

Features

- EPS - Electronic Positioning System with 4-20mA input
- Industrial grade PVC butterfly valve
- Polypropylene (PP) disc with 316 Stainless Steel shaft
- EPDM Primary Liner
- Visual valve position indicator
- Rugged aluminum Type 4X weatherproof enclosure
- Heavy duty motor with overload protection
- Thermostatically controlled anti-condensation heater
- Manual override with end of travel mechanical stops
- Two auxiliary position confirmation limit switches
- Valves NSF Certified for use in potable water applications

Applications

PVC butterfly valves with EPDM seals are typically used for on-off control of water and other media compatible with the materials of construction. NSF approved material for use in conditions requiring potable water. Multi-standard alignment holes, suitable for ISO or ANSI flanges. Actuators designed for 70% duty cycle.

PVC butterfly valves should never be used for compressed gas 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

Valve Body	PVC (dark gray)
Disc	PP (Polypropylene)
Primary Liner	EPDM
Stem	316 SS
Stem Seals	EPDM
Shaft O-Rings/Anti Friction Rings	EPDM/PTFE
Gear Drive	Heavy duty alloy steel/aluminum bronze, self locking
Actuator Enclosure	Aluminum, polyester powder painted, Type 4X, IP67
Visual Valve Position Indicator	Clear cover with red/yellow open-closed indicator
Fasteners	Stainless Steel
EPS Module	Electronics mounted in potted ABS module



Description

Electric operated direct mount butterfly valves with PVC wafer body are designed for commercial and industrial applications. Valve mounts between two standard ISO or ANSI Class 150 flanges and includes integral molded EPDM flange gaskets. Disc is Polypropylene. Rugged corrosion resistant electric actuator includes a manual override, auto calibration positioner module, 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-EN 60204-1:2006



Valves

- NSF International certified to:
 - NSF/ANSI 372 Drinking Water
 - NSF/ANSI 61 G
 - ANSI B16.5
- Disc PP Type 1 homopolymer per ASTM D4101
- CE conformance- PED 2014/68/UE



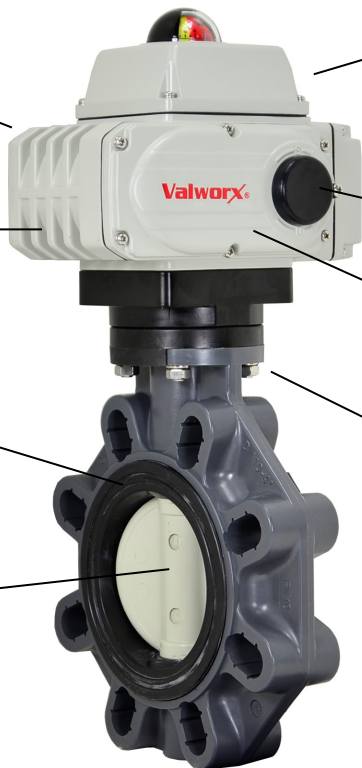
Construction Features

Heavy duty integral motor design significantly reduces physical size of actuator

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

Disc, seat and seals are only components that contact media flow isolating PVC valve body**

PP (Polypropylene) disc suitable for use with clean or dirty fluids (refer to installation guidelines)



Anti-Condensation Heater

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

Manual Override with protective cover

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

Direct mount wafer butterfly valve with standard ISO5211 mount, no additional brackets required

Valve certified per NSF 372 and NSF 61 for potable/drinking water



Pressure-Temperature Rating

Pressure Rating*: 232 PSI (16 Bar, 2" Valves), 150 PSI (10 Bar, 3-10" valves), 120 PSI (8 Bar, 12" valves) ~ at 73° F (23° C)

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

Valve Temperature Rating: 32 to 140° F (0 to 60°C)

* See P/T chart (page 3)

** Not for use in end of line service.



Visual Valve Position Indicator

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



Electric Actuated Butterfly Valves

PVC Wafer Body ANSI 150#
EPS Positioner Models

SERIES
5407
5409

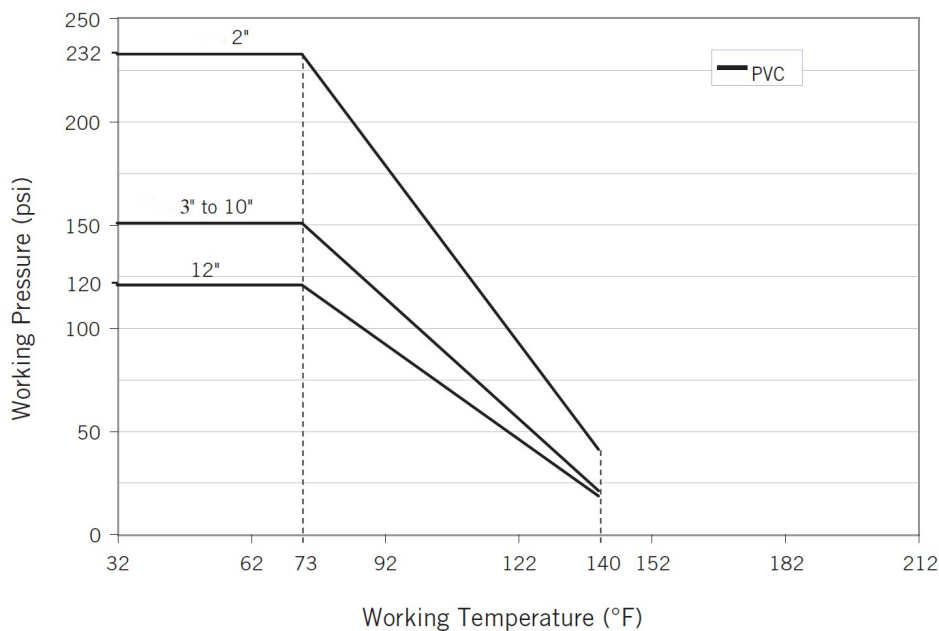
Specifications (English units)

Stock Number	Pipe Size (inch)	Disc Size (inch)	Cv Flow Factor*	Pressure Max. (PSI)**	Cycle Time/90° (seconds)	Voltage	Current (amps)	Duty Cycle	Electrical Dwg.
110 VAC ELECTRIC ACTUATED WAFER BUTTERFLY VALVE, EPDM SEALS EPS POSITIONER 4-20mA input									
540702A	2	2.0	90	232	25/21	110 VAC, 50/60Hz	0.3	70%	E
540704A	3	3.2	249	150	25/21	110 VAC, 50/60Hz	0.3	70%	E
540706	4	3.9	413	150	30/25	110 VAC, 50/60Hz	0.6	70%	E
540708	6	5.9	1309	150	30/25	110 VAC, 50/60Hz	0.7	70%	E
540710	8	7.9	2135	150	30/25	110 VAC, 50/60Hz	0.7	70%	E
540712	10	9.8	3724	150	45/37	110 VAC, 50/60Hz	1.3	70%	E
540714	12	11.8	5712	120	45/37	110 VAC, 50/60Hz	1.3	70%	E
24 VDC ELECTRIC WAFER ACTUATED BUTTERFLY VALVE, EPDM SEALS EPS POSITIONER 4-20mA input									
540902A	2	2.0	90	232	30	DC24	1.0	70%	GEY
540904A	3	3.2	249	150	30	DC24	1.0	70%	GEY
540906A	4	3.9	413	150	30	DC24	1.7	70%	GEY
540908A	6	5.9	1309	150	30	DC24	3.6	70%	GEY
540910A	8	7.9	2135	150	30	DC24	3.6	70%	GEY
540912A	10	9.8	3724	150	45	DC24	6.0	70%	GEY
540914A	12	11.8	5712	120	45	DC24	6.0	70%	GEY

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

** See P/T Chart below for more detail

Pressure Temperature Chart



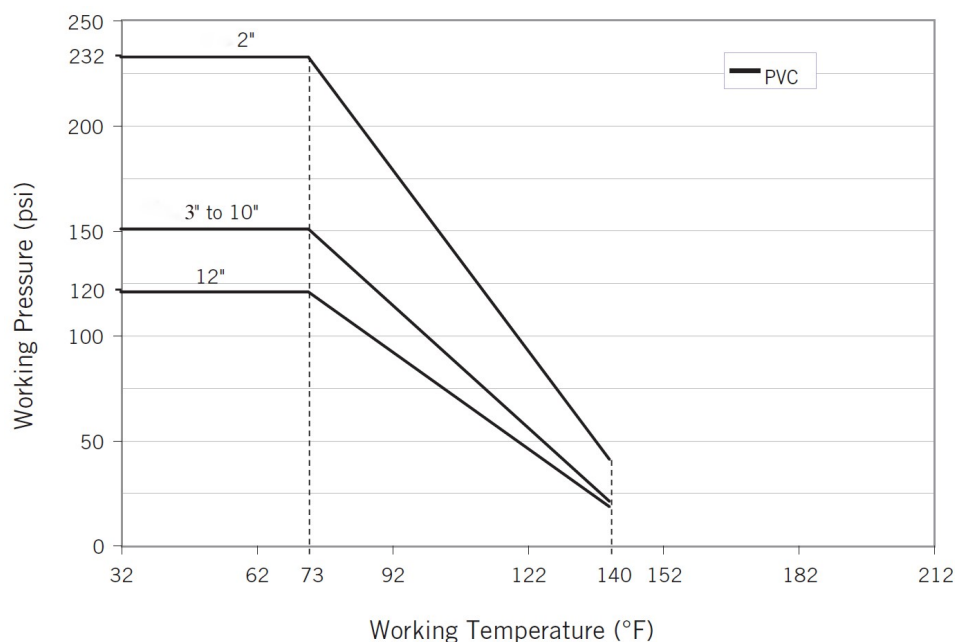
Specifications (Metric units)

Stock Number	Pipe Size (inch)	Disc Size (mm)	Kv Flow Factor*	Pressure Max. (Bar)**	Cycle Time/90° (seconds)	Voltage	Current (amps)	Duty Cycle	Electrical Dwg.
110 VAC ELECTRIC ACTUATED WAFER BUTTERFLY VALVE, EPDM SEALS EPS POSITIONER 4-20mA input									
540702A	2	50	78	16	25/21	110 VAC, 50/60Hz	0.3	70%	E
540704A	3	80	215	10	25/21	110 VAC, 50/60Hz	0.3	70%	E
540706	4	100	357	10	30/25	110 VAC, 50/60Hz	0.6	70%	E
540708	6	150	1132	10	30/25	110 VAC, 50/60Hz	0.7	70%	E
540710	8	200	1847	10	30/25	110 VAC, 50/60Hz	0.7	70%	E
540712	10	250	3221	10	45/37	110 VAC, 50/60Hz	1.3	70%	E
540714	12	300	4940	8	45/37	110 VAC, 50/60Hz	1.3	70%	E
24 VDC ELECTRIC ACTUATED WAFER BUTTERFLY VALVE, EPDM SEALS EPS POSITIONER 4-20mA input									
540902A	2	50	78	16	30	DC24	1.0	70%	GEY
540904A	3	80	215	10	30	DC24	1.0	70%	GEY
540906A	4	100	357	10	30	DC24	1.7	70%	GEY
540908A	6	150	1132	10	30	DC24	3.6	70%	GEY
540910A	8	200	1847	10	30	DC24	3.6	70%	GEY
540912A	10	250	3221	10	45	DC24	6.0	70%	GEY
540914A	12	300	4940	8	45	DC24	6.0	70%	GEY

* Kv = The number of m³ per hour of 20° C water at 1 bar pressure drop

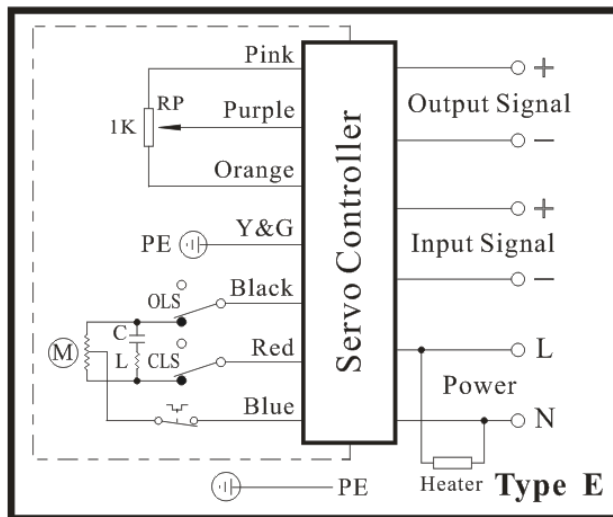
** See P/T Chart below for more detail

Pressure Temperature Chart

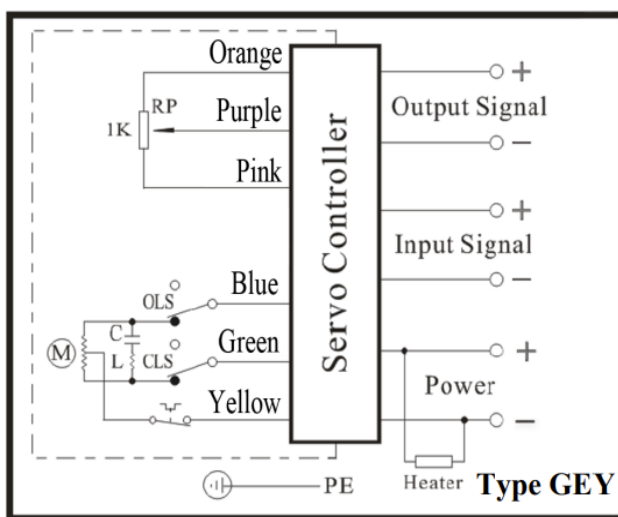


Electrical Wiring

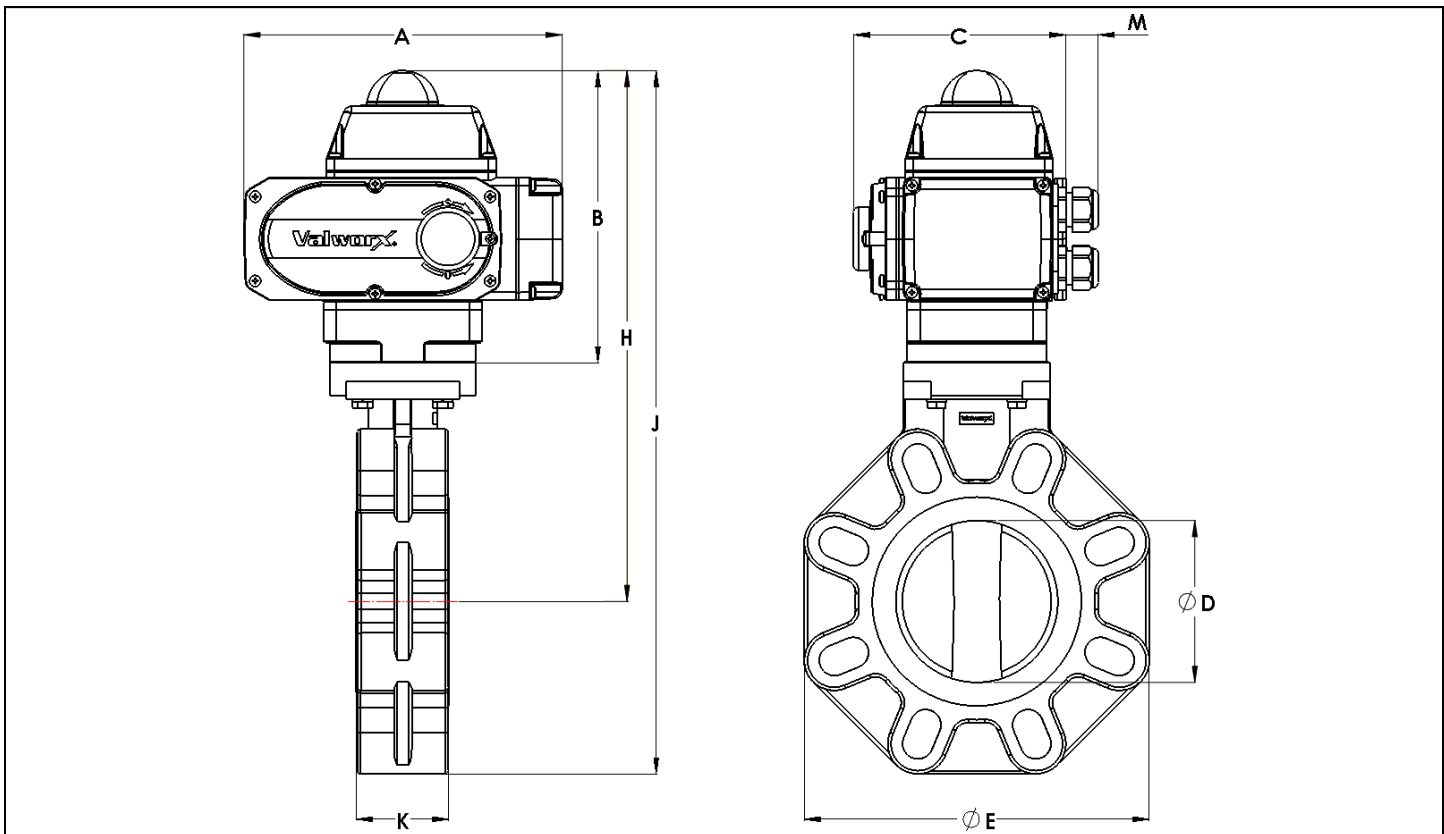
Valves with EPS Positioners AC Voltages



Valves with EPS Positioners DC Voltages



Dimensions:



Pipe Size		A	B	C	D	E	H	J	K	M	Weight (AC/DC)
2	inch	6.4	6.1	4.7	2.0	5.8	10.7	13.4	1.7	1.0	7.7 lbs
	mm	162.0	156.0	118.0	50.0	147.0	272.0	341.0	44.0	25.0	3.5 kg
3	inch	6.4	6.1	4.7	3.2	7.3	11.4	14.2	2.0	1.0	9.3 lbs
	mm	164.0	156.0	118.0	80.0	185.0	290.0	360.0	50.0	25.0	4.2 kg
4	inch	7.7	7.1	5.2	3.9	8.3	12.9	17.1	2.2	1.0	13.1 lbs
	mm	196.5	180.0	131.0	100.0	211.0	328.0	435.0	56.0	25.0	6.0 kg
6	inch	10.1	8.5	6.3	5.9	10.5	15.6	20.9	2.8	1.0	28.1 lbs
	mm	256.0	216.0	160.0	150.0	268.0	396.0	530.0	71.0	25.0	12.8 kg
8	inch	10.1	8.5	6.3	7.9	12.7	17.5	23.8	2.8	1.0	34.3 lbs
	mm	256.0	216.0	160.0	200.0	323.0	444.0	605.0	72.0	25.0	15.6 kg
10	inch	10.1	8.5	6.3	9.8	15.9	18.3	26.5	4.5	1.0	51.5 lbs
	mm	256.0	216.0	160.0	250.0	405.0	465.0	674.0	114.0	25.0	23.4 kg
12	inch	10.1	8.5	6.3	11.8	18.7	20.6	30.4	4.5	1.0	62.1 lbs
	mm	256.0	216.0	160.0	300.0	475.0	522.0	773.0	114.0	25.0	28.2 kg