

Air Springs Used as Grippers Enidine Air Springs Application

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Product Overview

A Denver, Colorado based manufacturer of packaging and material-handling equipment was developing a new line of palletizers. The manufacturing operations required gripping of pallets while adding or removing them from a stack. The company tried using conventional pneumatic cylinders, but soon realized they required too much floor space and were difficult to synchronize.

Product Solution

The manufacturer contacted John Budd of Fiero Fluid Power, the local ITT Enidine Inc. distributor, for some help in solving this problem. Fiero and the manufacturer came up with a custom design that was specific for this application.

They used 6 single bellows type Air Springs that were combined with 3 actuators per side, creating a very large parallel pallet gripper. The actuators were designed to fit into restrictive space, but could still produce the high force outputs required, and also handle occasional side loads. Because the actuators contain no moving piston rod components, breakaway and friction factors do not have to be considered. Thus allowing smoother performance and precise regulation of the entire mechanism. The actuators in combination with high flow valves could almost produce simultaneous motion. This highly effective area of air springs will result in large amounts of force being produced with pressures even below 100 psi.

Application Opportunity

By using ITT Enidine Inc. Air Springs in their application, the customer now has a reliable, fail-safe sound design. They continue to incorporate a wide range of ITT Enidine Inc. Air Springs into other applications.

