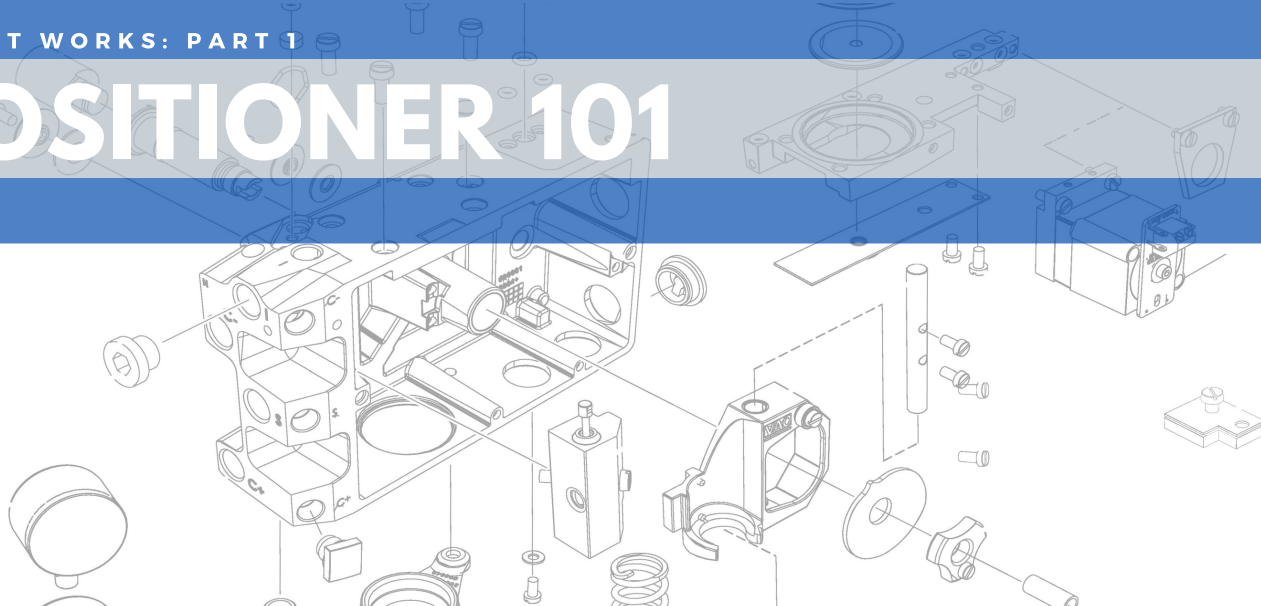
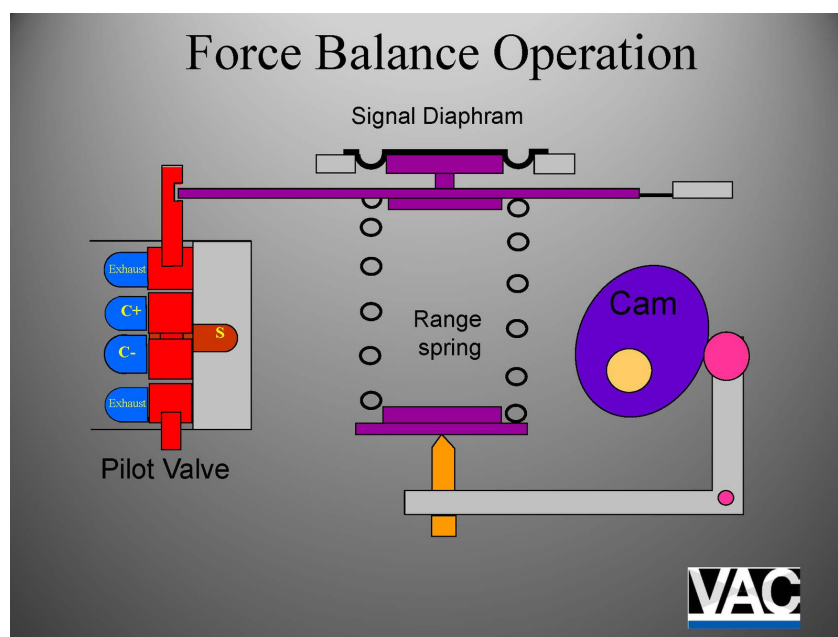


POSITIONER 101



A positioner is an instrument connected to the stem of the valve/actuator. This makes the positioner unique because it is the only instrument with a direct connection to the process that can also change the process. A positioner is also beneficial because it directly responds to the process changes and forces that move the valve trim.

Positioners control the position of the valve trim based on the set-point generated by the control system. Set-point is calculated by the control system using the deviation from optimal process conditions.



VAC's analog positioners operate based on the force balance principle of pressure. The 3-15psi signal drives the signal diaphragm/balance arm against the range spring. When the signal changes or the valve trim moves the balance arm will move the pilot valve directing air to the opening or closing ports of the actuator corresponding with the direction of the signal change. The actuator moves in response, the cam rotates changing the force exerted on the range spring against the diaphragm. When the forces are balanced, the pilot valve will return to the center and the positioner will have moved the valve to the desired set-point. The system is self-stabilizing and searches for a steady-state position.