Custom Valve Assembly Replaces Several Devices in a Medical Operatory

Customer Application:
A manufacturer of medical equipment contacted Pneumadyne engineers to design a system that would combine the functions of several individual operatory devices into one convenient package. Our customer had already established the application requirements and overall package size but needed help with the pneumatic circuitry.

Application Requirements:
- Condense three circuits into one component
- Meet specific flow and pressure requirements
- Reduce the size of the circuit to fit the space constraints of the operatory equipment that the customer had already designed
- Pneumadyne Engineers had to work within an extremely tight timeline which required weekly web-based meetings with several domestic and international offices
- Several components within the device had to be able to withstand an autoclave

Pneumadyne's Solution:
1. Pneumadyne engineers were able to meet the customer's strict timeline and develop an integrated manifold block that contains three separate circuits and fits the space allowed in the customer's equipment. This multi-function assembly allowed the customer to replace several devices within an operatory.
2. A highly accurate Regulator pre-set at 2 psi controls pressure in one of the circuits
3. A Regulator pre-set at 7.5 psi supplies pressure to a water chamber
4. A separate valve within a plastic cap shuts the flow of water off between uses
5. Four Pressure Transducers provide an electronic interface for the measurement of system flow and pressure
6. All five solenoid valves are oxygen cleaned
7. Push-to-connect fittings ease tubing connection and system installation
8. Two Relief Valves are available to vent overpressure
9. Special tests were developed and performed to ensure that the device met the customer's flow and pressure specifications.

Contact us today to review the requirements for your medical application. sales@pneumadyne.com or sales@henrymwood.com