

# Q Series Electric Actuators

## for 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



Q Series on Type 57  
Butterfly Valve

Declutchable Manual Override/  
Position Indicator



Q Series on Type 21  
True Union Ball Valve

The 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.

**JJD** 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 Zytel<sup>1</sup> 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 Voltage<sup>2</sup>

- 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)

# JJD

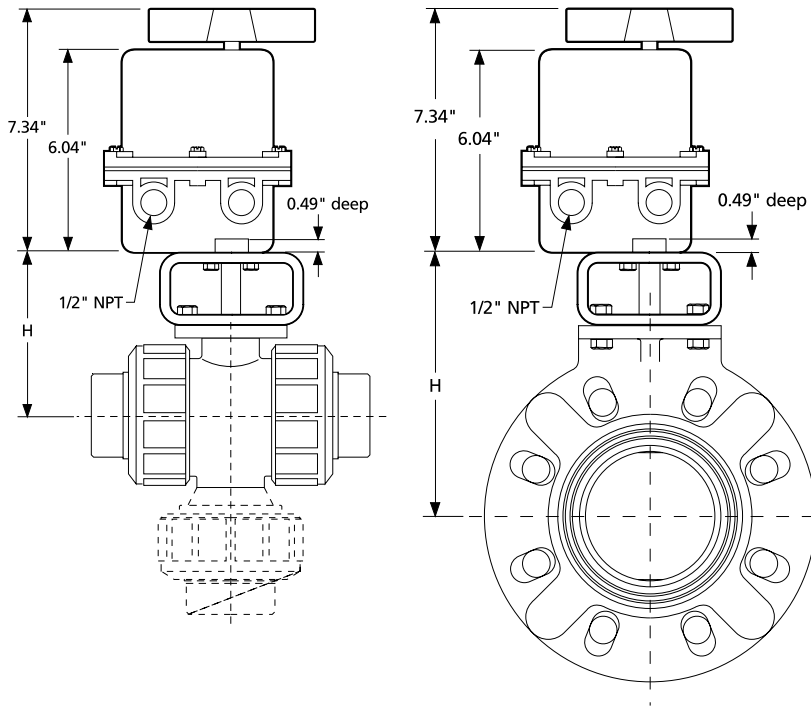
JJ DOWNS INDUSTRIAL PLASTICS INC.  
JJDOWN.COM

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

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

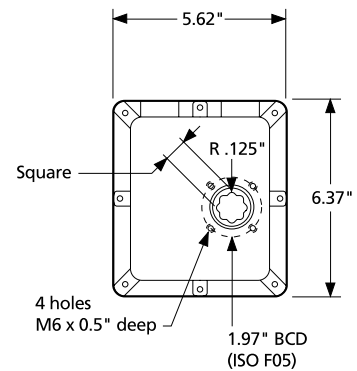
# Q Series Electric Actuators

## 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.



JJ DOWNS INDUSTRIAL PLASTICS INC

416.236.1884

JJDOWNS.COM

Toronto, ON



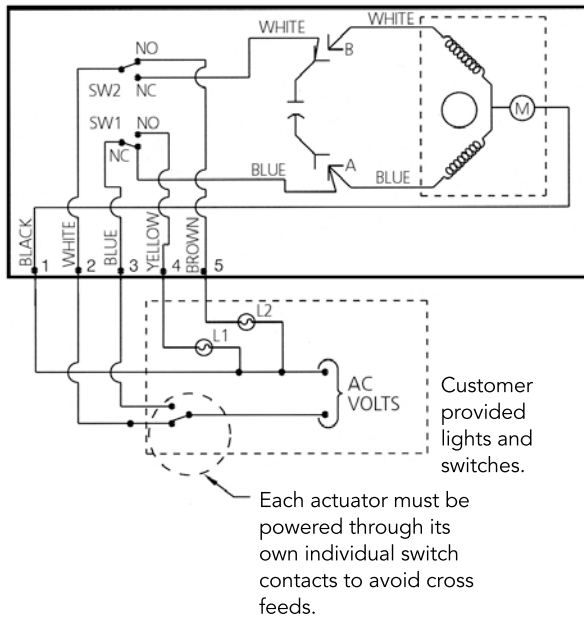

## SPECIFICATIONS

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).

# Q Series Electric Actuators

## AC WIRING



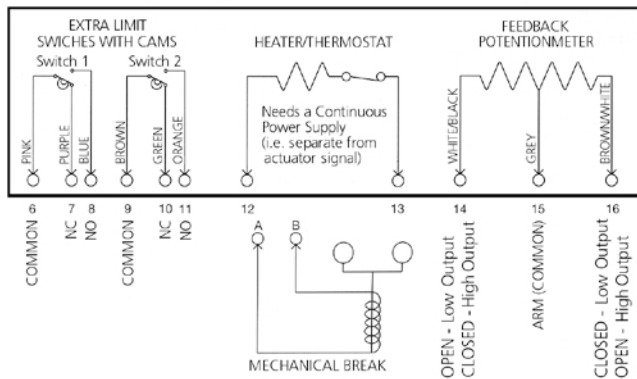
## VALVE OPERATION

- 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 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.)



JJ DOWNS INDUSTRIAL PLASTICS INC

416.236.1884

JJDOWNS.COM

Toronto, ON