

Features

- Quick close actuator– 2, 4 or 8 second cycle times
- Industrial grade True Union full port ball valve
- Union nut locking device prevents back-off
- Energized PTFE ball seats for lower torque and longer life
- Leak free dual stem seal design
- Valve certified per NSF372/ NSF61 for potable/drinking water
- Visual valve position indicator
- Rugged aluminum Type 4X weatherproof enclosure
- Anti-condensation heater
- Manual override with end of travel mechanical stops
- Two auxiliary limit switches (on-off models)
- Actuator CSA listed per UL429 and CSA C22.2

Applications

Industrial quality full port electric actuated PVC ball valves are typically used for control of water and other media compatible with the materials of construction (not suitable for compressed air or gas). Ideal for industrial applications and where NSF approved construction is required for potable drinking water. Rugged actuator designed for 70% duty cycle.

Operation

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 ball 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. Wiring is directly to a terminal strip via supplied cable connector, or optional 1/2 inch NPT conduit adapters.

Construction

Valve Body	PVC cell class 12454 per ASTM D1784 (dark gray)
Ball/Stem	PVC cell class 12454 per ASTM D1784
Ball Seats	PTFE (Teflon) energized with EPDM
Stem Seals	Dual EPDM seals
Gear Drive	Heavy duty alloy steel and aluminium bronze worm
Actuator Enclosure	Aluminum polyester powder coated, Type 4X, IP67
Visual Valve Position Indicator	Clear polycarbonate cover, red/yellow open-closed
Fasteners	Stainless Steel
Auxiliary Limit Switches on-off models	2 x SPDT 3A@125/250VAC, 30VDC resistive load



Description

Electric actuated PVC ball valves offer a variety of advanced features in a wide range of pipe sizes. Energized PTFE ball seats are designed for low torque and extended cycle life. Dual stem seals and adjustable ball seat carrier contribute to a leak free design. Union nut locking device prevents back off due to vibration or thermal cycling. Rugged Type 4X corrosion resistant actuator includes a manual override, valve position confirmation switches (on-off models), 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
 - ISO5211 Mounting



Valves

- NSF International certified to:
 - NSF/ANSI 61 G
 - NSF/ANSI 372 Drinking Water
- ANSI B1.20.1
- ASTM D1784, cell class 12454



Construction Features



Certified per NSF61G and NSF372 for potable/ drinking water



Pressure-Temperature

Pressure Rating*: 232 PSI (16 Bar) at 73°F (23°C)

Vacuum 29inHg

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

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

*See P/T chart



Visual Valve
Position Indicator

Pressure/Temperature Chart

P/T Chart (PSI/°F)							
PSI	232	232	232	180	150	100	35
°F	32	50	70	90	110	120	140

P/T Chart (BAR/°C)							
Bar	16	16	16	12	10	7	2.4
°C	0	10	21	32	43	49	60

Specifications: Electric PVC Valves On-Off Version (English units)

Stock Number	Pipe Size (inch)*	Pipe O.D. (inch)	Cv Flow Factor	Pressure Max. (PSI)**	Cycle Time/90° (seconds)	Voltage	Current F.L. Amps	Electrical Wiring Drawing	Quick Close Accessory
120 VAC ELECTRIC PVC BALL VALVE TEFLON/EPDM: ON-OFF version									
565404C	1/2	0.8	14	232	2	110 VAC, 50/60Hz	0.8	B	A561825
565406C	3/4	1.1	27	232	2	110 VAC, 50/60Hz	0.8	B	A561825
565408C	1	1.3	54	232	2	110 VAC, 50/60Hz	0.8	B	A561825
565410C	1-1/4	1.7	77	232	2	110 VAC, 50/60Hz	0.8	B	A561825
565412C	1-1/2	1.9	123	232	2	110 VAC, 50/60Hz	0.8	B	A561825
565416C	2	2.4	238	232	4	110 VAC, 50/60Hz	0.8	B	A561850
565417C	2-1/2	2.9	368	232	4	110 VAC, 50/60Hz	0.8	B	A561850
565418A	3	3.5	497	232	8	110 VAC, 50/60Hz	1.2	B	A561862
565419A	4	4.5	665	232	8	110 VAC, 50/60Hz	1.2	B	A561870
24 VDC ELECTRIC PVC BALL VALVE TEFLON/EPDM: ON-OFF version									
565446C	1/2	0.8	14	232	4	DC24	6.0	G	A561851
565447C	3/4	1.1	27	232	4	DC24	6.0	G	A561851
565449C	1	1.3	54	232	4	DC24	6.0	G	A561851
565450C	1-1/4	1.7	77	232	4	DC24	6.0	G	A561851
565451C	1-1/2	1.9	123	232	4	DC24	6.0	G	A561851
565452C	2	2.4	238	232	4	DC24	6.0	G	A561851
565453C	2-1/2	2.9	368	232	4	DC24	6.0	G	A561851
565454A	3	3.5	497	232	8	DC24	6.0	G	A561865
565455A	4	4.5	665	232	8	DC24	6.0	G	A561871

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

*Valve sizes 1/2 to 2 inch include both IPS glue sockets and NPT end connectors, sizes 2-1/2 to 4 inch include IPS glue sockets only

** Maximum pressure at 73° F, pressure decreases as temperature increases (see P/T chart)

Specifications: Electric PVC Valves On-Off Version (Metric units)

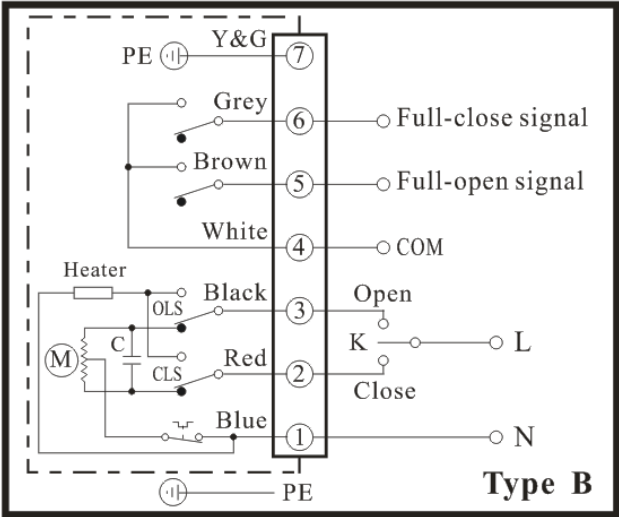
Stock Number	Pipe Size (inch)*	Pipe O.D. (mm)	Kv Flow Factor	Pressure Max. (Bar)**	Cycle Time/90° (seconds)	Voltage	Current F.L. Amps	Electrical Wiring Drawing	Quick Close Accessory
120 VAC ELECTRIC PVC BALL VALVE TEFLON/EPDM: ON-OFF version									
565404C	1/2	21.3	12	16	2	110 VAC, 50/60Hz	0.8	B	A561825
565406C	3/4	26.7	23	16	2	110 VAC, 50/60Hz	0.8	B	A561825
565408C	1	33.5	46	16	2	110 VAC, 50/60Hz	0.8	B	A561825
565410C	1-1/4	42.2	66	16	2	110 VAC, 50/60Hz	0.8	B	A561825
565412C	1-1/2	48.3	106	16	2	110 VAC, 50/60Hz	0.8	B	A561825
565416C	2	60.5	205	16	4	110 VAC, 50/60Hz	0.8	B	A561850
565417C	2-1/2	73.2	317	16	4	110 VAC, 50/60Hz	0.8	B	A561850
565418A	3	88.9	427	16	8	110 VAC, 50/60Hz	1.2	B	A561862
565419A	4	114.3	572	16	8	110 VAC, 50/60Hz	1.2	B	A561870
24 VDC ELECTRIC PVC BALL VALVE TEFLON/EPDM: ON-OFF version									
565446C	1/2	21.3	12	16	4	DC24	6.0	G	A561851
565447C	3/4	26.7	23	16	4	DC24	6.0	G	A561851
565449C	1	33.5	46	16	4	DC24	6.0	G	A561851
565450C	1-1/4	42.2	66	16	4	DC24	6.0	G	A561851
565451C	1-1/2	48.3	106	16	4	DC24	6.0	G	A561851
565452C	2	60.5	205	16	4	DC24	6.0	G	A561851
565453C	2-1/2	73.2	317	16	4	DC24	6.0	G	A561851
565454A	3	88.9	427	16	8	DC24	6.0	G	A561865
565455A	4	114.3	572	16	8	DC24	6.0	G	A561871

*Valve sizes 1/2 to 2 inch include both IPS glue sockets and NPT end connectors, sizes 2-1/2 to 4 inch include IPS glue sockets only

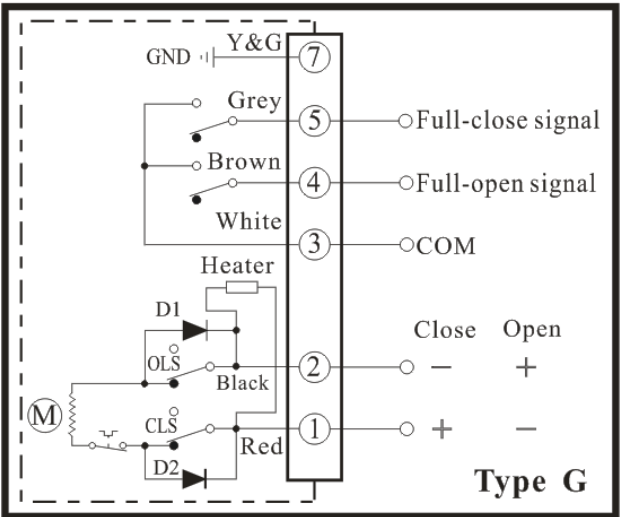
** Maximum pressure at 23° C, pressure decreases as temperature increases (see P/T chart)

Electrical Wiring Diagrams

AC Voltages



DC Voltages



On-Off Electric Actuated Valves

Valworx electric actuated valves use power-to-open and power-to-close, stays in the last known position with loss of power. The actuator will rotate the output drive 90° to open or close the ball valve. Limit switches automatically stop the motor drive in either the open or closed position as required. Two auxiliary limit switches are provided as standard with on-off actuators to confirm valve open or closed position.

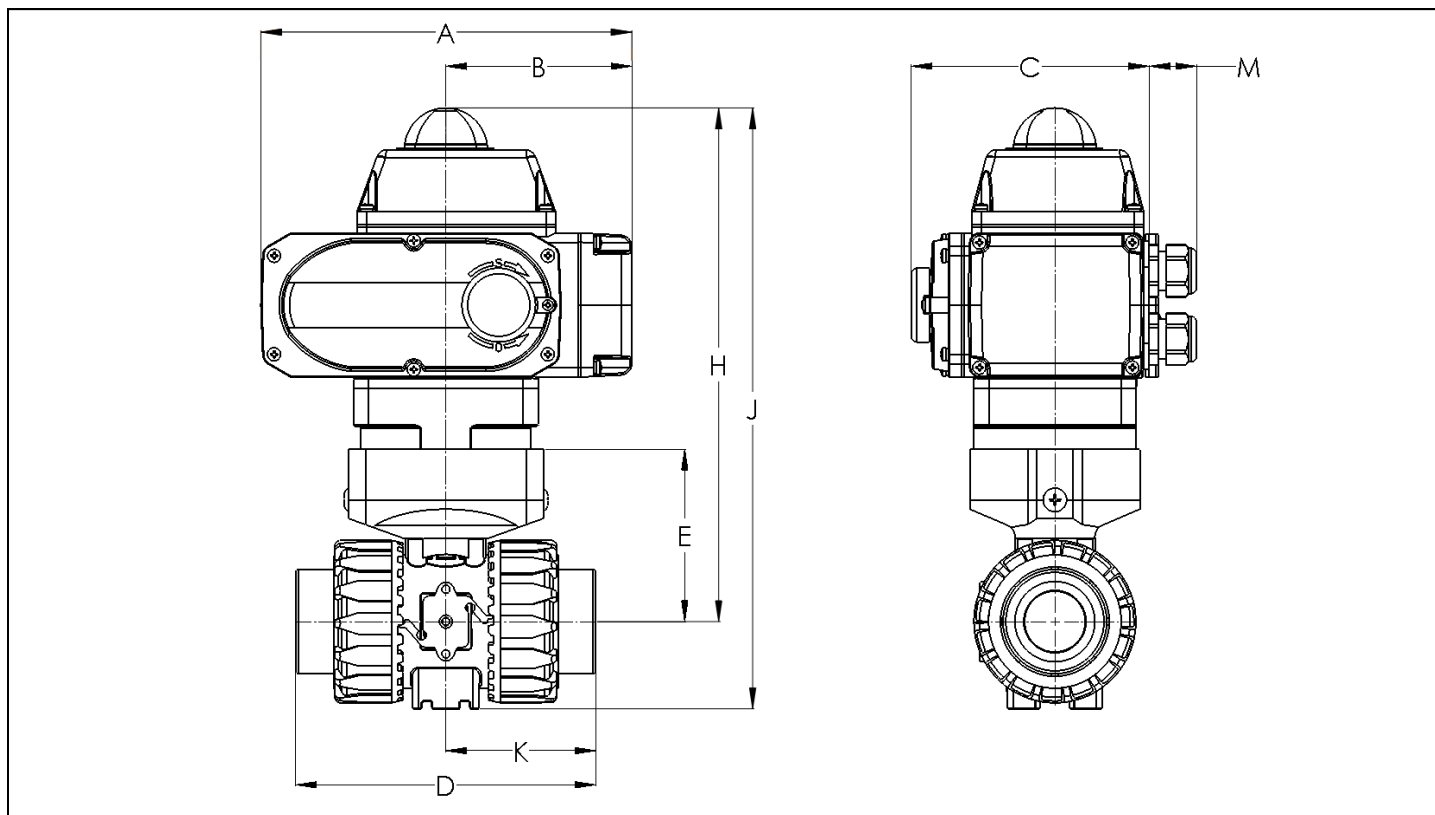
Rugged primary gear drive system is made of heat treated alloy steel for high strength, excellent wear resistance and high torque. Final stage aluminium bronze worm gear drive is self-locking, no motor brake required. A manual override is provided for use in setup or power failure situations.

The override is operated with a standard hex wrench (included). The standard 4 watt thermostatically controlled anti-condensation heater will help prevent failures due to condensation buildup inside the actuator.

Robust aluminium alloy housing is corrosion-resistant, polyester powder coated, and weatherproof. The housing is rated Type 4X (IP67) and certified by CSA. Heavy duty motor is integral to the actuator housing providing the smallest physical size to power ratio of typical actuators on the market.

Electrical wiring is directly to a terminal strip via included cable connectors, or optional 1/2" NPT conduit adapters.

Dimensions:



Pipe Size (inch)		A	B	C	D	E	H	J	K	M	Weight (AC/DC)
1/2	inch	7.7	3.9	5.0	4.6	2.1	9.4	10.5	2.3	1.0	10.4 lb
	mm	196.5	98.0	126.0	117.0	54.0	238.8	266.7	58.8	25.0	4.7 kg
3/4	inch	7.7	3.9	5.0	5.1	2.6	9.8	11.2	2.6	1.0	10.7 lb
	mm	196.5	98.0	126.0	129.0	65.0	248.9	284.5	65.2	25.0	4.9 kg
1	inch	7.7	3.9	5.0	5.6	2.8	10.0	11.6	2.8	1.0	10.9 lb
	mm	196.5	98.0	126.0	142.0	70.0	254.0	294.6	71.0	25.0	5.0 kg
1-1/4	inch	7.7	3.9	5.0	6.4	3.3	10.5	12.4	3.1	1.0	11.5 lb
	mm	196.5	98.0	126.0	162.0	83.0	266.7	315.9	79.5	25.0	5.2 kg
1-1/2	inch	7.7	3.9	5.0	6.8	3.5	10.8	12.8	3.4	1.0	12.1 lb
	mm	196.5	98.0	126.0	172.0	89.0	274.3	325.1	86.0	25.0	5.5 kg
2	inch	7.7	3.9	5.0	7.8	4.3	11.5	13.8	3.5	1.0	13.7 lb
	mm	196.5	98.0	126.0	199.0	108.0	292.1	350.5	99.5	25.0	6.2 kg
2-1/2	inch	7.7	3.9	5.0	9.3	6.5	13.6	17.2	4.6	1.0	19.6 lb
	mm	196.5	98.0	126.0	235.0	164.0	345.4	436.9	117.5	25.0	8.9 kg
3	inch	10.1	4.8	6.4	10.6	8.0	18.1	21.2	5.3	1.0	35.8 lb
	mm	256.0	121.0	161.5	270.0	203.0	459.0	538.0	135.0	25.0	16.3 kg
4	inch	10.1	4.8	6.4	12.1	9.4	19.4	22.8	6.1	1.0	44.4 lb
	mm	256.0	121.0	161.5	308.0	238.0	494.0	580.0	154.0	25.0	20.2 kg