



## Glossary of Terms

**Santoprene** A thermoplastic elastomer, a rubber-like material that complies to FDA requirements

**Service Temperature** The maximum and minimum temperature of the media.

**Silicone** Dimethyl silicone, a synthetic rubber

**Sintering** Heat process in which powdered metal particles are heated to near melting point, fusing the metal granules together.

**SPDT** Single pole double throw switch

**SPST** Single pole single throw switch

**Spring-Return (SR) Pneumatic Actuator** Any pneumatic actuator which contains a single coil spring or group of coil springs to oppose the movement of a piston or diaphragm. As air moves the piston or diaphragm the spring is compressed. When the air supply is discontinued and exhausted, the spring extends and drives the piston or diaphragm in the opposite direction. This type of actuator is normally used for applications where it is necessary for the valve to move to the open or close position upon loss of air supply, whether by design or by system failure.

**Static Discharge Head** The vertical distance in feet between the pump centerline and the point of free discharge or the surface of the liquid in the discharge tank.

**Static Head** The pressure at any point in a liquid can be thought of as being caused by a vertical column of the liquid which, due to its weight, exerts a pressure equal to the pressure at the point in question. The height of this column is called the "static head" and is expressed in terms of feet of liquid.

**Stem Torque** The force required at the valve stem to open or close the valve against system pressure and service conditions.

**Suction Head** Exists when the source of supply is above the centerline of the pump. Thus the *static suction head* is the vertical distance in feet from the centerline of the pump to the free level of the liquid to be pumped.

**Suction Lift** Exists when the source of supply is below the center line of the pump. Thus the *static suction lift* is the vertical distance in feet from the center line of the pump to the free level of the liquid to be pumped.

**Supply Pressure** The plant air supply pressure available to operate a pneumatic actuator. (plant air)

**Surge** Also known as water hammer. A rapid rise or decrease of internal pressure. Surge conditions occur for various reasons, typically, but not limited to: start and stop sequences.

**Torque** A twisting or turning force. Usually measured in inch pounds (in-lbs) or foot pounds (ft-lbs)/(force through a distance).

**Total Dynamic Discharge Head (hd)** The static discharge head plus the velocity head at the pump discharge flange plus the total friction head in the discharge line. The total dynamic discharge head, as determined on pump test, is the reading of a gauge at the discharge flange, converted to feet of liquid and corrected to the pump centerline, plus the velocity head at the point of gauge attachment.

**Total Dynamic Suction Head (hs)** The static suction head plus the velocity head at the pump suction flange minus the total friction head in the suction line. The total dynamic suction head, as determined on pump test, is the reading of the gauge on the suction flange, converted to feet of liquid and corrected to the pump centerline, plus the velocity head at the point of gauge attachment.

**Total Dynamic Suction Lift (hs)** The static suction lift minus the velocity head at the pump suction flange plus the total friction head in the suction line. The total dynamic suction lift, as determined on pump tests, is the reading of a gauge on the suction flange, converted to feet of liquid and corrected to the pump centerline, minus the velocity head at the point of gauge attachment.

**Total Head (H) or Total Dynamic Head** The total dynamic discharge head minus the total dynamic suction head or plus the total dynamic suction lift.

$$\begin{aligned} \text{TDH} &= \text{hd} + \text{hs} \text{ (with suction lift)} \\ \text{TDH} &= \text{hd} - \text{hs} \text{ (with a suction head)} \end{aligned}$$

**V Total Static Head** The vertical distance in feet between the free level of the source of supply and the point of free discharge or the free surface of the discharge liquid.