

## Butterfly Valve with ANSI Class 300 Lug types

- Disc 316 stainless steel
- Bubble tight shut-off
- Teflon seat
- Valve face-to-face dimensions comply with API 609 & MSS-SP-67
- For use with dead-end service
- Completely assembled and tested, ready for installation



2-year warranty

## Type overview

Type	DN
F6300-300SHP	300

## Technical data

Functional data	Valve size [mm]	12" [300]
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	
Flow characteristic	modified equal percentage, unidirectional	
Pipe connection	Flange for use with ASME/ANSI class 300	
Servicing	maintenance-free	
Flow Pattern	2-way	
Leakage rate	0%	
Controllable flow range	quarter turn, mechanically limited	
Cv	4837	
Maximum Inlet Pressure (Steam)	50 psi	
Maximum Velocity	32 FPS	
Lug threads	1 1/8-8 UNC	
Materials	Valve body	Carbon steel full lug (ASME B16.34)
	Stem	17-4 PH stainless steel
	Seat	RPTFE
	Bearing	glass backed PTFE
	Disc	316 stainless steel
Suitable actuators	Non Fail-Safe	SY4 SY7

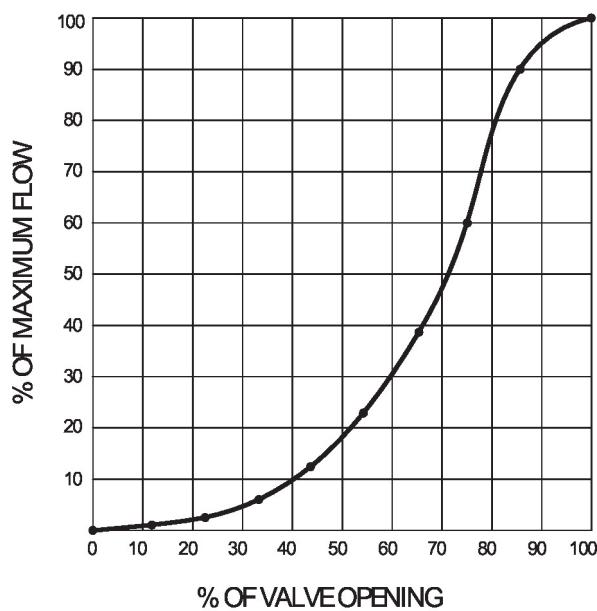
## Safety notes



- 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](http://www.p65warnings.ca.gov)

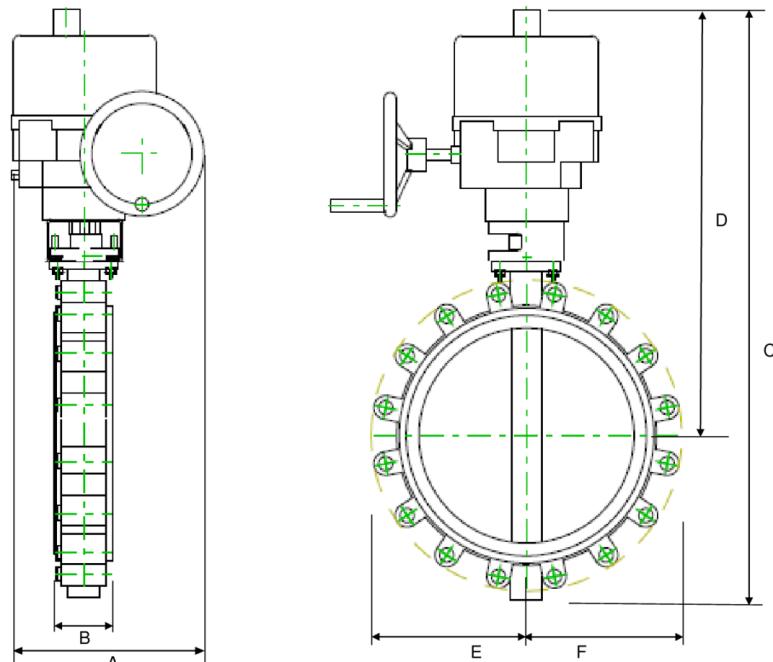
## Product features

## Flow/Mounting details



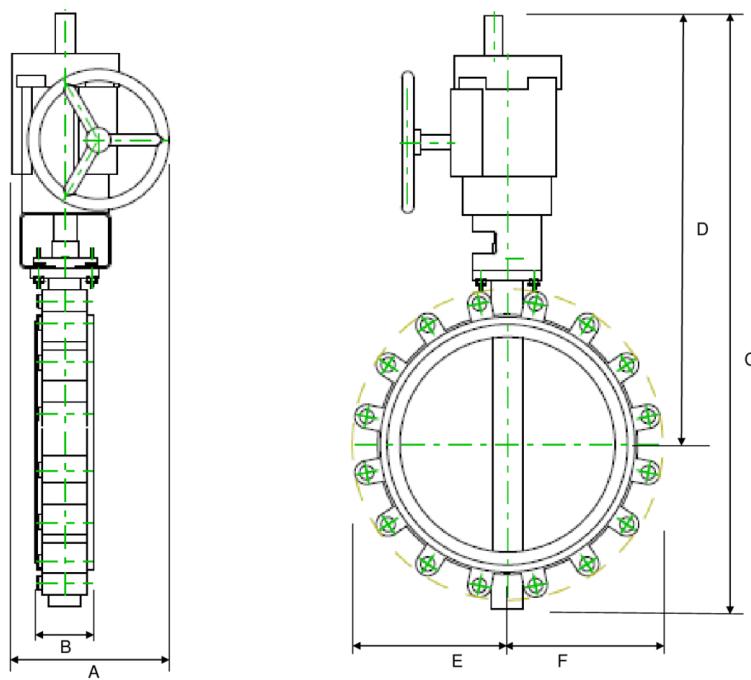
## Dimensions

Type	DN	Weight
F6300-300SHP	300	130 lb [60 kg]



A	B	C	D	E	F	Number of Bolt Holes
11.5" [293]	3.6" [92]	45.1" [1145]	34.5" [876]	9.7" [246]	9.7" [246]	16

## Dimensions



A	B	C	D	E	F	Number of Bolt Holes
11.5" [293]	3.2" [82]	31.4" [797]	28.0" [712]	3.6" [92]	3.6" [92]	16

MFT/programmable, Non fail-safe, 230 V



2-year warranty

## Technical data

Electrical data	
Nominal voltage	AC 230 V
Nominal voltage frequency	50/60 Hz
Nominal voltage range	AC 207...253 V
Transformer sizing	276 VA
Current consumption	1.2 A
Auxiliary switch	2x SPDT, 1 mA...5 A (3 A inductive), DC 5 V...AC 250 V, 1 x 3° / 1 x 87°
Switching capacity auxiliary switch	1 mA...5 A (3 A inductive), DC 5 V...AC 250 V
Electrical Connection	Terminal blocks
Overload Protection	thermally protected 135°C cut-out
Internal Humidity Control	resistive heating element
Functional data	
Torque motor	1000 Nm
Operating range Y	2...10 V
Input impedance	100 kΩ
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	hand wheel
Angle of rotation	90°
Running Time (Motor)	59 s
Duty cycle value	75%
Noise level, motor	45 dB(A)
Position indication	top mounted domed indicator
Safety data	
Degree of protection IEC/EN	IP66/67
Degree of protection NEMA/UL	NEMA 4X
Enclosure	UL Enclosure Type 4X
Agency Listing	ISO, CE, cCSAus
Quality Standard	ISO 9001
Ambient humidity	Max. 100% RH
Ambient temperature	-22...149°F [-30...65°C]
Storage temperature	-40...176°F [-40...80°C]
Servicing	maintenance-free
Weight	
Weight	80 lb [36 kg]

## Technical data

Materials	Housing material	die cast aluminium
	Gear train	high alloy steel gear sets, self locking

## Product features

Application	SY Series actuators are fractional horsepower devices, and utilize full-wave power supplies. Observe wire sizing and transformer sizing requirements. Proportional models CANNOT be connected to Belimo direct coupled (AF, AM, GM...etc) actuator power supplies or any type of half-wave device. You MUST use a separate, dedicated transformer or power supply to power the SY actuator. Please do not connect other automation equipment to the dedicated SY supply source. You MUST use four wires (plus a ground) to control a proportional control SY actuator (See SY Wiring Section).
-------------	--

## Accessories

Gateways	Description	Type
Gateway MP to BACnet MS/TP		UK24BAC
Gateway MP to Modbus RTU		UK24MOD
Gateway MP to LonWorks		UK24LON
Electrical accessories	Description	Type
Local electric disconnect for SY4...12 series actuator, AC 120 V, MFT		HOA-120VMFT
Service tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices		ZTH US
Battery backup system for SY7...12 series actuator, AC 120 V, on/off		EXT-NSV-B05-120
Tools	Description	Type
Connecting cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection		ZK4-GEN
Service tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices		ZTH US

## Electrical installation

 **INSTALLATION NOTES**

-  Do not change sensitivity or dip switch setting with power applied.
-  Power supply Common/Neutral and Control Signal "-"wiring to a common is prohibited. Terminals 4 and 6 need to be wired separately.
-  Isolation relays must be used in parallel connection of multiple actuators using a common control signal inputs. The relays should be DPDT.
-  Isolation relays are required in parallel applications. The reason parallel applications need isolation relays is that the motor uses two sets of windings, one for each direction. When one is energized to turn the actuator in a specific direction a voltage is generated in the other due to the magnetic field created from the first. It's called back EMF. This is not an issue with one actuator because the voltage generated in the second winding isn't connected to anything so there is no flow. On parallel applications without isolation, this EMF voltage energizes the winding it is connected to on the other actuators in the system, the actuators are trying to turn in both directions at once. The EMF voltage is always less than the supply voltage due to the resistance of the windings, so while the actuator still turns in the commanded direction, the drag from the other reduces the torque output and causes overheating.

 **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.

## Electrical installation

Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

## Wiring diagrams

