



Single Block Assembly Reduces Components, Weight & Package Size

Challenge:

A lift device manufacturer contacted Pneumadyne engineers to design a system that would pneumatically control the raising, lowering, tilting and angling of their mechanism. While the weight of the system had to be taken into consideration, the space allotted for the pneumatic circuitry was also extremely limited.

Requirements

- Circuit had to be able to lock cylinders in position
- A relief was required for cylinder shock protection
- Limited space was available for component installation
- The assembly had to be lightweight to ensure proper function of the lift device

Solution:

By consolidating components into a single block assembly, Pneumadyne engineers were able to accommodate the weight and space limitations of the application. The resulting manifold assembly features a common input port that feeds three valve blocks. To control the raising, lowering, tilting and angling of the device, each valve block contains:

- Two solenoid valves
- Two relief valves
- Two pilot-operated check valves

Consolidating these components also allowed us to reduce the number of fittings and the time required to plumb all of the valves, simplifying the installation of the pneumatic circuit.

Benefits:

- **Lightweight, compact design**
- **Reduced number of fittings to save customer money and reduce installation time**
- **Simplified circuit allows for easy installation**

Other Applications:

- **Palletizing**
- **Medical**
- **Assembly**



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