

Di-Dro Advanced Forming Systems



- Standard and delayed return pressure systems available.
- More force than a standard nitrogen gas or air system.
- Low contact and return pressure for less strain on the press.
- Constant force throughout the stroke.
- High speed capability.
- Wide range of stroke lengths.
- Can be used in upper and lower applications.
- Pad delay accomplished with or without a signal from the press.



Go Forward With Us

Standard Pressure System

The size of the pressure system is based on tonnage requirements, cycle rate and press stroke. A standard pressure system consists of:



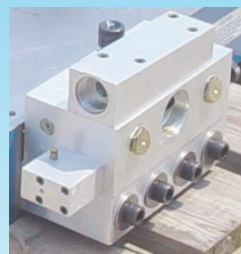
- 1 A manifold, die shoe or parallel with cylinder assemblies**
The quantity and size of the cylinders depend on the tonnage requirements.
- 2 A pressure control valve**
The size of the pressure control valve or valves depends on the oil flow during the down stroke of the press. Some applications require more than one valve to handle the flow rate.

- 3 An air-over-oil reservoir**
The air-over-oil reservoir, generally pressurized with 40-100 psi (3-7 bar) air pressure, does not affect the working pressure of the valve. Pressure in this reservoir is needed only to extend the piston rods during the up stroke of the press ram.
- 4 Air regulator**
- 5 Hoses**
The low pressure hoses carry fluid from the tank to the manifold and back to the tank.

Delayed Return Pressure System

A Delayed Return Pressure System uses the same components as the Standard Pressure System with the addition of a solenoid valve, air pilot valve or mechanical control to direct the timing of the pad during the up stroke.

Mechanical



Solenoid Valve



Air Pilot Valve



Applications

Standard Pressure System - This system is ideal

- for forming high strength steel or aluminum parts in a single hit
- for high tonnage operations such as coining or embossing
- for precision jobs such as fine blanking

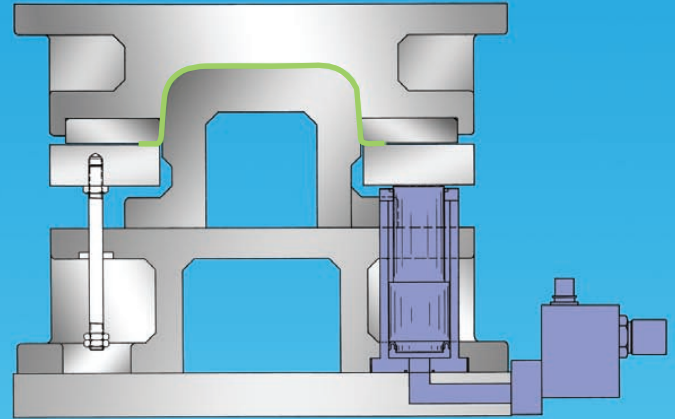
Delayed Return Pressure System - Incorporate the delayed return option

- for reducing pad interference during part transfer
- for maintaining part quality when other systems may cause the part to turn inside out

Application Examples

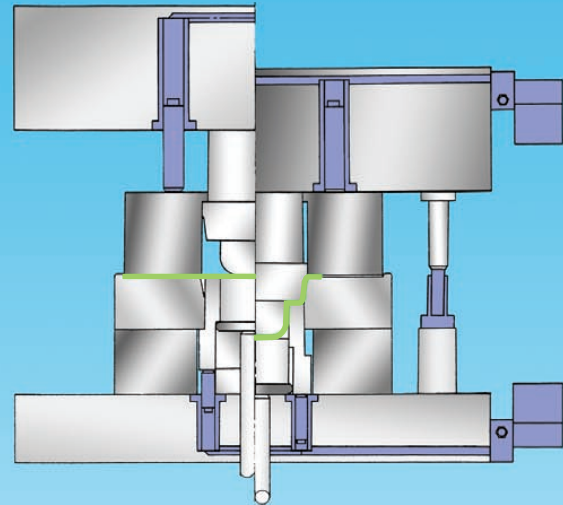
Fuel Tank Stretch Form

The Di-Dro Advanced Forming System provides the controlled force that allows deep draws. The system maintains constant force from the top of the stroke to the bottom.

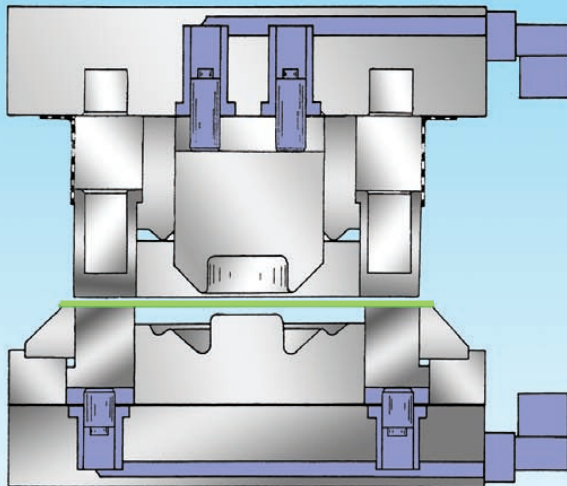


Step Draw

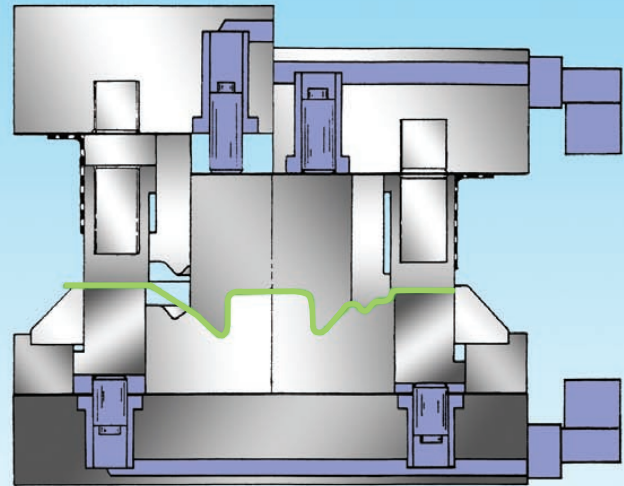
A delayed return is necessary in some deep draw operations where the part does not come free from the punch when the ram retracts. The Di-Dro Advanced Forming System with delay allows the part to relieve itself from the punch before it is lifted off.



High Strength Steels



START



FIRST FORM

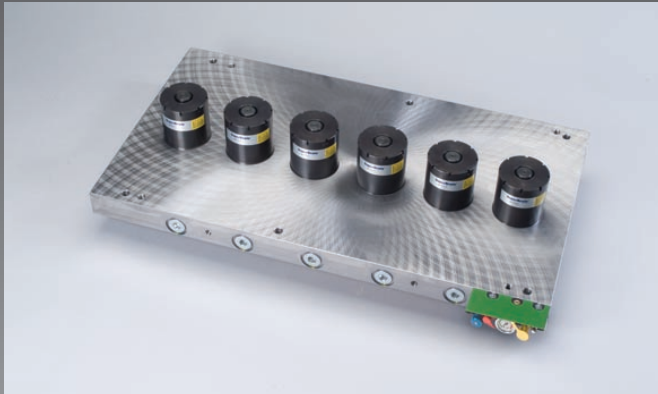
FINISH FORM

High strength steels have significant spring back after forming and often require double or triple stamping. The Di-Dro Advanced Forming System provides higher force during the forming process so the part can be formed with a single stamping.

The Di-Dro Advanced Forming System controls the force curve and locks down the system so that no force is generated on the return stroke of the press.

Other Products from Forward Industries

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