Operation (refer to Fig. 1)

The 200N Positioners key operational components consist of a diaphragm (1) exposed to the signal pressure, a feedback spring (2), a double action spool valve (3) and a connecting rod (4) allowing all three components to move together depending on the input or feedback of the system. An increase in signal pressure on the diaphragm (1) causes the spool valve to move to the right. Supply air will flow out of the spool valve port and into the actuator. As the actuator stem begins to rotate the cam (7) will move in tandem with the stem. (Note: The positioner cam and actuator stem are directly coupled.) As the cam rotates the load on the spring will increase placing a counter load on the diaphragm. When these two loads reach and equilibrium the actuator will remain stationary. A decrease in signal pressure will cause the operation to be reversed and the actuator will begin to close.

Single Acting - the double acting 200N positioner can easily be converted to single action by plugging one of the two output ports and placing a muffler on the exposed port of the actuator. Reversal of Action - can be accomplished by simply turning the cam over and reversing the actuator air connections. Zero Adjustment is carried out by rotating the adjustment nut (8), which determines the pre-loading of the feedback spring. Range adjustment is carried out by setting the set screw (9) in order to vary the number of spring turns.