

Butterfly Valve with Lug types

Reinforced Teflon Seat, 316 Stainless Steel



5-year warranty

## Type overview

Type	DN
F6300-150SHP	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 150
Flow characteristic	modified equal percentage, unidirectional
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	7/8-9 UNC
Materials	
Valve body	Carbon steel full lug (ASME B16.34)
Stem	17-4 PH stainless steel
Seat	RPTFE
Pipe connection	ASME/ANSI class 150 flange
Bearing	glass backed PTFE
Disc	316 stainless steel
Gear operator materials	Gears - hardened steel
Suitable actuators	
Non-Spring	SY4
	SY5

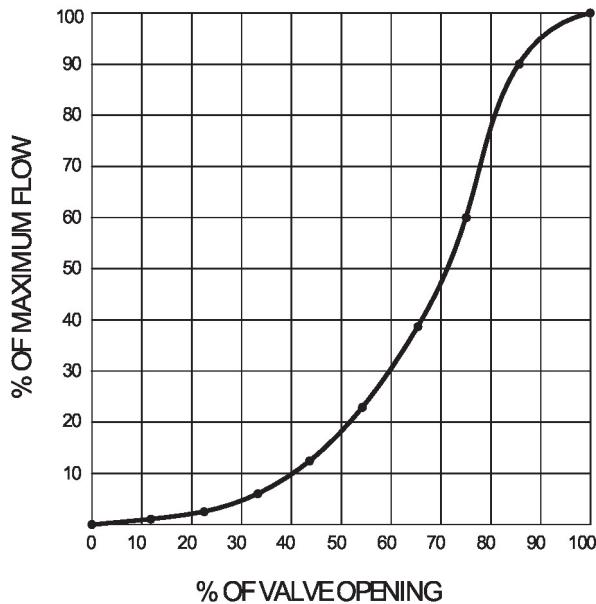
## Safety notes



- 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

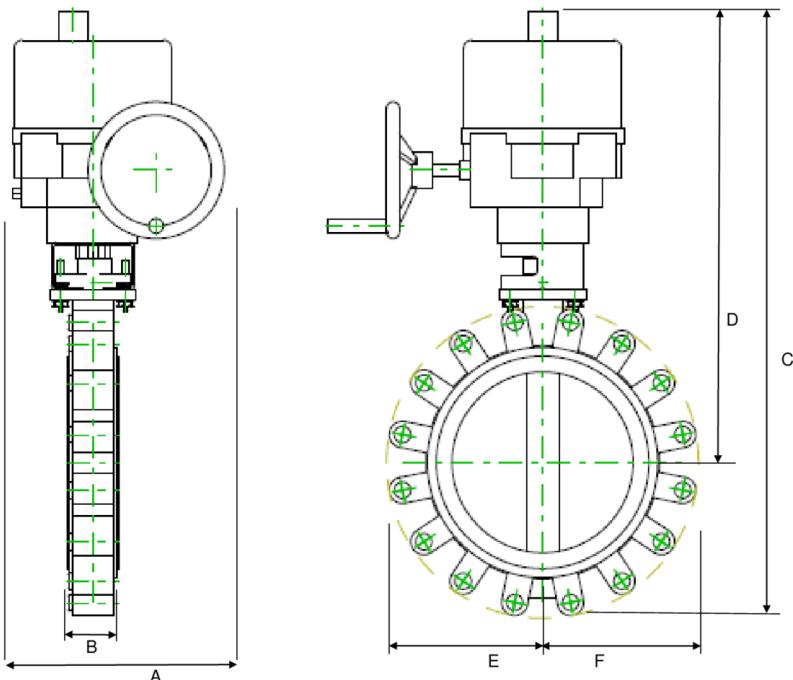
Type  
F6300-150SHP

DN

300

Weight

130 lb [60 kg]



A	B	C	D	E	F	Number of Bolt Holes
11.5" [293]	3.2" [82]	36.7" [933]	27.2" [691]	9.4" [238]	9.4" [240]	12

On/Off, Floating point, 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	253 VA	
Current consumption	1.1 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	400 Nm	
Direction of motion motor	selectable with switch 0/1	
Manual override	hand wheel	
Angle of rotation	90°	
Running Time (Motor)	20 s	
Duty cycle value	30%	
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	46 lb [21 kg]	
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

Electrical accessories	Description	Type
	Local electric disconnect for SY4...12 series actuator, AC 120 V, on/off	HOA-120V
	Battery backup system for SY4...6 series actuator, AC 120 V, on/off	EXT-NSV-B03-120
	Battery backup system for SY4...6 series actuator, AC 120 V, MFT	EXT-NSV-B04-120
	Battery backup system for SY4...5 series actuator, AC 24 V, on/off	EXT-NSV-B13-24
	Battery backup system for SY4...5 series actuator, AC 24 V, MFT	EXT-NSV-B14-24

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

## Electrical installation

## Wiring diagrams

AC/DC 110/120 or 220/230V

AC 110/120 or 220/230 V

