

# A Series Electric Actuators



## CHEMLINE Plastics Limited

Your Pipeline To Quality

The Chemline A Series Electric Actuator is a reversible rotary unit with output torques up to 2000 in.-lb. These actuators power Chemline butterfly valves up to 6" size, as well as all sizes of Chemline ball valves up to 6". The A Series actuator features an epoxy coated die cast aluminum housing with NEMA 4X enclosure rating.

Chemline also offers complete actuated ball, butterfly and diaphragm valves, assembled and bench tested. Actuation service is also available for all quarter-turn metal valves.

### for Chemline Ball Valves up to 6" and Butterfly Valves to 6"

**SERIES:** AA – 400 in.-lb.  
AB – 700 in.-lb.  
AC – 1,100 in.-lb.  
AD – 2,000 in.-lb.

**VOLTAGES:** 12, 24, 115 or 220 VAC,  
12 or 24 VDC

**ENCLOSURE:** Baked Hybrid Epoxy  
Coated Die Cast  
Aluminum NEMA 4X

## Beacon Position Indicator

## Manual Override

## Rugged and Reliable

### Features

#### Large Selection of Options and Accessories

Approved by CSA (Canadian Standards Association)

#### Powerful Reversible Motors

- Minimum 75% duty cycle for high cycling applications

#### No Maintenance

- Permanently lubricated gear train
- Unit is designed for minimum life of 250,000 cycles

#### Standard Mounting Dimensions

- ISO 5211 mounting bolt circle

### Technical

#### Limit Switches

- Rated 5 amps at 120 volts

#### Conduit Entry

- Two separate 1/2" NPT entries

#### Ambient Temperature Range

- -10 to 60°C (15 to 140°F)

Beacon Visual Position Indicator and  
Declutchable Manual Override\*



A Series on Type 21  
Ball Valve



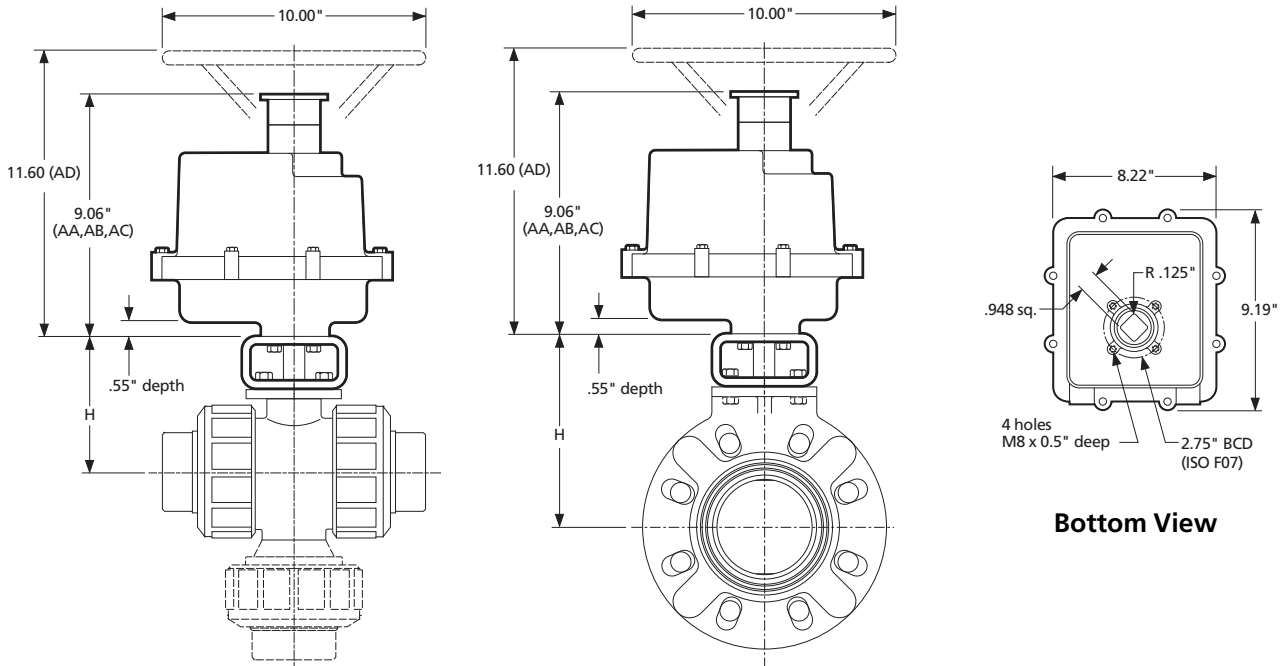
A Series on Type 57  
Butterfly Valve

\* "D" size actuator has declutching hand wheel override.

# A Series Electric Actuators



## DIMENSIONS INCHES



Type 21 True Union and  
Type 23 Multi Port Ball Valves

Type 57 Butterfly Valves

## DIMENSION "H" INCHES

Valve Size	Valve Type						
	Type 21 Ball	Type 23 Multiport	Type 57 Butterfly	MT Series Multiport	HC Series Ball	Type 14 Diaphragm	CG Series Gate
1/2"	2.76	2.76	–	1.20	–	3.55	–
3/4"	3.01	3.01	–	1.60	–	3.61	–
1"	3.29	3.29	–	1.80	–	3.77	–
1-1/4"	3.64	3.64	–	–	–	5.94	–
1-1/2"	3.98	3.98	5.65	3.10	–	6.50	9.00
2"	4.43	4.43	5.95	3.20	–	7.02	10.46
2-1/2"	5.12	5.12	6.35	–	–	9.52	–
3"	5.47	5.47	6.65	4.50	–	10.25	14.06
4"	6.97	6.97	7.35	6.00	6.75	11.00	–
5"	–	–	8.80	–	–	–	–
6"	–	–	9.30	–	8.30	–	–

Valves are not to scale. For valve dimensions and parts refer to separate valve data sheets.

## SPECIFICATIONS

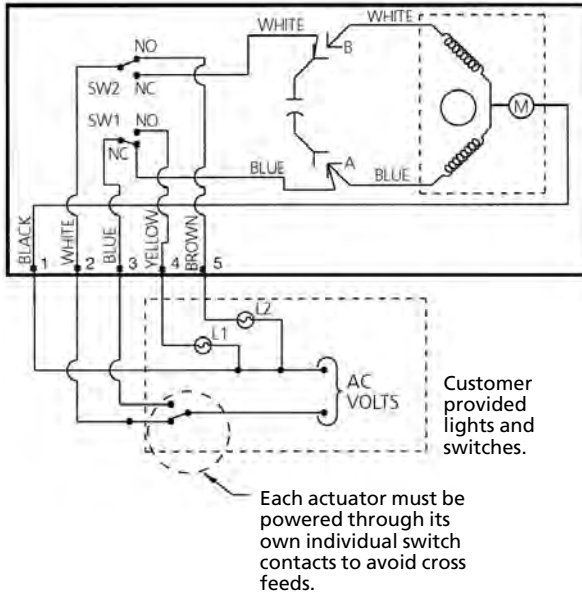
Model	Torques (in.-lbs.)	115 VAC (x=1)		220 VAC (x=2)		12 VDC (x=3)		24 VDC (x=4)		12 VAC (x=5)		24 VAC (x=6)		Cycle Time/90° (sec.)	Weight (lbs.)
		Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	Amp Draw	Duty Cycle		
Ax	400	0.50	100%	0.40	75%	2.0	75%	4.0	75%	2.0	75%	3.0	75%	10	15.3
Bx	700	0.75	75%	0.60	50%	2.0	75%	4.0	75%	2.0	75%	3.0	75%	10	15.3
Cx	1100	0.50	100%	0.40	75%	2.0	75%	4.0	75%	2.0	75%	3.0	75%	25	15.5
Dx	2000	1.00	50%	0.60	50%	2.0	75%	4.0	75%	2.0	75%	3.0	75%	25	18.3

Current draw values are for actuators with rotors locked. Duty cycles are for ambient temperature 20°C (68°F).

# A Series Electric Actuators



## AC WIRING



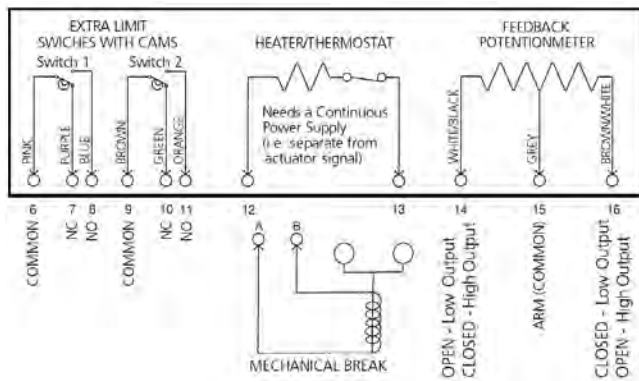
## VALVE OPERATION

1. Black – Neutral
- To Open – Power to White (Terminal 2)
- To Close – Power to Blue (Terminal 3)
- L1 – Possible Customer Equipment
- L2 – Possible Customer Equipment

## NOTES:

1. Actuator shown in counter clockwise extreme of travel, or 'open' position.
2. Motor has a thermal protector shown as (M) in the diagram.

## ACCESSORIES WIRING



## CONTROL ACCESSORIES

- **Extra Limit Switches** – For position feedback
- **Heater/Thermostat** – For outdoor or humid environments. Maintains internal temperature of actuator at 5°C (40°F)
- **3-Position Control** – For 3-way ball valves or dribble control on 2-way valves
- **Digital Positioner** – Onboard digital position controller accepts 4 to 20 mA and other inputs. These units are easier to calibrate, have faster response and provide more precise proportional control.
- **4 to 20 mA Retransmit** – A circuit board coupled with a feedback potentiometer provides 4 to 20 mA output used by other equipment (PLC, data logger, etc.)
- **Failsafe Capability** – Onboard backup battery pack powers actuator in case of power failure
- **Feedback Potentiometer** – For feedback indicating the precise valve position to a remote location, or to allow "jogging" control
- **Cycle Length Control Module** – For lengthening closing/opening times when water hammer is a concern
- **Two-Wire Control** – For direct wiring timers, level switches, pump control, etc.
- **Mechanical Brake** – To eliminate oscillation when seating butterfly valves or large ball valves
- **Multi-Turn Models** – For diaphragm and gate valves
- **ASi Bus System Capability** – Available with 24 VDC model for 30 VDC ASi systems