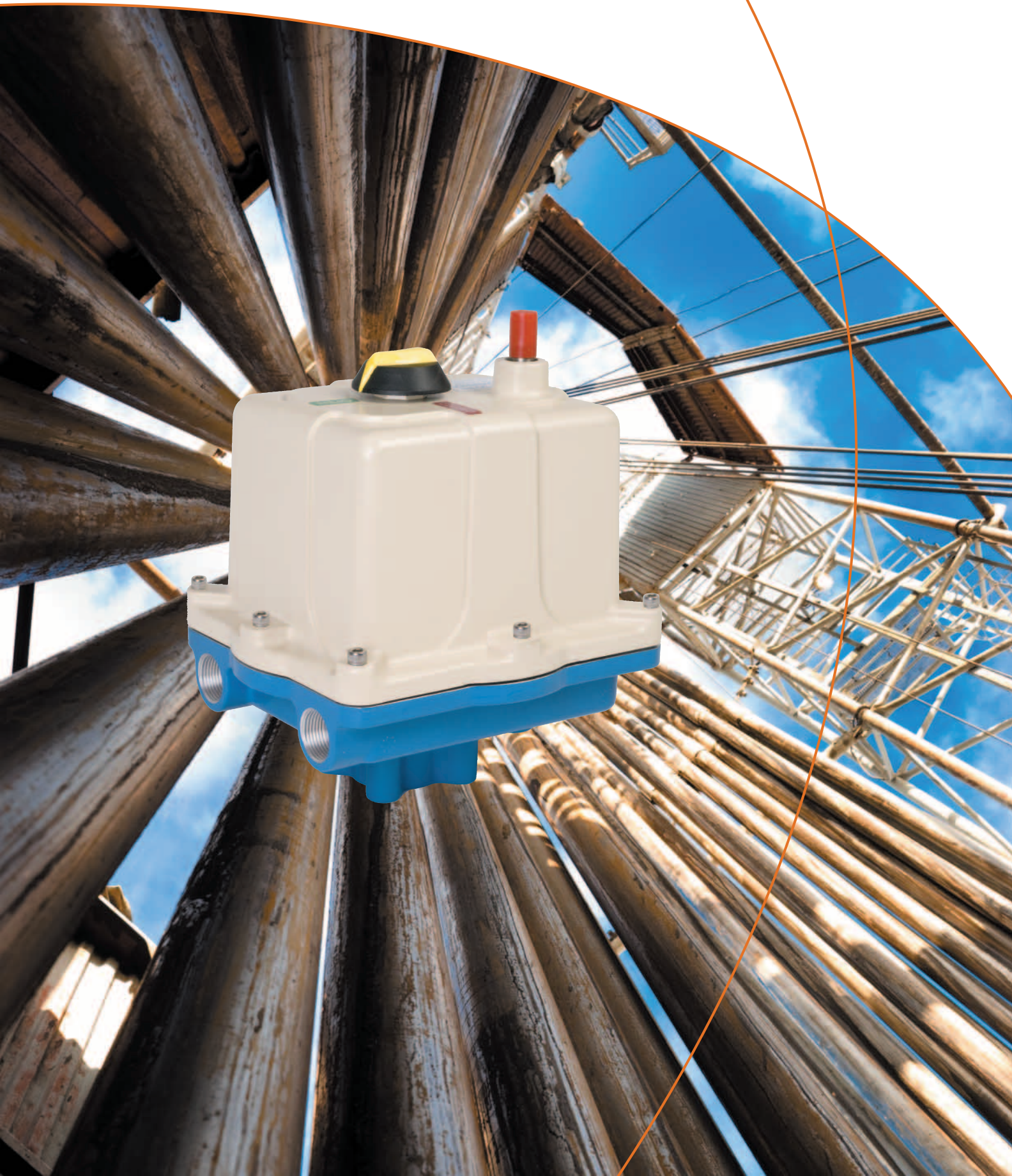
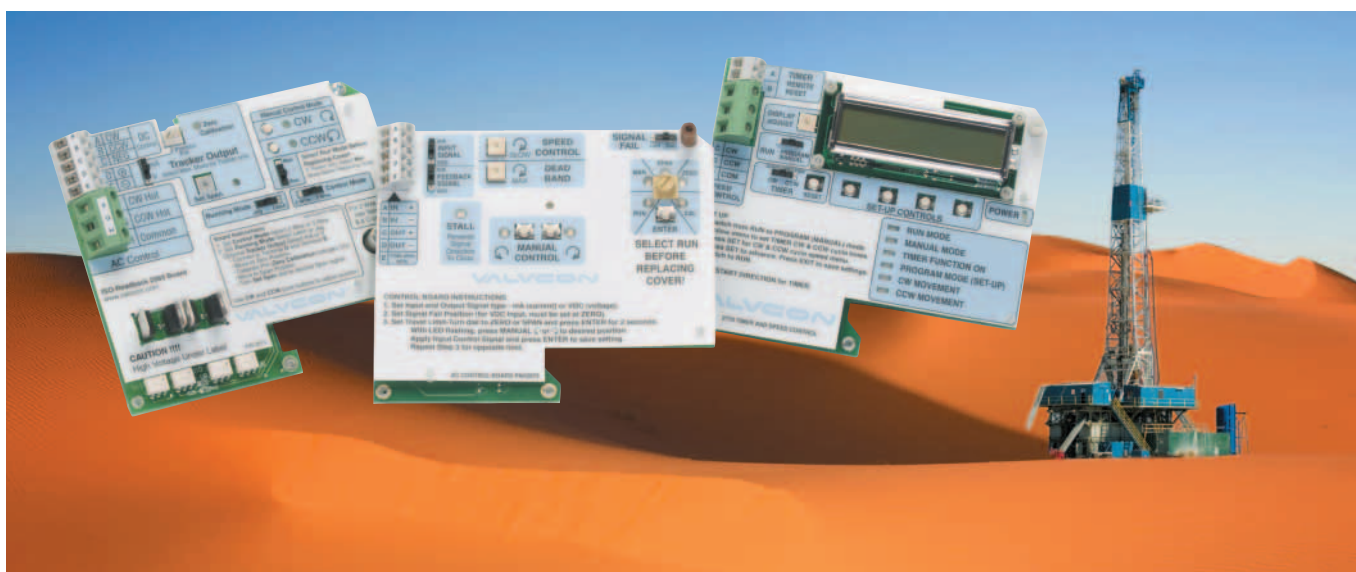


VALVCON
V-Series Electric Actuators





A Tradition of Innovation

Metso is a leading designer and provider of compact, reliable, electronically controlled electric actuators for valves and dampers. We offer a complete line of Valvcon electric actuators for accurate positioning of dampers and valves in the aerospace, automotive, consumer services, discrete manufacturing, energy, environmental, oil/pipeline, petrochemical, power/utilities, process, recreation, transportation, and water/wastewater industries.

Metso has developed and introduced the industry's most innovative products, including simple "set and go" calibration, intelligent processor-based digital electronics, "Plug-in" accessory boards, "Fail-Safe" actuators, as well as electric actuators

designed for remote control, solar-powered applications and two-wire network applications. Metso has built its reputation and success on the ability to envision, implement, and deliver innovative actuator technology products and services to

support emerging market requirements. As emerging technologies and market needs continue to evolve, Metso will lead the way with high quality Valvcon actuators that exceed industry expectations and further refine the valve actuation process.

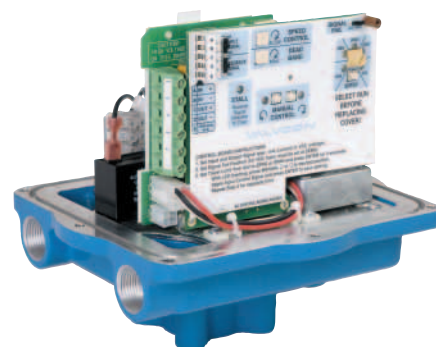
Rugged, Reliable Electric Actuators for Valves and Dampers

The V-Series quarter-turn electric actuator complies with Part 15, Class A of the FCC regulations for emissions and conducted radiation for industrial devices. It is certified by the Canadian Standards Association (CSA) for weathertight locations as well as weathertight and hazardous locations.

The V-Series actuator is composed of a compact cast aluminum housing, motor, gearing, limit switches controlled by metal cams for end of travel control, mechanical

position indicator, and declutchable override as one complete unit.

All internal connections (motor leads, limit switch leads, option connectors, etc.) are coded, using different style connectors for each function, to prevent mis-wiring. All connections plug in to simplify field repairs and upgrades. No preventive or periodic maintenance of any type will be required.



Actuators Built for Hard Work

In AC applications, V-Series actuators provide several levels of protection against overloads and overheating.

Thermal Overload Breaker

If the motor is running too hot, for any reason, it will automatically be disconnected until it cools down. After cooling, it will resume normal operation.

Fuse Protected Input Power

On AC Hot and AC Common connections. If power is mis-applied, the fuses will isolate damage to the Motor Board, allowing for easy repair.

Auto-Resetting Fuses for Limit Indicator Outputs

Protect the limit switches and internal circuitry from overloads caused outside the actuator. The working limit is .25 amps, enough for any pilot or indicator applications. They reset automatically, approximately 3 minutes after the overload condition is corrected.

Stall Protection (Modulating Applications)

If the actuator cannot achieve the position commanded by the control signal, it will automatically disconnect power to the motor until the control signal commands the actuator to drive in the opposite direction.

Electrical Interference and Emissions

The actuator has been carefully designed to minimize electrical interference with other equipment. Emission levels comply with Part 15 of the FCC Rules for Class A electronic equipment.

Simplified Set-up

With the Mode Selector Switch and the touch of a simple "enter, set and go" push button, the V Series Control Board simplifies actuator set-up. On-board push buttons and slide switches make manual positioning easy, and simplify the selection of input signal type, feedback signal type, and actuator fail position in the event of a loss of control signal. With a simple turn of a dial, signal sensitivity (dead band) and cycle time (speed) are easily adjusted.

Extended Duty Cycle for Continuous Cycling

Metso Automation conservatively rates its AC motors at 75% duty cycle. These electric actuator motors can operate continuously at full rated torque for up to 15 minutes without pausing. After running continuously for 15 minutes, motors need to rest for only 1/3 of the cycle time between each cycle. That is, if the cycle time is 30 seconds, they must rest for 10 seconds between each cycle. In constantly modulating applications, all Metso Automation Valvcon V Series actuators can handle up to 30 starts per minute.

Break-away Torque

Designed for efficiency and reliability, all Metso Automation Valvcon electric actuators deliver the power you need when and where it is needed. With efficient gear trains and motors these actuators are rated at breakaway torque. Immediately upon power up, the actuator supplies the rated torque — when it is needed to break the valve away from its seat. Other manufacturer's actuators may be rated at running torque, but actually deliver significantly less breakaway torque.

V-Series Options Available

Board Options

- Control Board
- Isolated Control/Position Feedback Board
- Speed Control/Timer Board

Other Options

- Feedback Potentiometer
- Handwheel
- Heater/Thermostat
- ISO 5211 Output
- Tropical Heater/Thermostat
- Hazardous Location Enclosures
- Additional Limit Switches
- Brake

"The Valvcon V-Series control board introduces a revolutionary advance in the set-up and calibration process — Simplicity."

Other Valvcon Actuators

ADC-Series

- ADC-Series up to 3000 inch pounds, with an optional internal battery pack, for On/Off or continuous duty Modulating Applications
- 115VAC, 230VAC, 24VAC, 12VDC and 24VDC voltages

ESR-Series

- ESR-Series up to 600 inch pounds, with two wire operation (energize to drive in one direction, de-energize to drive in the other direction)
- 115VAC & 230VAC voltages

LC-Series

- Up to 600 inch pounds
- 25% duty cycle
- NEMA 4/4X enclosures
- 115VAC, 230VAC, 24VAC, 12 VDC and 24VDC voltages
- Options include extra limit switches and heater/thermostats
- Male output (standard) or female output (optional)

I-Series Network Capable

- Modbus®
- AS-interface
- DeviceNet™
- LonWorks®
- Foundation Fieldbus
- Other fieldbus protocols (consult factory)

Q6-Series for Remote Solar Applications

- 600 inch pounds
- 12VDC
- Low current draw

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