



# **Electro Series Actuated Ball Valves**



## **ENGINEERING GUIDE**

Contact Spears® for any Information not found.

## Actuated Valves Technical Electro Series Specifications



The Electro Actuated Ball Valve provides high quality, basic on-off electrical actuation at an economical price, with voltage options and special "2-wire" control available. This prepackaged combination is constructed with an all plastic NEMA 4X enclosure directly mounted to a PVC or CPVC valve body for lighter weight and a low profile design for minimal space requirements. All Electro Series Ball Valves are pressure rated to 235 psi and suitable for vacuum service. Available in IPS sizes 1/2" - 2", with socket, threaded, or flanged ends and choice of EPDM or FKM O-ring seals.



Typical Illustration



Typical Illustration

### ELECTRO ACTUATED COMPACT 2000 BALL VALVE

Compact Electro Ball Valves are built around Spears® industrial grade Compact 2000 Ball Valve. This heavy bodied, sealed unit design is well suited for a multitude of general purpose, industrial, and OEM actuation needs.

### ELECTRO ACTUATED TRUE UNION BALL VALVE

The Electro True Union Ball Valve utilizes Spears® industrial grade True Union Ball Valve. This fully repairable, double union style allows easy in-line removal for servicing and is the valve of choice for many industrial and chemical processing applications.

### ELECTRO 50 & 100 ACTUATOR SPECIFICATIONS

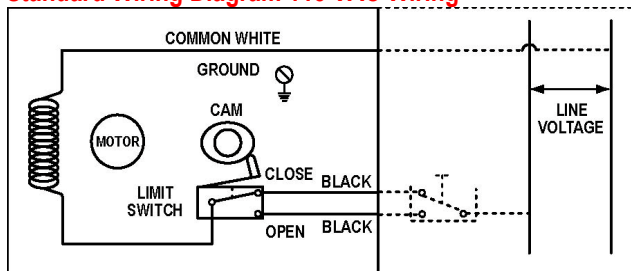
- Motor:** Brushless, Non-Reversing, Shaded Pole, Thermally Protected
- Torque:** ELECTRO-50 50 in./lbs. (1/2" - 1" Valves)  
ELECTRO-100 100 in./lbs. (1-1/4" - 2" Valves)
- Opening Time:** 5 seconds
- Closing Time:** 5 seconds
- Duty Cycle:** 25% standard (optional 75% available)
- Limit Switch:** Cam Operated, Omni Directional, SPDT
- Housing:** NEMA 4X (Weatherproof, Corrosion Proof), High Impact Polypropylene, SS 316 Fasteners  
1/2" NPT Connection
- Indicator:** Visual Open/Close - Standard
- Voltage:** 115V standard (see Voltage Options)

**Optional "2-Wire" Control:**  
Control switch setup operates as a solenoid valve. Valve opens when control switch is open 5-seconds and closes when control switch is closed 5-seconds. Uses 4-wire connection with 2 wires to line voltage and 2 wires to SPST control switch.

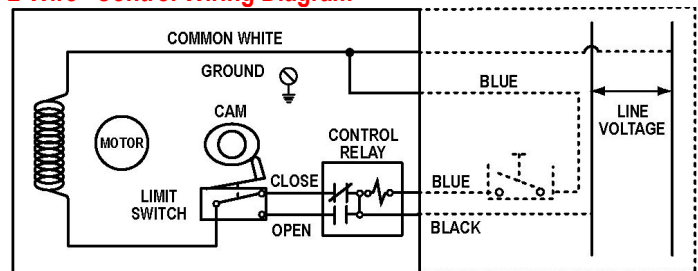
#### Voltage Options:

Voltage	Load AMP Electro-50	Load AMP Electro-100
12 VAC	2.40	N/A
24 VAC	2.1	7.8
115 VAC	.6	1.9
230 VAC	.5	1.5
12 VDC	.3	.2
24 VDC	.2	.2

#### Standard Wiring Diagram 115 VAC Wiring



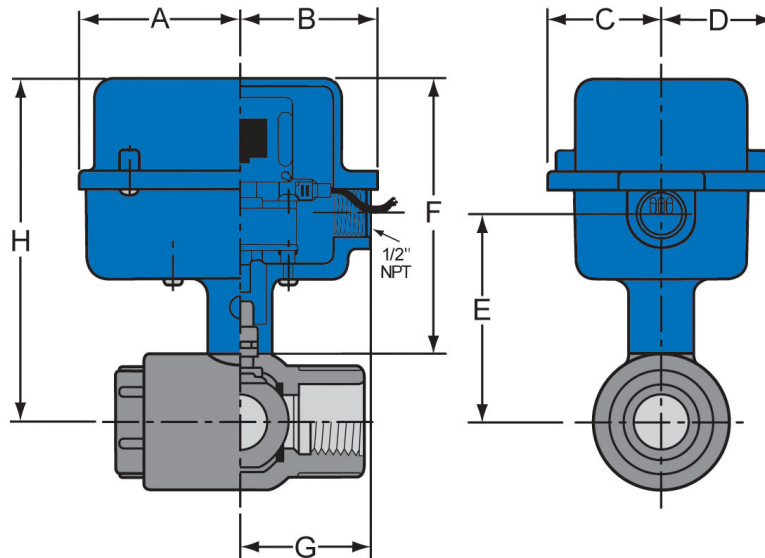
#### "2-Wire" Control Wiring Diagram





Actuated Valves Technical  
**Electro Compact Ball Valve Dimensions**

**Compact Ball Valve**



**Actuated Compact Ball Valve Dimensions**

Valve Size	A	B	C	D	E	F	G	H
1/2	2-7/8	2-1/2	2	2	3-3/8	5-5/8	2-5/16	6-5/8
3/4	2-7/8	2-1/2	2	2	3-9/16	5-5/8	2-5/16	6-7/8
1	2-7/8	2-1/2	2	2	3-5/8	5-5/8	2-5/16	7-1/16
1-1/4	3-5/8	2-7/16	2	2	4-3/4	5-7/8	2-7/16	7-5/8
1-1/2	3-5/8	2-7/16	2	2	5	5-7/8	2-7/16	7-7/8
2	3-5/8	2-7/16	2	2	5-1/2	5-7/8	2-7/16	8-3/8

**Valve:** PVC or CPVC Industrial Grade Valve,  
 Non-Repairable Sealed Unit  
 PTFE Seats  
 EPDM or FKM O-rings

Socket, Threaded or Flanged End Connection  
 Vacuum Service Rated  
 Pressure rated to 235 psi water @ 73°F  
 (Flanged to 150 psi)

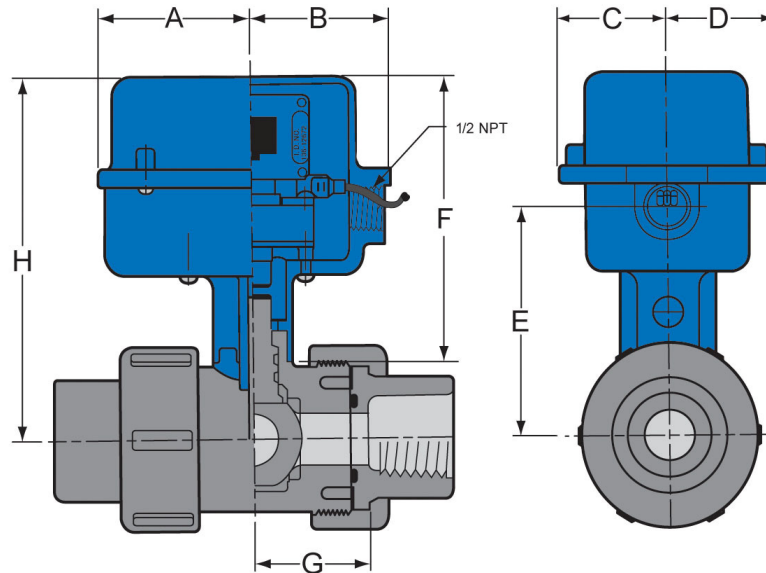
**Sample Engineering Specification**

All actuated ball valves shall be PVC or CPVC construction with direct mount electric actuator. Valve shall be compact sealed unit type, pressure rated to 235 psi @ 73°F (150 psi for flanged), with PTFE seats, Safe-T-Shear® Stem, EPDM or FKM O-rings, and socket, threaded or flanged end connections. Actuator shall be direct mount, with brushless non-reversing quarter turn motors and built in visual open/close position indicator. Actuator housing shall be weather proof and corrosion proof (NEMA 4X) with type 316 stainless steel fasteners, as manufactured by Spears® Manufacturing Company.

Actuated Valves Technical  
**Electro True Union Ball Valve Dimensions**



**True Union Ball Valve**



**Actuated True Union Ball Valve Dimensions**

Valve Size	A	B	C	D	E	F	G	H
1/2	2-7/8	2-1/2	2	2	3-3/8	5-5/8	2-5/16	6-5/8
3/4	2-7/8	2-1/2	2	2	3-9/16	5-5/8	2-5/16	6-7/8
1	2-7/8	2-1/2	2	2	3-5/8	5-5/8	2-5/16	7-1/16
1-1/4	3-5/8	2-7/16	2	2	4-13/16	5-7/8	2-7/16	7-5/8
1-1/2	3-5/8	2-7/16	2	2	5	5-7/8	2-7/16	7-7/8
2	3-5/8	2-7/16	2	2	5-1/2	5-7/8	2-7/16	8-3/8

**Valve:** PVC or CPVC Industrial Grade Valve  
 Double Union Style with Blocked Seal Carrier  
 Fully Repairable & Adjustable  
 PTFE Seats  
 EPDM or FKM O-rings

Socket, Threaded or Flanged End Connection  
 Vacuum Service Rated  
 Pressure rated to 235 psi water @ 73°F  
 (Flanged to 150 psi)

**Sample Engineering Specification**

All actuated ball valves shall be PVC or CPVC construction with direct mount electric actuator. Valve shall be True Union type, pressure rated to 235 psi @ 73°F (150 psi for flanged), with buttress threaded union nuts, PTFE seats, Safe-T-Shear® Stem, EPDM or FKM O-rings, and socket, threaded or flanged end connections. Actuator shall be direct mount, with brushless non-reversing quarter turn motors and built in visual open/close position indicator. Actuator housing shall be weather proof and corrosion proof (NEMA 4X) with type 316 stainless steel fasteners, as manufactured by Spears® Manufacturing Company.