

Q Series Electric Actuators



for Chemline ball & butterfly valves up to 3"

SERIES: QA – 150 in.lb.
QB – 300 in.lb.

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

ENCLOSURE: High Impact "Zytel" Plastic Cover
NEMA 4X

Dec clutchable Manual Override/
Position Indicator



Q Series on Type 57
Butterfly Valve



Q Series on Type 21
True Union Ball Valve

The Chemline Q Series Electric Actuator is a reversible rotary unit with output torques of 150 or 300 in.-lb. These units are ideal for all Chemline ball valves up to 3" size, as well as butterfly valves up to 3". The Q Series is compact, light weight and has a plastic housing. A large red handle provides manual override and position indication.

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.

Features

Multiple Operation/Control Options

- 3-wire (standard)
- Adjustable Travel (standard)
- Manual Override (standard)
- 2-wire (optional)
- 3-position (optional)
- Cycle Length Control (optional)
- Digital Positioner (optional)
- Failsafe (optional)
- Heater/Thermostat (optional)
- Mechanical Brake (optional)

Multiple Feedback Options

- Visual (standard)
- Feedback Switches (optional)
- Feedback Potentiometer (optional)
- Feedback Transmitter (optional)

Special Inspection Labelled by CSA

(Canadian Standards Association)

NEMA 4X Enclosure

- Waterproof, corrosion proof with high impact Zytel¹ housing and stainless steel fasteners

No Maintenance

- Permanently lubricated gear train
- Designed for 250,000 + cycles

Thermal Overload Protection

- Thermal switch embedded into motor windings

Extended Operating Temperature Range

- -10 to 60°C (15 to 140°F) (standard)
- Lower temperature reachable with anti-condensation cold weather heater/thermostat (optional)

Standard Mounting Dimensions

- ISO-5211 mounting bolt circle and drive

technical

Operating Voltage²

- 115 VAC (standard)
- 220 VAC, 12 or 24 VAC or VDC (optional)

Electrical Conduit Entry

- 2 x 1/2" NPT

Motor Direction

- Reversing

Motor Cycle Time

- Fixed (standard)
- Adjustable (optional)

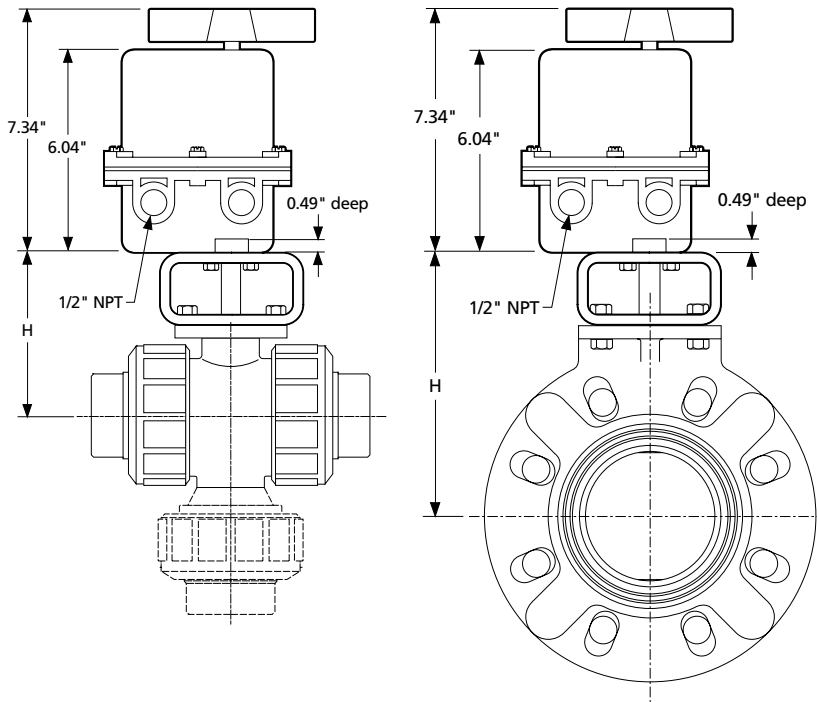
¹ Zytel FR-50 is a flame retardant 25% glass reinforced high strength polyamide (Nylon) resin from DuPont

² 150 and 220 VAC are rated 50/60Hz, CE approved for Europe

Q Series Electric Actuators

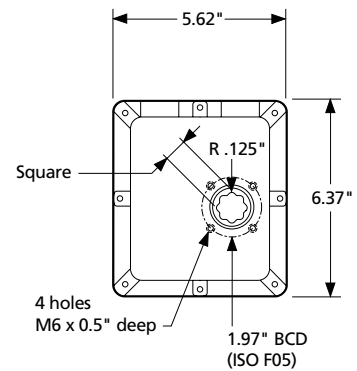


DIMENSIONS INCHES



Type 21 True Union and
Type 23 Multi Port Ball Valves

Type 57 Butterfly Valves



Bottom View

Square Size

up to March 2012 = 0.788"
after March 2012 = 0.551" (14mm)

DIMENSION "H" INCHES

Valve Size	Valve Type			
	Type 21 Ball	Type 23 Multiport	Type 57 Butterfly	MT Series Multiport
1/2"	2.76	2.76	–	1.20
3/4"	3.01	3.01	–	1.60
1"	3.29	3.29	–	1.80
1-1/4"	3.64	3.64	–	–
1-1/2"	3.98	3.98	5.65	3.10
2"	4.43	4.43	5.95	3.20
2-1/2"	5.12	5.12	6.35	–
3"	5.47	5.47	6.65	4.50
4"	–	–	7.35	–

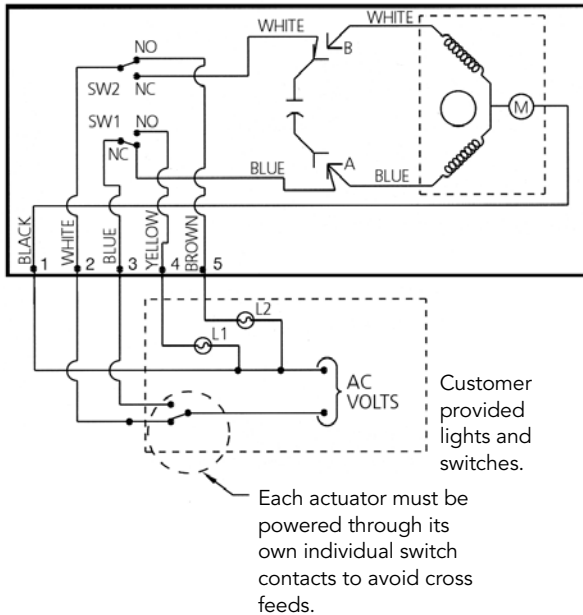
Valves not to scale. For valve dimensions and parts refer to separate valve data sheets.

SPECIFICATIONS

Model	Output Torque (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		
QAx	150	0.50	100%	0.40	100%	2.0	75%	4.0	75%	2.0	75%	4.0	75%	5	6.6
QBx	300	0.75	75%	0.60	75%	2.0	75%	4.0	75%	2.0	75%	4.0	75%	5	6.6

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

AC WIRING



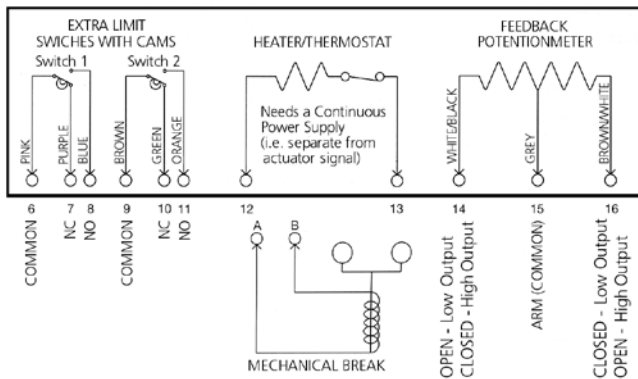
VALVE OPERATION

- 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 as shown by (M) in the diagram.
3. ON-OFF actuator wiring shown. For other versions (Positioning, Failsafe) see operating manual.

ACCESSORIES WIRING



OPERATIONAL/CONTROL OPTIONS

- **2-Wire Control** – For direct wiring timers, level switches, pump control, etc.
- **3-Position Control** – For 3-way ball valves or dribble control on 2-way valves
- **Cycle Length Control Module** – For lengthening closing/opening times when water hammer is a concern
- **Digital Positioner** – New onboard digital position controller accepts 4 to 20 mA, 1 to 5 VDC, 0 to 5 VDC, 0 to 10 VDC or other inputs. These new units are easier to calibrate, have faster response and provide more precise proportional control.
- **Failsafe Capability** – Onboard backup battery pack powers actuator in case of power failure
- **Heater/Thermostat** – For outdoor or humid environments. Maintains internal temperature of actuator at 5°C (40°F)
- **Mechanical Brake** – To eliminate oscillation when seating butterfly valves or large ball valves

FEEDBACK OPTIONS

- **Feedback Switches** – For end-of-travel position feedback
- **Feedback Potentiometer** – For feedback indicating the precise valve position to a remote location, or to allow "jogging" control
- **Feedback Transmitter** – A circuit board coupled with a feedback potentiometer provides 4 to 20 mA output used by other equipment (PLC, data logger, etc.)