, up to 60% glycol, steam |
| | Fluid Temp Range (water) | -22...400°F [-30...204°C] |
| | Body Pressure Rating | ANSI Class 300 |
| | Close-off pressure Δps | 285 psi |
| | Flow characteristic | modified equal percentage, unidirectional |
| | Servicing | maintenance-free |
| | Flow Pattern | 2-way |
| | Leakage rate | 0% |
| | Controllable flow range | quarter turn, mechanically limited |
| | Cv | 228 |
| | Maximum Inlet Pressure (Steam) | 50 psi |
| | Maximum Velocity | 32 FPS |
| | Lug threads | 3/4-10 UNC |
| Materials | Valve body | Carbon steel full lug (ASME B16.34) |
| | Stem | 17-4 PH stainless steel |
| | Seat | RPTFE |
| | Pipe connection | ASME/ANSI class 300 flange |
| | Bearing | glass backed PTFE |
| | Disc | 316 stainless steel |
| | Gland Seal | TFE |
| | Gear operator materials | Gears - hardened steel |
| Suitable actuators | Non-Spring | GMB(X) (2*GMB(X)) PRB(X) |
| | Electrical fail-safe | (2*GKB(X)) PKRB(X) |

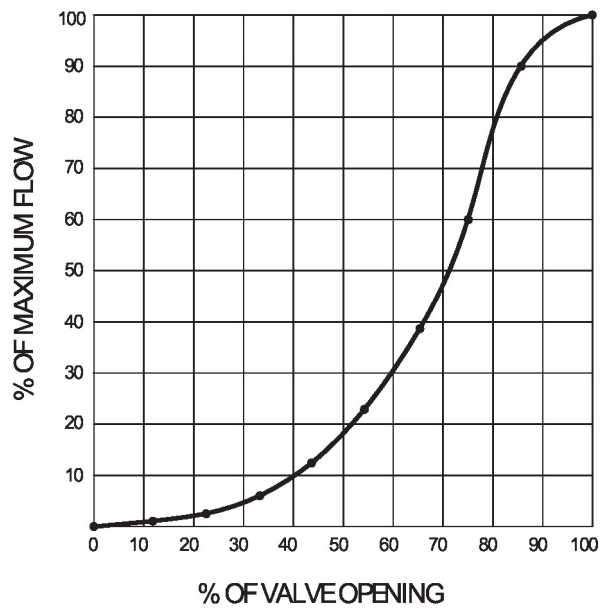
Safety notes



- WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov

Product features

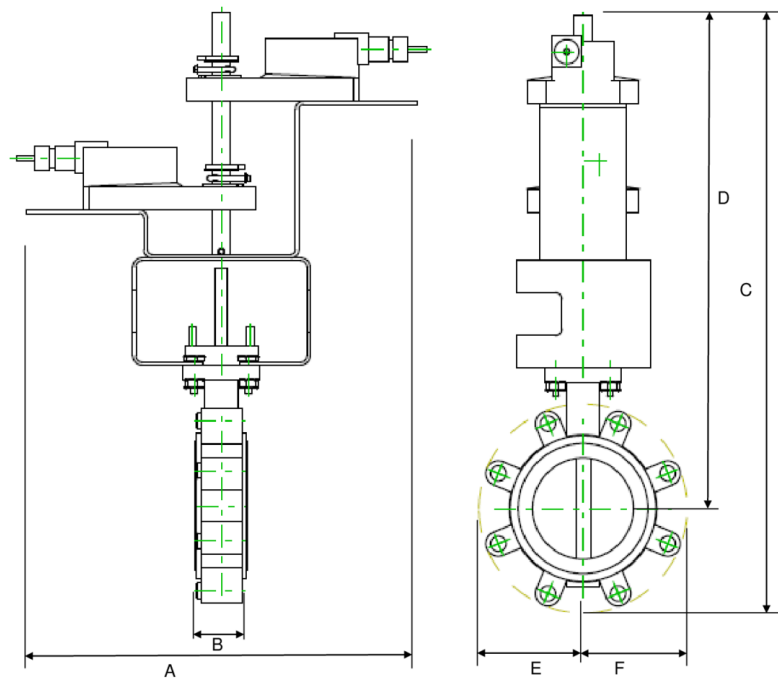
Flow/Mounting details



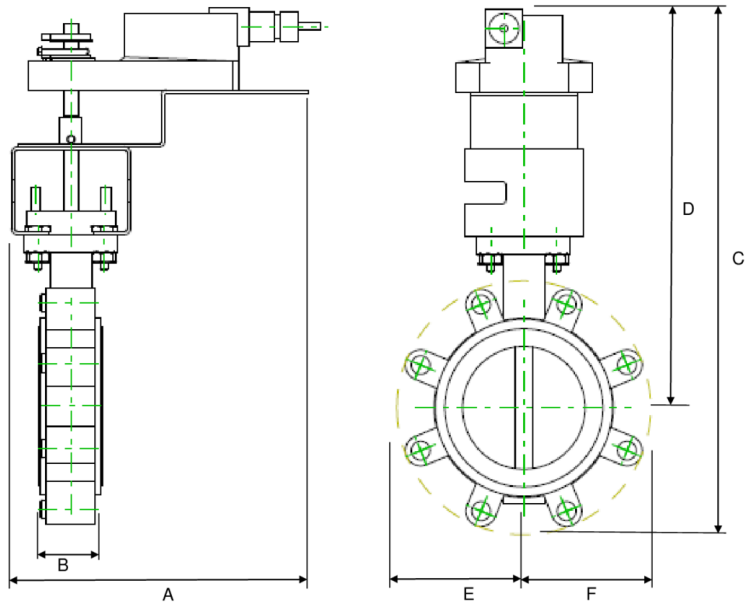
Dimensions

| | |
|-------------|----|
| Type | DN |
| F680-300SHP | 80 |

2*GM/2*GK

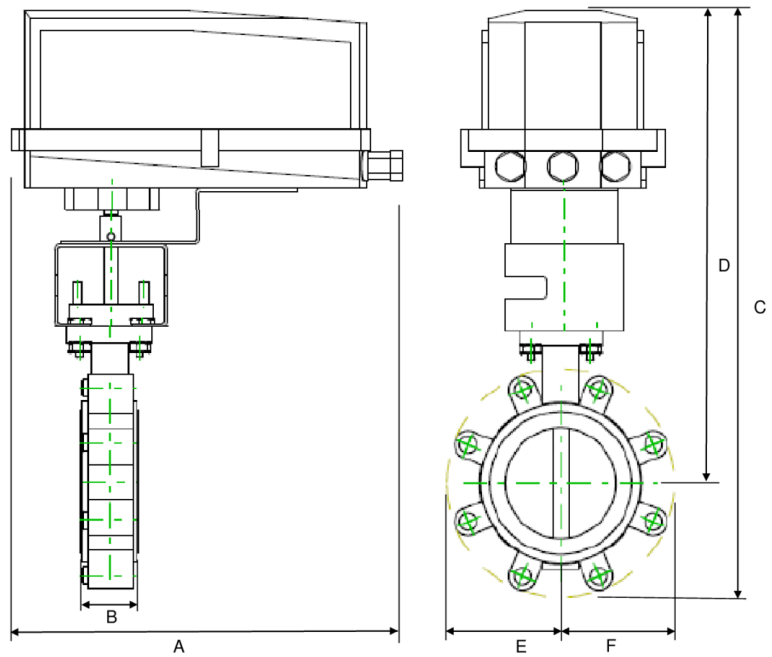


| A | B | C | D | E | F | Number of Bolt Holes |
|-------------|-----------|-------------|-------------|-----------|-----------|----------------------|
| 18.0" [457] | 1.9" [49] | 20.0" [509] | 16.6" [421] | 3.5" [89] | 3.5" [89] | 8 |



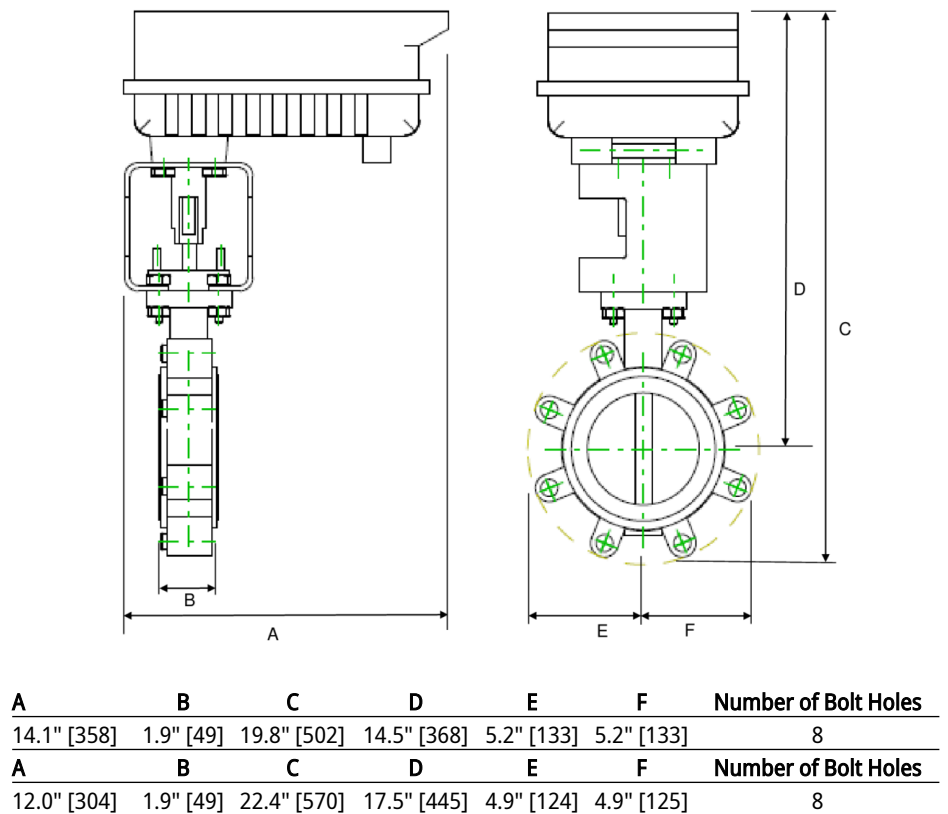
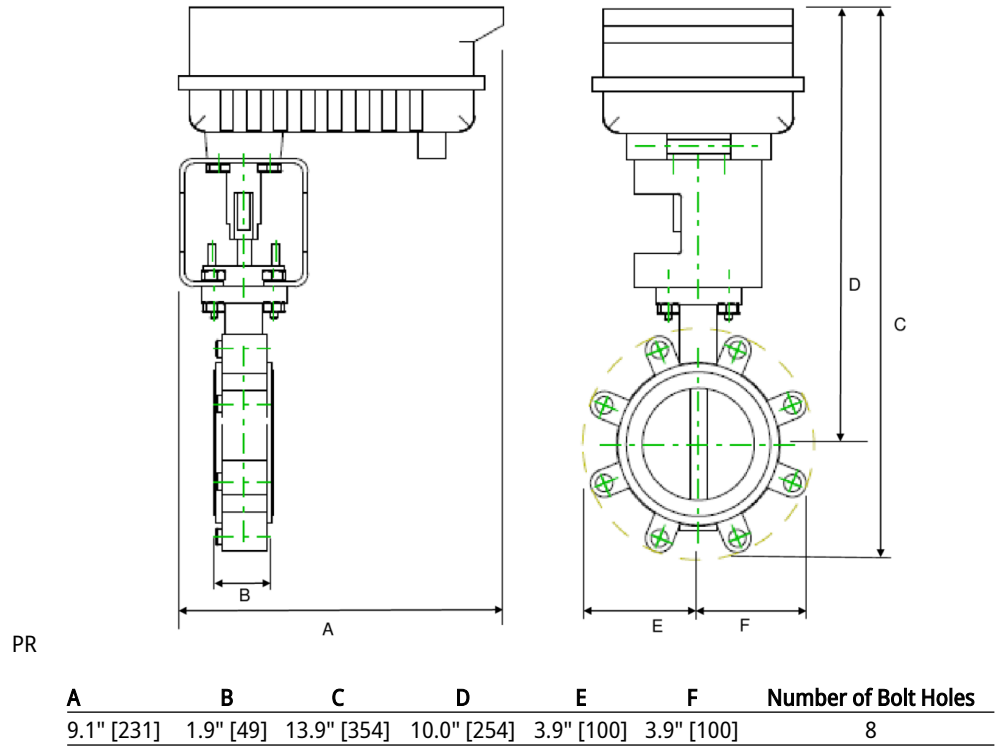
GM/GK

| A | B | C | D | E | F | Number of Bolt Holes |
|-------------|-----------|-------------|-------------|------------|------------|----------------------|
| 15.3" [388] | 1.9" [49] | 16.1" [409] | 12.2" [310] | 3.9" [100] | 3.9" [100] | 8 |



GK/GM N4

| A | B | C | D | E | F | Number of Bolt Holes |
|-------------|-----------|-------------|-------------|------------|------------|----------------------|
| 10.9" [277] | 1.9" [49] | 17.9" [454] | 13.2" [336] | 4.9" [124] | 4.9" [125] | 8 |





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Technical data

| | | |
|------------------------|------------------------------------|---|
| Electrical data | Nominal voltage | AC/DC 24 V |
| | Nominal voltage frequency | 50/60 Hz |
| | Power consumption in operation | 8 W |
| | Power consumption in rest position | 2.5 W |
| | Transformer sizing | 11 VA (class 2 power source) |
| | Electrical Connection | Terminal blocks |
| | Overload Protection | electronic throughout 0...95° rotation |
| Functional data | Direction of motion motor | selectable with switch 0/1 |
| | Manual override | under cover |
| | Angle of rotation | Max. 95° |
| | 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 | 45 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 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] |
| | Ambient humidity | Max. 100% RH |
| | Servicing | maintenance-free |
| Materials | Housing material | Die cast aluminium and plastic casing |

Footnotes †Rated Impulse Voltage 800V, Type action 1, 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 |

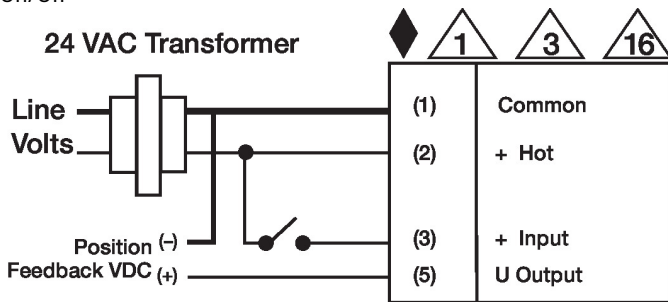
Electrical installation

✂ INSTALLATION NOTES

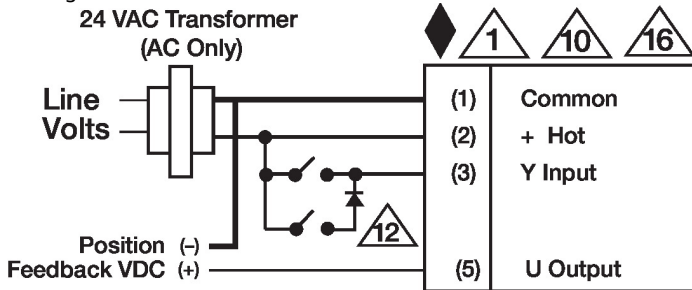
- 1** Provide overload protection and disconnect as required.
- 3** Actuators may also be powered by DC 24 V.
- 10** For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator 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.
- ◆ Meets cULus requirements without the need of an electrical ground connection.
- 1** **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



Floating Point



Dimensions