
DEFINITIONS

- BACK PRESSURE:** The pressure that is on the outlet side of a component.
- BURST PRESSURE:** Four times working pressure unless otherwise specified by customer. Actual burst is when a fracture occurs. Fracture occurs when the force on the weakest part of a unit reaches the ultimate strength of the part.
- CRACKING PRESSURE:** The pressure at which a component starts to open. Circle Seal Controls definition is 5cc/min air for an elastomer and 0.02 SCFM for PTFE.
- C_v:** Flow capability indication commonly accepted by the valve industry. The literal definition is that a component with a C_v of one (1) can flow one (1) gallon of water with a ΔP of one (1) PSI. The calculated results from C_v equations must be considered reasonable approximations only.
- DIFFERENTIAL PRESSURE (ΔP):** Difference between inlet and outlet pressure.
- DROOP:** The difference between the set pressure of a regulator and the outlet pressure immediately downstream of the regulator at a certain flowing condition.
- E.S.E.O.D.** Equivalent sharp edge orifice diameter. $E.S.E.O.D. = 0.236 \sqrt{C_v}$
- LOCK UP:** The downstream pressure at which a regulator shuts off.
- MEDIA:** The gas or liquid that a component will be subjected to.
- PROOF PRESSURE:** 1-1/2 times the working pressure unless otherwise specified by the customer. No permanent deformation is allowed at proof pressure.
- RELIEF PRESSURE:** The pressure at which a relief valve opens.
- RESEAT PRESSURE:** The pressure at which a component is closed after it has been open.
- SET PRESSURE:** The cracking pressure of a relief valve or back pressure regulator, the lockup pressure of a regulator, the shut-off pressure of a gage saver.
- SONIC FLOW:** Flow is sonic when the ΔP is equal to or greater than 1/2 of the inlet pressure. Also called choked flow.



SPECIFIC GRAVITY: The ratio of the density of one substance to that of a reference substance. Reference substance is water for liquids and air for gases.

SUBSONIC FLOW: Flow is subsonic when the ΔP is less than 1/2 of the inlet pressure.

TRIM: All metal parts in contact with media except the body.

WORKING PRESSURE: Maximum pressure that a component will be subjected to under normal working conditions.

ZERO LEAK: Standard Circle Seal definition of zero leakage is:

3 x 10⁻⁴ scc / sec

0.25 bubbles / min

4 minutes / bubble

