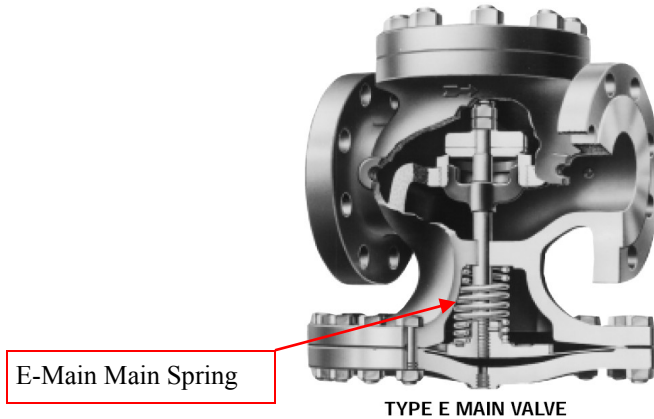




Mec-Tric E-Main Technical Publication 072312

Subject: Low Pressure (LP) Main Spring Applications for Low Differential Pressure on Spence E Main pressure regulator valves.



Differential pressure is defined as the valve inlet pressure minus the valve outlet pressure.

For example: 100 psi steam into valve with pressure reduced by valve to 25 psi at valve outlet yields a pressure differential of 75 psi. Alternatively, 50 psi inlet pressure with outlet pressure of 30 psi yields a pressure differential of 20 psi.

The E Series Main Valves provide superior regulation in a broad range of applications by utilizing a specialized Main Spring. When differential pressures between 10-50 psi are desired, E Main valves should be equipped with the optional Low Pressure (LP) spring. The LP spring alone will receive differential pressures to 15 psi. In order to attain differential pressures to 10 psi, optional 5B open elbow and 1/16" bleed port are required. (Reference page 41, Spence Steam and Fluid Control Designers guide, 4th edition; page 43, 3rd edition)

Page 14 of Spence 4th edition Designers Guide also states: standard spring (HP high pressure) requires minimum of 30 psi differential. 50 psi is recommended minimum differential. Use optional low ΔP (LP) main spring for 15 psi minimum differential. 10 psi minimum differential is attainable by adding base bypass and 1/16" bleedport. See below.

