

Custom Valve Assembly Eliminates 29 Components in a Medical Device

Customer Application:

A manufacturer of medical equipment invited us to evaluate a new trauma device that they were developing. They had mocked up the pneumatic system using individual components from various competitors and asked us to suggest improvements for their system.

Application Requirements:

- Design a circuit that would fit inside the customer's existing equipment mold
- Decrease the time required to assemble and install the circuit
- Meet specific flow and pressure requirements at a pump pressure of 7 psi
- Provide pressure sensing feedback to the equipment's computer
- Eliminate potential leak-points

Pneumadyne's Solution:

Our Sales and Engineering teams designed the complete circuit, including the actuators, and proposed an integrated solution that reduced the number of components from 29 to just 4.

1. Three Pressure Transducers provide an electronic interface for the measurement of system pressure
2. Push-to-connect fittings ease tubing connection and system installation
3. Built-in Air Reservoir for quick reaction
4. Four solenoid valves control cylinder and various functions within the circuit

Pneumadyne's integrated solution eliminated numerous potential leak-points and reduced the amount of time needed to plumb the pneumatic circuit.

In addition to the block assembly, we also designed and built the unique double acting rolling diaphragm cylinder with position feedback shown here. This cylinder had to function without hesitation at 1.5 psi.

Contact us today to review your medical application requirements. Reach out to

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