Electric Actuated Butterfly Valves

PVC Wafer Body ANSI 150#
2" to 12" Pipe

SERIES
5406
5408

Features

- Industrial grade PVC butterfly valve
- Polypropylene (PP) disc
- 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
- EPS - Electronic Positioning System models available
- Actuator CSA Listed per UL429 and CSA C22.2

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

On-Off electric actuated valve uses power-to-open and power-to-close, stays in the last known position with loss of power. On receipt of a continuous voltage signal, the motor runs and via a rugged all metal gear system rotates the disc 90°. The motor is automatically stopped by internal cams striking limit switches. On receipt of a reversing continuous signal, the motor turns in the opposite direction reversing the valve position. Power connections direct to terminal strip via included cable connector, or optional 1/2" NPT conduit adapters.

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, red/yellow open-closed
Fasteners	Stainless Steel
Auxiliary Limit Switches	2 x SPDT (5A/125VAC), on-off actuators only

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, 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-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

Auxiliary Limit Switches (2) for confirming valve position, standard in on-off units

Heavy duty integral motor design significantly reduces physical size of actuator

Rugged polyester powder coated aluminum corrosion resistant Type 4X weather-proof 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 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

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

Visual Valve Position Indicator

Pressure 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)

Temperature Rating

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

Valve Temperature Rating: 40 to 140° F (4 to 60°C)

*See P/T chart (page 3)

** Not for use in end of line service.

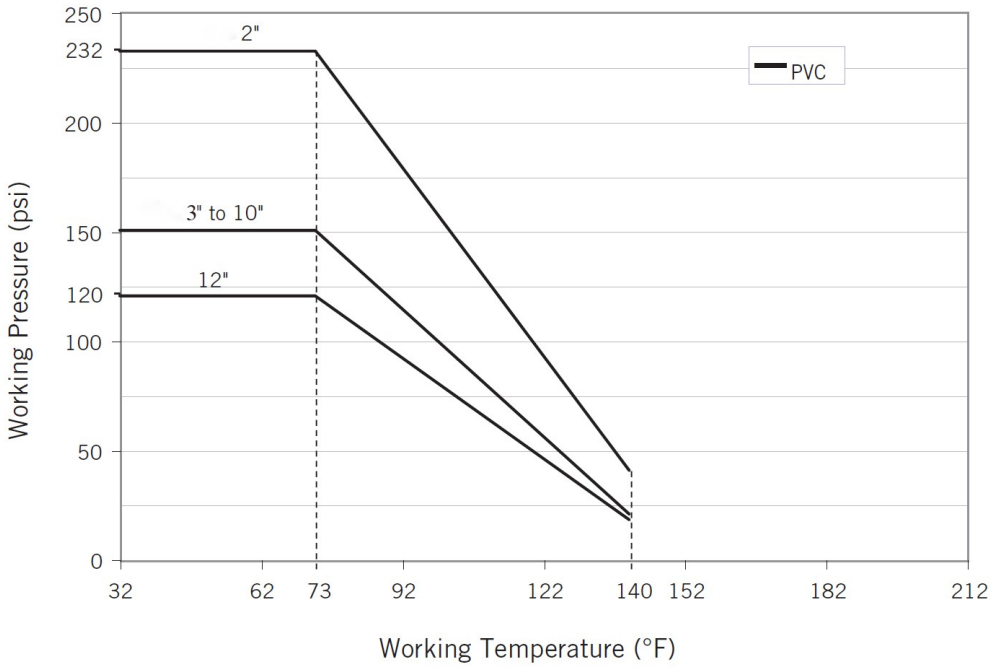
Specifications (English units)

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 BODY BUTTERFLY VALVE, EPDM SEALS									
540602A	2	2.0	90	232	25/21	110 VAC, 50/60Hz	0.3	70%	B
540604A	3	3.2	249	150	25/21	110 VAC, 50/60Hz	0.3	70%	B
540606	4	3.9	413	150	30/25	110 VAC, 50/60Hz	0.6	70%	B
540608	6	5.9	1309	150	30/25	110 VAC, 50/60Hz	0.7	70%	B
540610	8	7.9	2135	150	30/25	110 VAC, 50/60Hz	0.7	70%	B
540612	10	9.8	3724	150	45/37	110 VAC, 50/60Hz	1.3	70%	B
540614	12	11.8	5712	120	45/37	110 VAC, 50/60Hz	1.3	70%	B
24 VDC ELECTRIC ACTUATED WAFER BODY BUTTERFLY VALVE, EPDM SEALS									
540802A	2	2.0	90	232	20	DC24	1.3	70%	G
540804A	3	3.2	249	150	20	DC24	1.3	70%	G
540806	4	3.9	413	150	30	DC24	2.0	70%	G
540808	6	5.9	1309	150	30	DC24	3.6	70%	G
540810	8	7.9	2135	150	30	DC24	3.6	70%	G
540812	10	9.8	3724	150	45	DC24	6.0	70%	G
540814	12	11.8	5712	120	45	DC24	6.0	70%	G

* 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



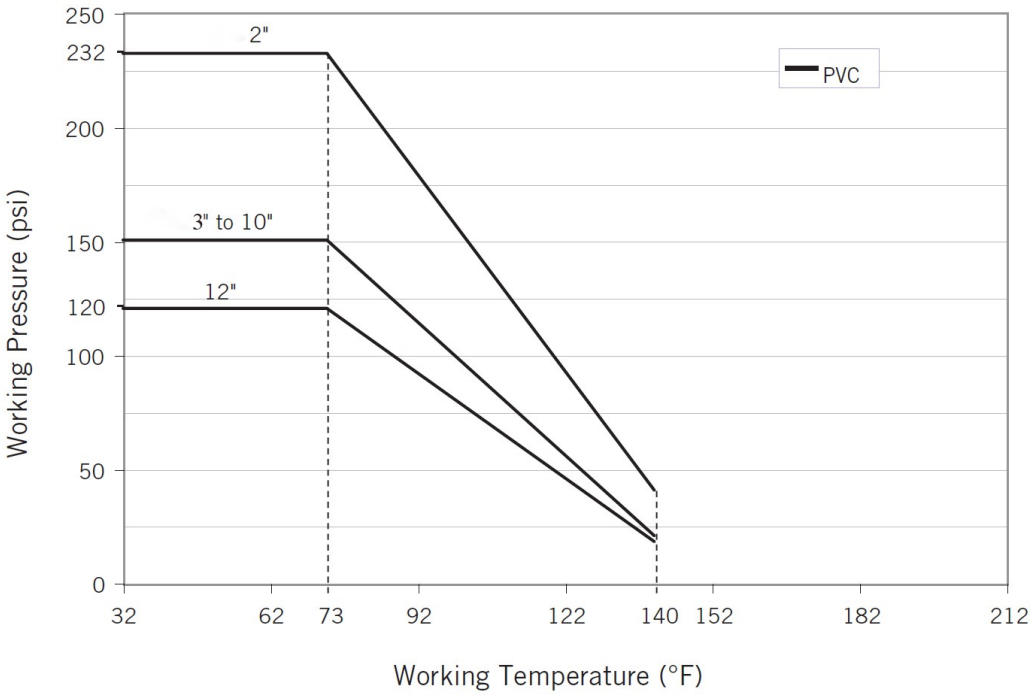
Specifications (Metric units)

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 BODY BUTTERFLY VALVE, EPDM SEALS									
540602A	2	50	78	16	25/21	110 VAC, 50/60Hz	0.3	70%	B
540604A	3	80	215	10	25/21	110 VAC, 50/60Hz	0.3	70%	B
540606	4	100	357	10	30/25	110 VAC, 50/60Hz	0.6	70%	B
540608	6	150	1132	10	30/25	110 VAC, 50/60Hz	0.7	70%	B
540608	8	200	1847	10	30/25	110 VAC, 50/60Hz	0.7	70%	B
540612	10	250	3221	10	45/37	110 VAC, 50/60Hz	1.3	70%	B
540614	12	300	4940	8	45/37	110 VAC, 50/60Hz	1.3	70%	B
24 VDC ELECTRIC ACTUATED WAFER BODY BUTTERFLY VALVE, EPDM SEALS									
540802A	2	50	78	16	20	DC24	1.3	70%	G
540804A	3	80	215	10	20	DC24	1.3	70%	G
540806	4	100	357	10	30	DC24	2.0	70%	G
540808	6	150	1132	10	30	DC24	3.6	70%	G
540810	8	200	1847	10	30	DC24	3.6	70%	G
540812	10	250	3221	10	45	DC24	6.0	70%	G
540814	12	300	4940	8	45	DC24	6.0	70%	G

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

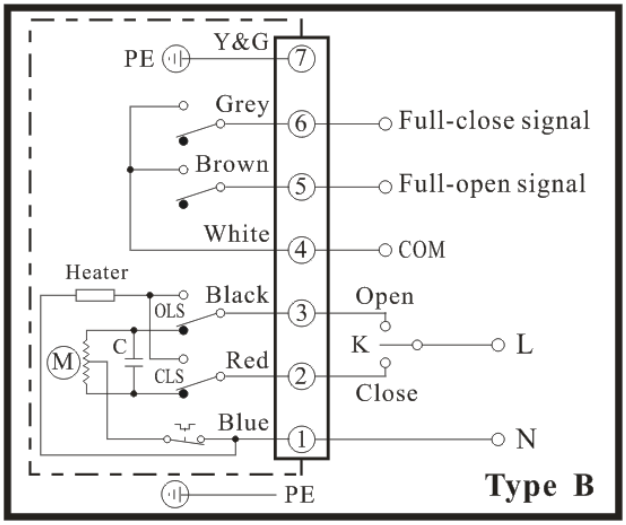
** See P/T Chart below for more detail

Pressure Temperature Chart

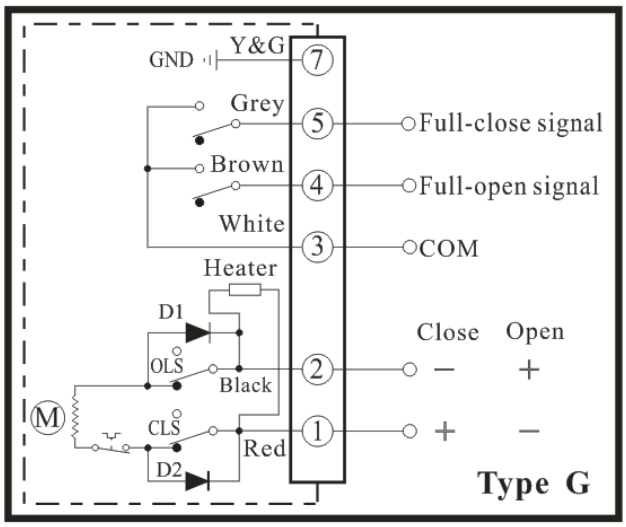


Electrical Wiring

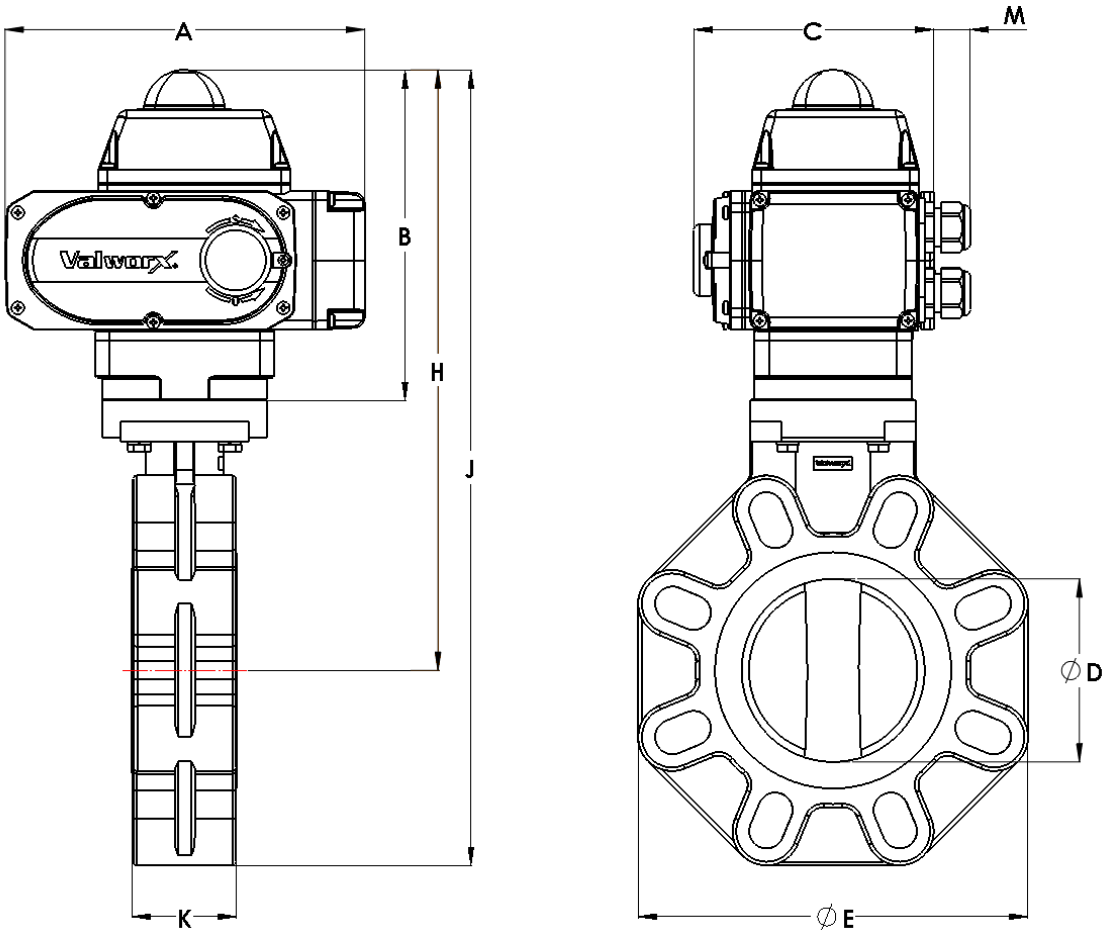
AC Voltages



DC Voltages



Dimensions:



Pipe Size		A	B	C	D	E	H	J	K	M	Weight
2	inch	6.4	6.1	4.7	2.0	5.8	10.7	13.4	1.7	1.0	7.7 lbs
DN50	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
DN80	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
DN100	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
DN150	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
DN200	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
DN250	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
DN300	mm	256.0	216.0	160.0	300.0	475.0	522.0	773.0	114.0	25.0	28.2 kg