

Producing exact, repeatable forces with a Pressure Sensing Control

Fabco's "RV" Valve, with its unique poppet type seal, senses the pressure being applied and opens at a pre-adjusted set point to provide a pilot signal for circuit control. Because force is a direct function of pressure multiplied by area, the "RV" provides direct and precision adjustable force sensing.

If the application requires that a predetermined force be applied to a workpiece at a point that may vary in physical dimensions (such as crimping, riveting, etc.) the "RV" is the control device to use. It assures that the desired force (due to its sensing the pressure) is applied regardless of variations in part thickness.



Cut-away view of an RV Sequence Valve

If system pressure should drop below the "RV's" set point, it cannot open. The cycle will hold and wait for the required pressure rather than produce an unacceptable rivet or crimp. See the circuit diagram, Figure 1.

Once pressure is restored, the cycle will continue. The part that had been under the work stroke will be finished as a "good part". The pressure gauge confirms the sensed pressure.

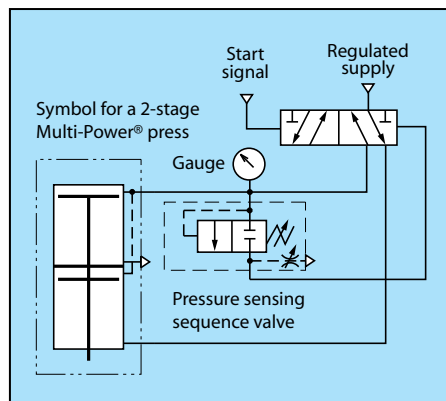


Figure 1 - Producing exact forces

Two speed work stroke with shock control

A single air/oil tank with a sequence, needle and shut-off valves, as shown in Figure 2, provides us with 2-speed work stroke operation.

The sequence is as follows:

1. Rapid "extend" stroke to approach the work.
2. Automatic switch to controlled rate when resistance is met and pressure builds up to the point where a Fabco-Air RV "Sequence Valve" actuates the 2-way shut-off valve forcing fluid flow through the speed controlling needle valve.

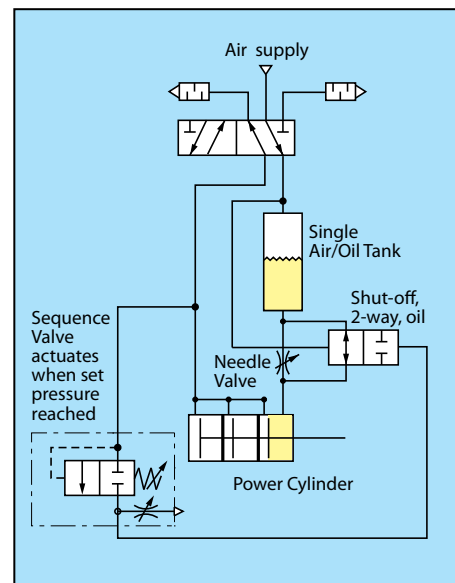


Figure 2 - 2-Speed work stroke circuit

3. Fluid catches the cylinder motion, thus controlling the shock that could otherwise occur.
4. Automatic return to rapid rate on "Cylinder Retract" stroke.



Come to www.fabco-air.com where more helpful tips and useful air circuits for RV valves and air/oil systems can be found in the downloadable Catalog #CV9, sections 9 and 13.