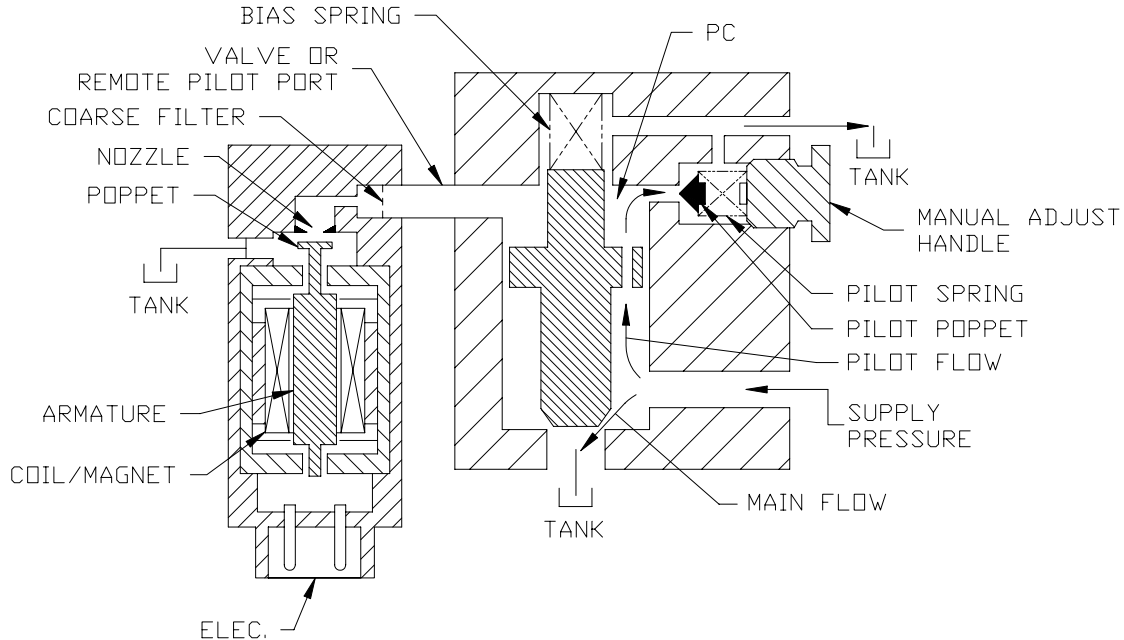


SCHEMATIC OF PPC MATED TO RELIEF VALVE

1. The pressure in the control cavity P_c is balanced against supply pressure on the other side of the piston in manual applications. P_c is controlled by the preload on the pilot poppet, which is set by adjusting the manual adjust handle.
2. When P_c is increased, the piston is forced down to close off the main flow to the tank. This raises the system pressure until it balances P_c and the system is again in equilibrium.
3. If P_c is reduced to zero pressure the supply pressure will still be about 80 PSI, which is the pressure necessary to balance against the bias spring. Thus, the supply pressure always has a differential of about 80 PSI higher than P_c .
4. This fixed differential of supply pressure over the P_c control pressure creates the pilot flow through the fixed orifice.
5. Virtually all pilot operated relief valves have what is called a vent or remote pilot port. This port is used in certain systems to remotely control the pilot pressure. This is accomplished by setting the manual adjust handle at a pressure higher than the working pressure. Then the P_c control pressure is controlled externally by metering the flow through some external component.
6. The FEMA PPC is simply plumbed to the remote pilot port and used as an electrically modulated device to meter the pilot flow to tank.



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