

## Features

- Double offset design reduces torque and seal wear
- High quality, passivated 316SS (CF8M) construction for superior corrosion protection
- Multiple RPTFE V-type rings for superior shaft sealing
- Bolted seat retainer keeps seat stable and allows easy changeout
- Belleville washers for consistent, self-adjusting stem seal pressure
- One piece, reinforced Teflon (RPTFE) seal
- Bi-directional seal design ensures increased sealing force in either flow direction
- EPS– Electronic Positioning System with 4-20mA input and output confirmation signal
- Visual valve position indicator
- Rugged aluminum Type 4X weatherproof enclosure
- Heavy duty motors with overload protection
- Thermostatically controlled anti-condensation heater
- Manual override with end of travel mechanical stops
- Actuators CSA Listed per UL429 and CSA C22.2

## Applications

High performance lug butterfly valves are used to control the flow of waters, oils, air, certain caustics, and other media compatible with the materials of construction for general service and where an expanded temperature range or higher pressure is required. Actuators designed for 70% duty cycle.

Also suitable for end of line applications.

## Operation

Electric actuated valves with EPS- Electronic Positioning System provide an accurate valve positioning function whereby the movement of the actuator is controlled by either a field selectable 4-20mA input control signal. Any change in the control input signal results in a corresponding and proportional change in the position of the actuator (valve disc). Flow is adjustable anywhere between 0-100%. Unique electronic positioning module is fully potted to help protect the electronics from vibration/moisture resistance.

## Construction

<b>Valve Body</b>	316 stainless steel CF8M
<b>Disc</b>	316 stainless steel CF8M
<b>Disc Seat/ Stem Packing</b>	RPTFE
<b>Stem</b>	17-4PH SS
<b>Gear Drive</b>	Heavy duty alloy steel/ aluminum bronze, self locking
<b>Actuator Enclosure</b>	Aluminum, polyester powder painted, Type 4X, IP67
<b>Visual Valve Position Indicator</b>	Clear Polycarbonate cover, red/yellow open-closed
<b>Fasteners</b>	Stainless Steel
<b>EPS Module</b>	Electronics mounted in potted ABS module



## Description

Electric operated direct mount high performance butterfly valves with 316 stainless steel lug body are designed for commercial and industrial applications. Valve mounts between two standard ANSI/ASME Class 125/150 flanges. Disc is spherically machined 316SS. Flange gaskets required. Double offset design to reduce seal wear. Rugged corrosion resistant electric actuator includes a manual override, valve position confirmation switches (on-off units), thermostatically controlled anti-condensation heater, and over-torque protection.

## Approvals

### Actuators

- CSA Listed to:
  - UL429 and CSA C22.2 no 139
  - Type 4X, IP67 weatherproof enclosure
- CE conformance– EN60204-1:2006
- ISO5211 Mounting



### Valves– Standards

- Pressure- ANSI/ASME B16.5 CLASS150
- JIS B 2239 10K, 16K
- Top Flange– ISO 5211
- Face– API 609 Class B
- Leakage- ISO 5208 Category 3, API 598 Table 5
- CE Conformance– PED 2014/68/EU Annex III Module B

## Construction Features

Heavy duty integral motor design significantly reduces physical size of actuator

Rugged polyester powder coated aluminum corrosion resistant Type 4X weatherproof enclosure

Stem packing adjustment below ISO mount is accessible with actuator installed

Bolted faceplate ensures consistent seat position

Spherically machined disc edge reduces wear & torque

Bi-directional, one piece self-energized RTPFE Seat

Thrust ring for anti-blowout, anti-static



Anti-Condensation Heater

Terminal Box, wire directly to terminal strip via included cable connector, or optional 1/2" NPT conduit adapters

Manual Override with protective cover

Self-locking all metal gear train, no additional brake required

316 Stainless Steel (CF8M) construction

Washer seals between stem and body brush away particles

Integrally-cast heavy duty mounting stop



Visual Valve Position Indicator

## Pressure Rating

**Pressure Rating:** 285 PSI (19.7 Bar), **Vacuum rating:** Full vacuum

## Temperature Rating

**Actuator Temperature Rating:** -13 to 131° F (-25 to 55° C)

**Valve Temperature Rating:** RPTFE seals: -40 to 450°F (-40 to 230°C)

## EPS - Electronic Positioning System

### Valve positioning and how it works?

Valworx electric actuators with EPS - Electronic Positioning System provide an accurate valve positioning function whereby the movement of the actuator is controlled by a 4-20mA input control signal. Any change in the control input signal results in a corresponding and proportional change in the position of the actuator (valve).

Unique electronic positioning module is fully potted to help protect the electronics from vibration/moisture resistance.

An internal microprocessor on the EPS circuit board continuously monitors the analog input and output signals and compares them to the physical position via a precision potentiometer feedback system, moving the actuator as required to balance the signals.

The EPS system is self-calibrating which virtually eliminates "hunting". The following functions are standard:

- Position monitoring output signal in same format as input. Ex: 4-20mA input, 4-20mA output
- Adjustable forward or reversing action.
- Sensitivity, Zero and Span adjustments
- Selectable fail mode: fail closed, fail open or stop in place (for loss of input command signal).
- Electric manual control with onboard selector switches
- Fault LED lights indicate valve jam or signal loss
- Electronic brake function

### Specifications (English units)

Stock Number	Pipe Size (inch)	Orifice Diam. (inch)	Cv Flow Factor	Pressure Max. (PSI)	Cycle Time/90° (seconds)	Voltage	Current (amps)	Duty Cycle	Electrical Dwg.
<b>120 VAC ELECTRIC ACTUATED HIGH PERFORMANCE LUG BODY BUTTERFLY VALVE, RPTFE SEALS EPS POSITIONER 4-20mA input</b>									
574203A	3	2.8	180	285	20/17	110 VAC, 50/60Hz	0.3	70%	E
574204A	4	3.6	375	285	30/25	110 VAC, 50/60Hz	0.7	70%	E
574206A	6	5.7	1350	285	30/25	110 VAC, 50/60Hz	0.7	70%	E
<b>24 VDC ELECTRIC ACTUATED HIGH PERFORMANCE LUG BODY BUTTERFLY VALVE, RPTFE SEALS EPS POSITIONER 4-20mA input</b>									
547403A	3	2.8	180	285	20	DC24	1.0	70%	GEY
547404A	4	3.6	375	285	30	DC24	1.7	70%	GEY
547406A	6	5.7	1350	285	30	DC24	1.7	70%	GEY

Cv = The GPM of water at 60° F that will pass through the valve with 1 PSI pressure drop

\* Consult compatibility chart for other fluid media. Suitable for vacuum up to 29 inHg

\* See P/T Chart

### Specifications (Metric units)

Stock Number	Pipe Size (DN)	Orifice Diam. (mm)	Kv Flow Factor	Pressure Max. (Bar)	Cycle Time/90° (seconds)	Voltage	Current (amps)	Duty Cycle	Electrical Dwg.
<b>120 VAC ELECTRIC ACTUATED HIGH PERFORMANCE LUG BODY BUTTERFLY VALVE, RPTFE SEALS EPS POSITIONER 4-20mA input</b>									
574203A	80	72.0	155.7	19.7	20/17	110 VAC, 50/60Hz	0.3	70%	E
574204A	100	91.0	324.4	19.7	30/25	110 VAC, 50/60Hz	0.7	70%	E
574206A	150	145.0	1167.8	19.7	30/25	110 VAC, 50/60Hz	0.7	70%	E
<b>24 VDC ELECTRIC ACTUATED HIGH PERFORMANCE LUG BODY BUTTERFLY VALVE, RPTFE SEALS EPS POSITIONER 4-20mA input</b>									
547403A	80	72.0	155.7	19.7	20	DC24	1.0	70%	GEY
547404A	100	91.0	324.4	19.7	30	DC24	1.7	70%	GEY
547406A	150	145.0	1167.8	19.7	30	DC24	1.7	70%	GEY

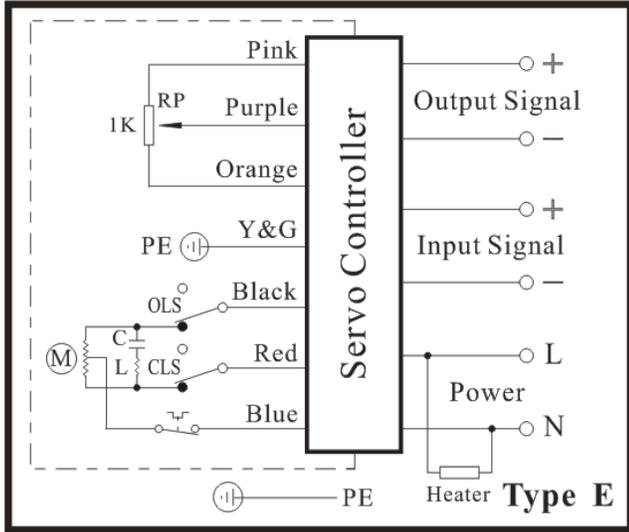
Kv = The number of m<sup>3</sup> per hour of 20° C water at 1 bar pressure drop

\* Consult compatibility chart for other fluid media. Suitable for vacuum up to 29 inHg

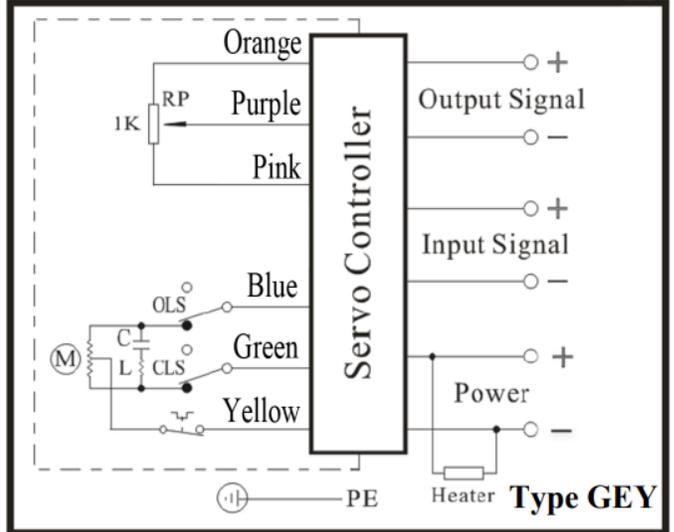
\* See P/T Chart

## Electrical Wiring

### Valves with EPS Positioners AC Voltages



### Valves with EPS Positioners DC Voltages

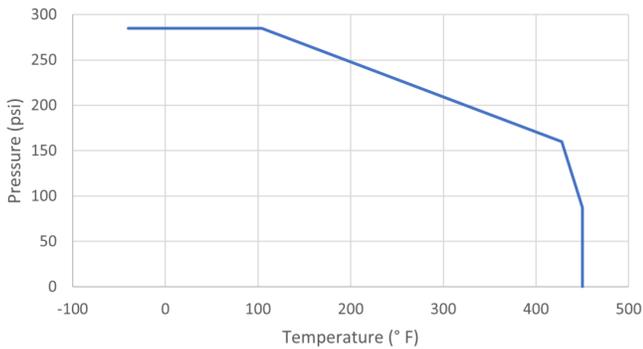


## PT Chart

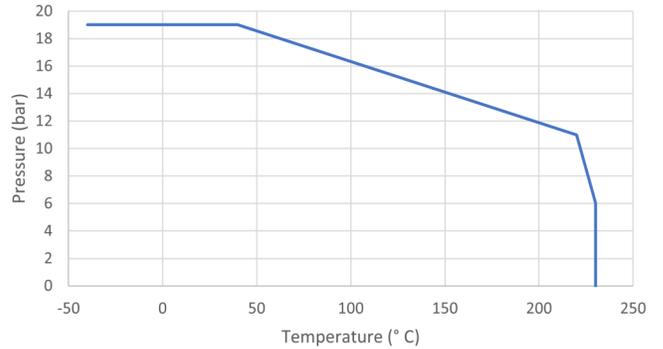
Pressure vs Temperature					
Temp °F	-40	104	428	450	450
Pressure- PSI	285	285	160	87	0

Pressure vs Temperature					
Temp °C	-40	40	220	230	230
Pressure- Bar	19	19	11	6	0

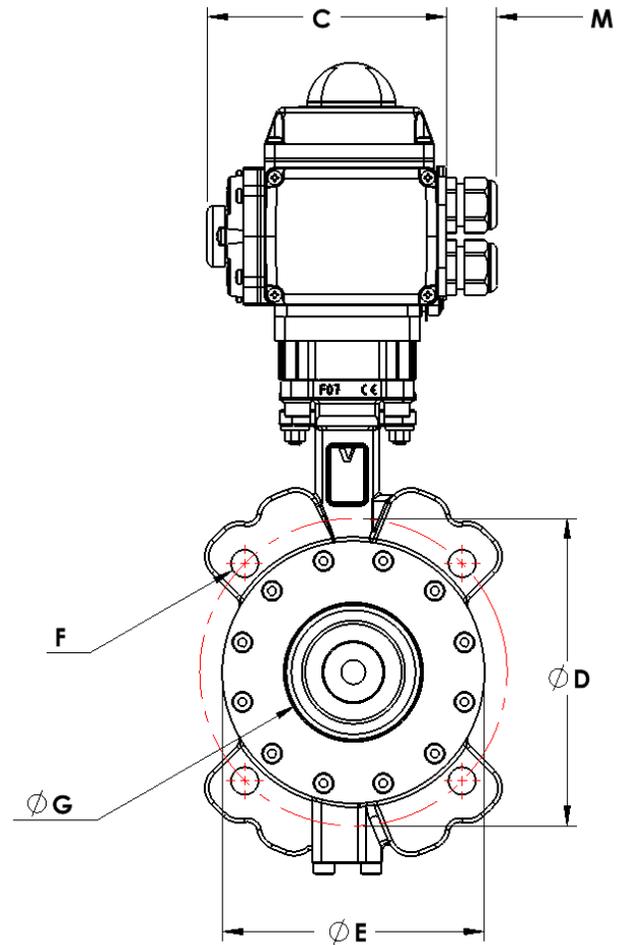
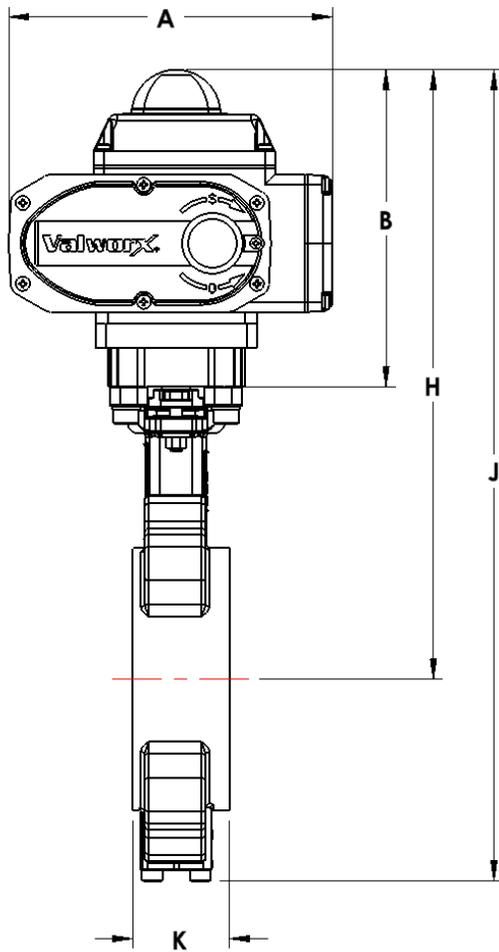
Pressure vs Temperature- Standard Units



Pressure vs Temperature- Metric Units



## Dimensions:



### Valves suitable between flanges:

- ◆ ANSI/ASME B16.5 CLASS 150
- ◆ ANSI/ASME B16.1 CLASS 125

Pipe Size		A	B	C	D	E	F	G	H	J	K	M	Weight
3	inch	6.4	6.2	4.7	6.0	5.1	4) 5/8-11	2.8	11.9	15.8	1.2	1.0	19.4 lb
	mm	162.0	157.0	118.5	152.4	130.0	-	72.0	302.3	401.3	48.0	25.0	8.8 kg
4	inch	10.1	8.5	6.4	7.5	6.2	8) 5/8-11	3.6	15.2	20.1	2.1	1.0	39.9 lb
	mm	255.5	216.0	161.5	190.5	157.0	-	91.0	386.1	510.5	54.0	25.0	18.1 kg
6	inch	10.1	8.5	6.4	9.5	8.5	8) 3/4-10	5.7	16.4	22.4	2.2	1.0	53.0 lb
	mm	255.5	216.0	161.5	241.3	216.0	-	145.0	416.6	568.9	57.0	25.0	24.1 kg