

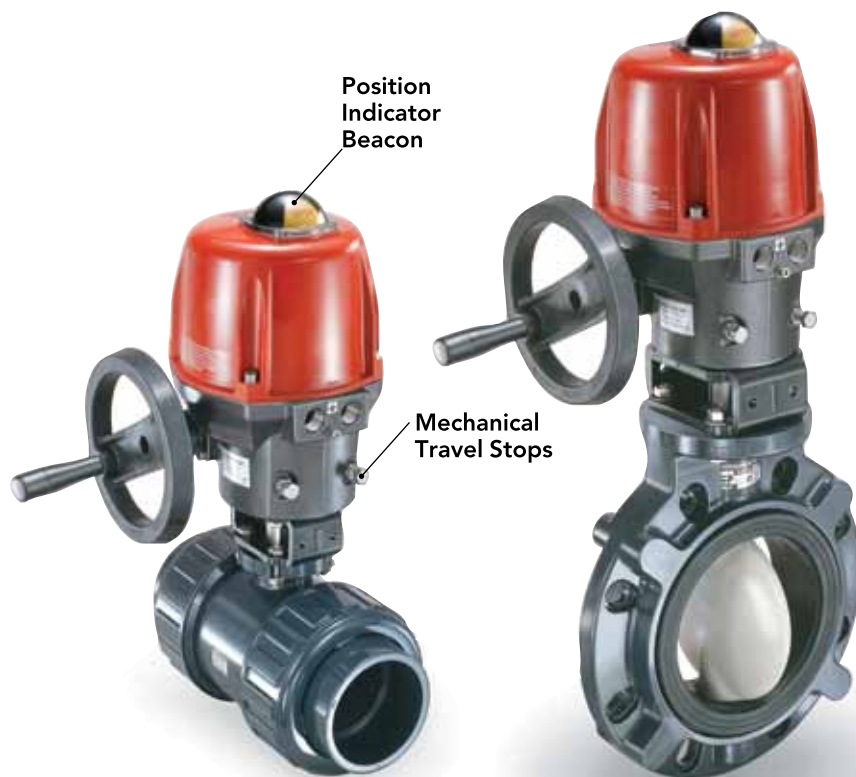
V Series Electric Actuators

for ball valves up to 6" & butterfly valves up to 20"¹

SERIES: VR – 220 to 660 in.lb.
VS – 880 to 2,660 in.lb.
VT – 5,300 to 8,860 in.lb.

VoITAgES: 115/220 VAC (50/60Hz), 12/24 VDC, 24 VAC (50/60Hz)

ENCloSuRE: Polyamide 6.6 Cover & Epoxy Coated Aluminum Base
NEMA 4X



VS Series on Type 21
Ball Valve

VS Series on Type 57
Butterfly Valve

¹Contact **JJD** for specific line pressure ratings

²VS and VT only

³IP67 (submersible to 2 metres up to 72 hours) with polyamide cover. Rated to IP68 with metal cover.

⁴VR and VS only

The **V Series** Electric Actuator is a reversible rotary unit with output torques up to 8,860 in.-lb. These actuators are ideal for Chemline butterfly valves up to 20" ¹ size, as well as all sizes of Chemline ball valves up to 6". The V Series actuator features a moulded Polyamide 6.6 cover, a die cast aluminum base with a thermally bonded epoxy powder coating, rated as a NEMA 4X enclosure. NEMA 7 and 9 enclosures are available. Consult **JJD**

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

- 2 & 3-wire (standard)
- Adjustable Travel (standard)
- Adjustable Travel Stops (standard)²
- Manual Override (standard)
- Bus Communication (optional)⁴
- Digital Positioner (optional)⁴
- Failsafe (optional)⁴
- Cold weather Heater/Thermostat (standard)

Multiple Feedback Options

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

CSA Approved⁴

NEMA 4X/IP67 Enclosure³

- Waterproof, corrosion proof with high impact Polyamide 6.6 cover, thermally bonded epoxy powder coated die cast aluminum base and stainless steel fasteners

No Maintenance

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

Thermal Overload Protection

- Thermal switch embedded onto control board

Extended Operating Temperature Range

- -10 to 60C (15 to 140°F) (standard)

Standard Mounting Dimensions

- ISO-5211 mounting bolt circle and drive

technical

Operating Voltage

- 115/220 VAC 50/60 Hz (standard)
- 12/24 VDC or 12 VAC 50/60 Hz (optional)

Electrical Conduit Entry

- 2 x 1/2" NPT

Motor Direction

- Reversing

Motor Cycle Time

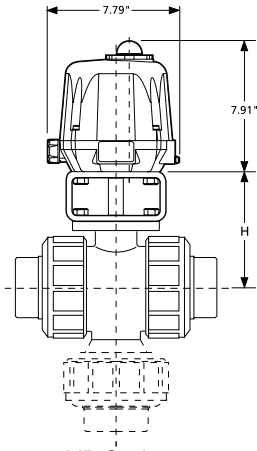
- Fixed (standard)

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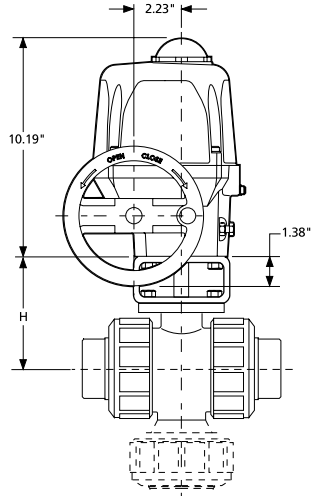
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V Series Electric Actuators

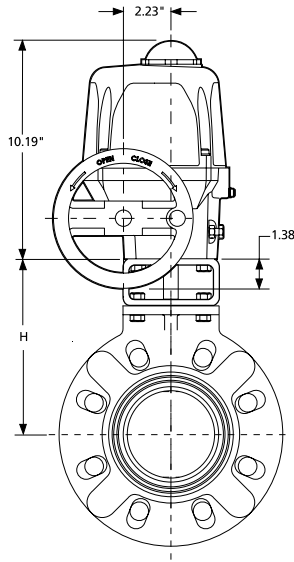
DIMENSIONS INCHES



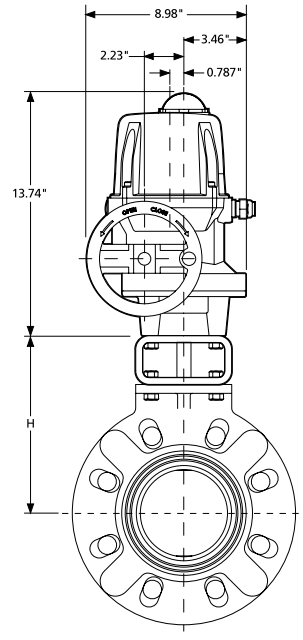
VR Series
Type 21 True Union and
Type 23 Multi Port Ball Valves



VS Series
Type 21 True Union and
Type 23 Multi Port Ball Valves



VS Series
Type 57 Butterfly Valves



VT Series
Type 57 Butterfly Valves

VR Series



VS Series

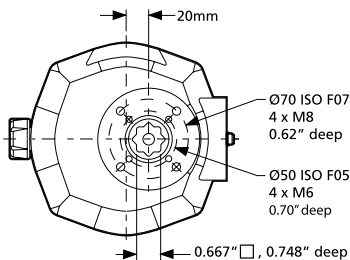


VT Series

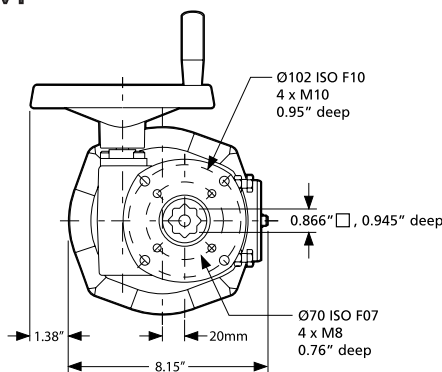


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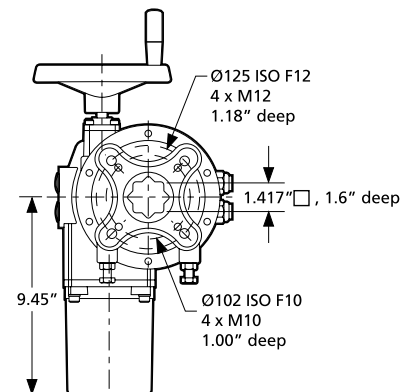
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VR Bottom View



VS Bottom View



VT Bottom View

V Series Electric Actuators

VR & VS SERIES DIMENSION "H" INCHES

Valve Size	Valve Type				
	Type 21 Ball	Type 23 Multiport	HC Series Ball	Type 57 Butterfly	ChemValve Butterfly
1/2"	2.76	2.76	–	–	–
3/4"	3.01	3.01	–	–	–
1"	3.29	3.29	–	–	–
1-1/4"	3.64	3.98	–	–	–
1-1/2"	3.98	3.98	–	5.65	–
2"	4.43	4.43	–	5.95	6.89
2-1/2"	5.12	5.47	–	6.35	7.52
3"	5.47	5.47	–	6.65	8.27
4"	6.97	6.97	6.75	7.35	9.05
5"	–	–	–	8.80	–
6"	–	–	8.30	9.30	10.31
8"	–	–	–	10.50	11.65

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

VT SERIES DIMENSION "H" INCHES

Valve Size	Valve Type			
	Type 57 Butterfly	Type 56 Butterfly	TB Series Butterfly	ChemValve Butterfly
10"	11.50	–	–	12.63
12"	14.20	–	–	14.13
14"	15.30	–	–	–
16"	–	16.00	–	–
18"	–	–	20.53	–
20"	–	–	21.73	–
24"	–	–	24.23	–

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

SPECIFICATIONS

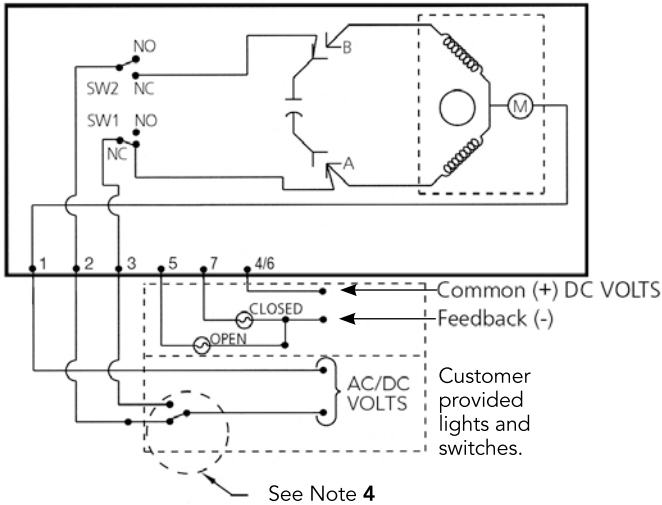
Model	Running Torques		115 VAC / 220 VAC (x=12)		12/24 VDC & 24 VAC (x=346)		Cycle Time/90° (sec.)	Weight (lbs.)
	(in.-lbs.)	Nm	Power Draw (Watts) ¹	Duty Cycle	Power Draw (Watts) ¹	Duty Cycle		
VR25.x	220	25	85W	80%	85W	80%	7	8.8
VR45.x	400	45	85W	80%	85W	80%	15	8.8
VR75.x	660	75	85W	80%	85W	80%	20	8.8
VS100.x	880	100	85W	80%	85W	80%	15	14.3
VS150.x	1,330	150	85W	80%	85W	80%	30	14.3
VS300.x	2,660	300	85W	80%	85W	80%	50	14.3
VT600.x ²	5,300	600	250W	50%	–	–	38	39.7
VT1000.x ²	8,860	1,000	250W	50%	–	–	38	39.7

¹Power draw values are for actuators with locked rotors. ²VT are only available in 220 VAC.

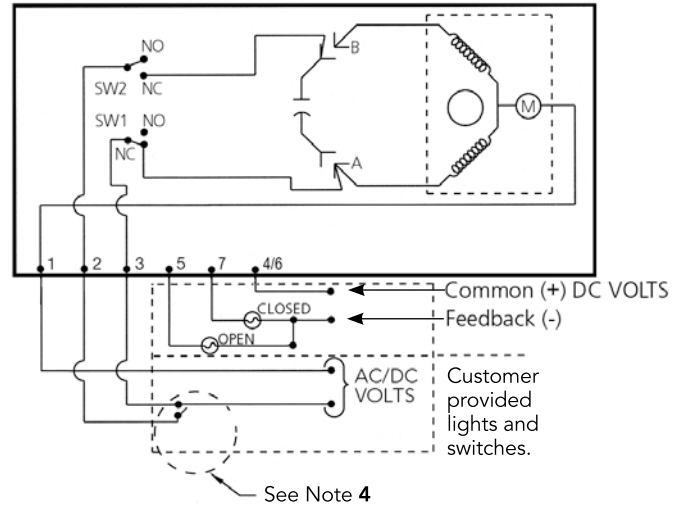


V Series Electric Actuators

WIRING, 3-WIRE CONTROL



WIRING, 2-WIRE CONTROL



3-WIRE OPERATION

- Neutral/Negative** – To Terminal 1 (Constant)
To Open – Hot/Positive to Terminal 2
To Close – Hot/Positive to Terminal 3

2-WIRE OPERATION

- Neutral/Negative** – To Terminal 1 (Constant)
To Open – Jumper between Terminal 2 and Terminal 3
To Close – Hot/Positive to Terminal 3 (Constant)

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.
4. Each actuator must be powered through its own individual switch contacts to avoid cross feeds.

OPERATION/CONTROL OPTIONS⁴

- **Bus Communication** – Proprietary bus communication/operation capability
- **Digital Positioner** – Onboard digital position controller accepts 4 to 20 mA, 0 to 20 mA, 0 to 10 VDC or other inputs. These 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
- **Bluetooth™ Wireless Control** – For maintenance/verification when actuator is out of physical reach

FEEDBACK OPTIONS

- **Extra Feedback Switches** – For extra end-of-travel position feedback
- **Feedback Potentiometer** – To feedback 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.)

⁴Available for VR and VS only





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