



## Actuated Valves Product Guide & Engineering Specifications

### 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

#### 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.



Typical Illustration

#### 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

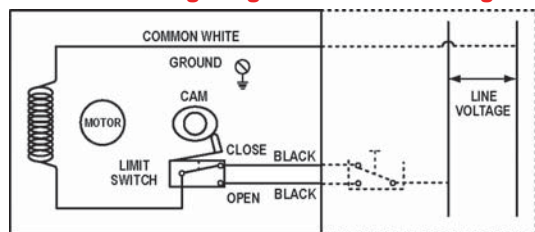
|               |   |
|---------------|---|
| Motor:        | Brushless, Non-Reversing, Shaded Pole, Thermally Protected  |
| Torque:       | ELECTRO-50 50 in./lbs. (1/2" - 1" Valves)<br>ELECTRO-100 100 in./lbs. (1-1/4" - 2" Valves)                  |
| Opening Time: | 5 seconds   |
| Closing Time: | 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<br>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                   |

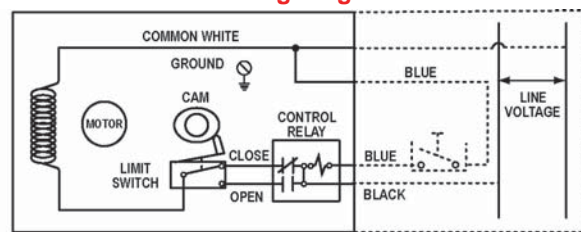
#### Standard Wiring Diagram 115 VAC Wiring



ELECTRO WIRING

EXTERNAL WIRING

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



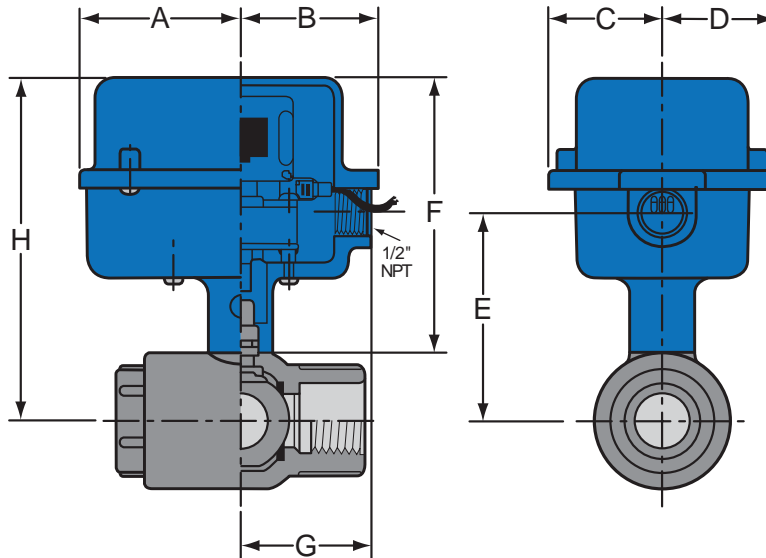
ELECTRO WIRING

EXTERNAL WIRING

## 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

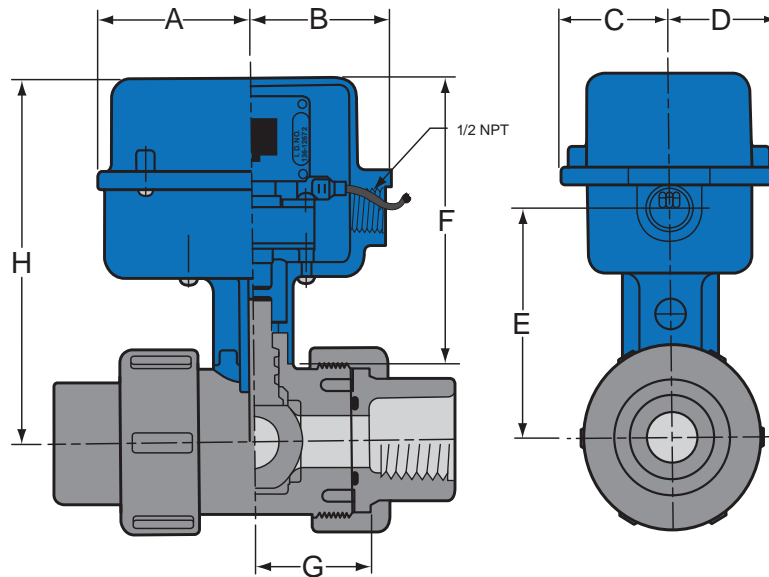
All actuated ball valves shall be PVC or CPVC construction with direct mount electric actuator. Valve shall be compact sealed unit type, pressure rated to 235 psi @ 73°F (150 psi for flanged), with PTFE seats, Safe-T-Shear® Stem, EPDM or FKM O-rings, and socket, threaded or flanged end connections. Actuator 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 Product Guide & Engineering Specifications

### 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.