



## Glossary of Terms

**Double-Acting (DA) Pneumatic Actuator** Any pneumatic actuator which uses air to drive the actuator output shaft in both the open and close direction. The air supply is piped to one side of a piston-drive or a diaphragm while the air contained on the opposing side is exhausted.

**DPDT** Double pole-double throw, a switch

**Durometer** An instrument for measuring the hardness of rubber by resistance to penetration

**Durometer Hardness** A numerical value which indicates the resistance to indentation of the blunt indenter of the durometer.

**EPDM** Ethylene propylene diene monome, a synthetic rubber

**Elastomer** Any of various elastic substances resembling rubber.

**Electric Actuator** An electro-mechanical device used to open and close or modulate a valve. The actuator (which is mounted and coupled to the valve in similar fashion as the pneumatic actuator), operates the valve using an electric motor driving a gear train. While the basic function of the electric actuator is similar to the pneumatic, there are distinct differences in the application and flexibility of the two types, and these differences should be considered to select the proper type.

**Electric Failsafe Actuator** Electrically driven actuator that contains an internal spring to close the valve on loss of electricity.

**Encapsulation** The enclosing of material by an encapsulant for protective purposes. In a ball valve the ball is encased in PTFE, preventing the material flowing through the valve from getting behind the ball causing contamination problems.

**Fail-Closed** Spring return pneumatic actuator is applied to the valve such that the spring will drive the valve to the closed position upon loss of air (may be termed air-to open)

**Fail-Open** Spring return pneumatic actuator is applied to the valve such that the spring will drive the valve to the open position upon loss of air (may be termed air-to close)

**Flow Coefficient (Cv)** Cv is defined as the flow rate in U.S. gallons of water (at 60°F) that will pass through the valve in one minute with a differential pressure across the valve of 1 PSI.

**Ferrule** A bushing used to secure a tube joint. A special bushing designed for welding to the end of tubing. Two ferrules and a gasket make a leak-proof connection when used with the complimentary clamps.

**Fitting** A small part of an apparatus (may be detachable).

**Fluorocarbon** Elastomer known as Viton® a registered trademark of DuPont.

**Friction loss** The part of the total loss that occurs as the fluid flows through straight pipe.

**Hex Union Nut** An internally acme-threaded six-sided connector used to assemble bevel seat fittings.

**ISO5211** International standard for actuator and valve interface

**Internal Expansion (IX)** A plug (or bullet) is pulled through a stem or a set of blades (fingers) increase the stem I.D. to the plug O.D. or a predetermined setting when using expansion blades (fingers). This forces the stem serrations into the hose tube and the hose cover into the serrations of the ferrule.

**Laminar Flow** The resistance of flow as a liquid is moved through a pipe due to viscous shear stresses within the liquid and turbulence that occur.

**Manual Override** Any mechanical device by which an automated valve may be manually operated. On smaller actuators, this may simply be wrench flats on the output shaft of the actuator. Larger actuators may require a more sophisticated system, such as de-clutchable hand wheels, manual gears, jack screws or hydraulic hand pump over-ride.

**Maximum-Shut-Off Pressure (Delta-P)** The pressure of the media flowing into the valve against which the valve will have to close.

**V Media** The material flowing through the valve.