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Control Valve Terminology

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1 Scope

This document contains terminology for control valves.

2 Purpose

To provide a glossary of definitions commonly used in the control valve industry.

3 Definitions

3.1 accessories:
devices usually attached to the actuator for various control functions such as positioners, relays, solenoid valves, airsets, handwheels, and limit switches.

3.2 accuracy:
the degree of deviation of an indicated value from the true value commonly expressed as a percentage error.

3.3 actuator:
a pneumatic, hydraulic, or electrically powered device that supplies force and motion to position a valve's closure member at or between the open or closed position.

3.3.1 bellows actuator:
a fluid powered device in which the fluid acts upon a flexible convoluted component, the bellows.

3.3.2 diaphragm actuator:
a fluid powered device in which the fluid acts upon a flexible component, the diaphragm. (See Figure 1.)

3.3.3 double-acting actuator:
a device in which power is supplied in either direction. (See Figure 2.)

3.3.4 electrohydraulic actuator:
a device that converts electrical energy to hydraulic pressure and into motion.

3.3.5 electromechanical actuator:
a device that converts electrical energy into motion.

3.3.6 hydraulic actuator:
a fluid device that converts the energy of an incompressible fluid into motion.

3.3.7 piston actuator:
a fluid powered device in which the fluid acts upon a movable piston to provide motion to the actuator stem. (See Figure 2.)

3.3.8 pneumatic actuator:
a device that converts the energy of a compressible fluid, usually air, into motion.

3.3.9 single-acting actuator:
a device in which the power supply acts in only one direction, e.g., a spring diaphragm actuator or a spring return piston actuator. (See Figures 1 and 2.)