

Mec-Tric Control Co.—Control Valve Repair

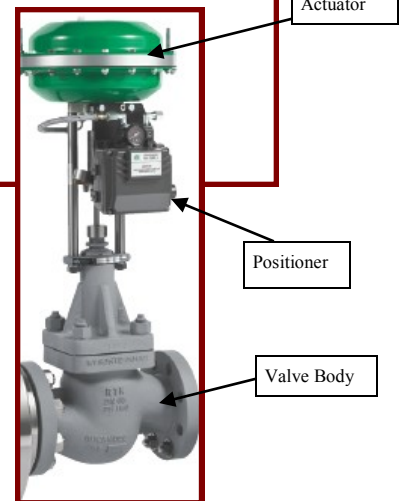
In controlling the proper movement of your processes in your plant, it is critical that your control valves are operating at maximum efficiency. Mec-Tric Control is privileged to have a National Board (NB) accredited Valve Repair and Valve Assembler Shop. This accreditation involves consistent calibration of our testing devices (Air, Steam, Liquid) as well as procedures relating to the verification of safety relief valve set pressure, blowdown (pressure at where valve reseats/closes relative to set pressure) and valve integrity. In addition to Safety Relief and Pressure Regulator Valve repair, Mec-Tric also offers Control Valve repair.

Our repair facility provides complete repair and reconditioning services for most types of control valves. We completely test every valve we service and then disassemble the control valves as necessary to perform machining, replace parts, calibrate and then retest. No valves leave our facility without being brought back to "like new" condition. All assemblies are fully disassembled, inspected, cleaned, soft goods replaced, reassembled, painted and tested to meet ANSI and FCI standards.

Control valves are valves used to control conditions such as flow, pressure, temperature, and liquid level by fully or partially opening or closing in response to signals received from controllers that compare a "setpoint" to a "process variable" whose value is provided by sensors that monitor changes in such conditions.

A control valve consists of three main parts in which each part exists in several types and designs:

- Valve actuator
- Valve positioner
- Valve body



The opening or closing of control valves is typically facilitated by electrical, hydraulic or pneumatic actuators. Actuators are generally considered direct acting or reverse acting .

- Direct acting valves are normally open with air pressure or electronic signal to close.
- Reverse acting valves are normally closed with air pressure or electronic signal to open.

Actuators that are direct operated will require a signal to close the valve. That is to say that an increasing signal will allow for the valve to be closed accordingly. Conversely, a reverse acting valve can be used if the application requires an increasing signal to open the valve.

Positioners are used to control the opening or closing of the actuator based on electric, or pneumatic feedback signals. Positioners indicate the current position of the valve and feedback to controllers which interface with the process sensors. Positioner control signal outputs have traditionally been based on an air signal with a 3-15psi range or an electronic signal with 4-20mA range. The signal ranges allow for the lower limit of the range to indicate a closed valve and the upper limit to indicate and open valve or vice versa. Within recent years signal outputs have advanced to the introduction of "Smart" systems being developed, including HART, Fieldbus Foundation, and Profibus protocols.

Mec-Tric offers Control Valve Repair on the following brands:



- | | |
|-----------|----------------|
| • Spence® | • Fisher® |
| • RTK® | • Bauman® |
| • Leslie® | • Masoneilan® |
| • Valtek® | • Other Brands |

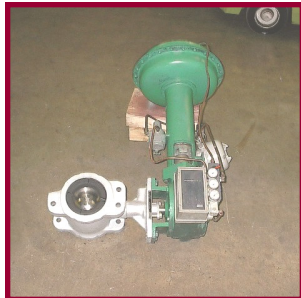
Oxygen cleaning services required for sanitary control valves is also offered.

As a trusted partner in the Industry, Mec-Tric has customers in the following industries:

- Petro-Chemical
- Refining
- Chemical
- Pharmaceutical
- Schools and universities
- Municipalities
- Fossil & Hydro Power
- Nuclear Power
- Offshore
- Paper Mills
- Government
- Pipeline



As a Spence[®], RTK[®] control valve representative, our experience in control valves goes beyond what others offer. Our ability to adhere to testing and calibration procedures is second to none. Our customers realize that when they receive their control valve back from our repair shop it will be as good as new.



Positioners



Ekhardt[®]



Moore 760P[®]



FieldVue[®]



J Valve[®] with EPC and Positioner

Photographs of Control Valve Repair Below



Disassembled Sanitary Valve



Plug



Seat



Calibrating Valves with 4-20 mA