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Actuation Is Not Just An Open-And-Shut Case

Actuators automate the opening and closing valves within process systems. These operations can include wastewater treatment facilities, power plants, refineries, chemical plants, mining, nuclear processes, food factories, and pipelines. The alternative is manual operation, which requires attendants to adjust the valves using a direct or geared mechanism attached to the valve stem. Power-operated actuators, using gas pressure, hydraulic pressure or electricity, allow a valve to be adjusted remotely, or allow rapid operation of large valves. Such actuators may be the final elements of an automatic control loop to regulate flow, levels or other definable functions of the processes. Actuators may be only to open and close the valve, or may allow varied positioning to accommodate blending and mixing of media within in the system.



All actuators have an operational purpose to perform, including:

- Moving the valve from open to closed, or closed to open, or somewhere between the two positions;
 - Keeping the valve in a desired position, depending on the process requirements;
 - Seating the valve to isolate the media;
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- Providing a fail-safe mode in the event of a system failure;
 - Providing the required speed of operation to perform the task required for process control.

When the decision to automate a valve is made, it is usually based on a variety of criteria, such as:

- Control and requirements of the process;
- Reliable operation;
- Reduction in labor;
- Valve access (the valve may be located in a remote or unsafe location);
- Cost;
- Difficulty of operation due to valve excessive torque requirements;
- The need for an emergency response, such a valve closure or opening upon a system failure; and
- Other safety requirements.



For questions or more information for a pressing need, please contact your [Milwaukee Valve sales representative](#) or contact the factory.



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