



The economy is on an upswing and the orders for new presses are coming in...

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Phoenix creates custom press for auto manufacturer

Phoenix recently delivered a 20 ton C frame press to a large auto manufacturer. The press, slide table and tool plate will be used in the production of bumpers for a new model vehicle.

The press, which has 20 tons of punching force and 10 tons of opening force, includes a guided tool plate. The plate is 40" right to left and 32" front to back. Four guide rods with bushings were designed for the tool plate alignment. The press also has two air operated locking devices to hold the tool plate in full upright position

The slide table is capable of carrying 6,000 pounds and extends 18" to the front of the press to permit load and unload of the part. The press controls include an Omron NEIS series controller with an Omron Panel View, a Balluff position transducer (used for ram position), and 24 volt DC valves.

The program involves a 2.5 "timeout". Holding pressure for more than 2.5 seconds turns the press off. The operator control station is mounted on a safety fence outside the press area. Safety features include light curtains mounted across the front of the press, a safety fence around the press and safety mats on the work area floor of the press.



Press Conference is a periodic publication of Phoenix Hydraulic Presses. Our sales staff in Hilliard welcomes your inquiries. Product literature is available on request.

Phoenix delivers compact 4 column 50 ton press

Phoenix built this compact 50 ton, four column press to a fabricator of tubular products. The press will be used to make custom tubular parts in the air-conditioning, marine, military, medical and nuclear industries.

In lined bored bushings were used to ensure precision guidance and columns were sized to optimize strength and rigidity. Frame specifications include a 21” daylight and a 7” stroke. The press also features a floor mounted power unit with an 80 gallon reservoir and a return line filter with indicator switch.



Other characteristics include a water to oil heat exchanger, track mounted adjustable limit switches and Allen Bradley electrical components. Pressure settings are selected electronically through a Micrologix 1000 programmable controller with 32 I/O. The operator interface is mounted on a movable T stand for flexibility.



Hydraulic Press Design Increases Productivity

Phoenix engineered and manufactured this specialized C frame press featuring a unique dual shuttle table setup. The unique design doubles productivity by using two operators.

A press operator places a part on the shuttle table and initiates the ergonomic push button which cycles the shuttle into the press. When the shuttle table is inside the press, both gates lower for safety and the press cycle is activated. After the ram presses the part and returns to its start position, the gates open and the tables switch position. On the opposite side of the press, another operator is placing a part on the other shuttle table for the next cycle. In brief, while one part is being pressed another part is being placed.

The unique speeds on this press are exceptional and include an advance speed of 266 IPM with a return speed of 254 IPM. The accumulator speed is 4 inches in .5 seconds with a 15 second accumulator charge time between press cycles.



The control package includes:

- Allen Bradley MicroLogix 1100 programmable controller.
- 6” black and white operator interface for ram positions, ram retract, and attack positions with recipe storage.
- LVDT mounted in the cylinder for ram positioning.
- Centralized operator station mounted on a swing pendant.

Phoenix Hydraulic Presses (and its predecessor PH Hydraulics) has been designing and building standard and customized presses since 1987. Our Quality Start-Up team performs rigorous mechanical, hydraulic and electrical inspections on each completed press to ensure conformance to internal and customer specifications.

Why Buy Phoenix?

Our Presses:

- Are engineered with a **Stress Safety Factor of 5:1.**
- Use hard tubing wherever possible.
- Use standard industrial components making it easy to get spare parts.
- Go through an extreme testing and inspection process.

Large straightening press with precision control

A California manufacturer of materials for renewable energy looked to Phoenix to design a hydraulic press with highly precise control. This press needed to straighten large diameter stainless steel pipe within a tolerance of .005. Phoenix designed and built the 55 ton straightening press with a 144" table. The hydraulics feature a two speed high output electric pump, four way valve (advance, hold and return) and a 2 ½ "diameter pressure gauge.

The frame has a 55 ton capacity at 10,000 PSI. The stroke of the platen is 12", daylight is 25", reach is 15" and height is 110". The table is 144" left to right, and 21" front to back. The control is a remote hand control with a rocker style switch that has a momentary advance, spring center hold, and momentary retract with a 10' cord. The remote control enables the operator to view work from all sides with fingertip control of cylinder piston control.



Phoenix offers a wide selection of hydraulic presses:

- Four column
- Two column
- Gib or straight sided
- Floor mounted C-frame
- Bench presses
- H-frame presses
- Custom engineered

Upgrade to a Phoenix Press

If you already have a press that could get the job done but has seen better days, consider rebuilding as a cost effective alternative to buying a new press. Rebuilding or upgrading machine functions may be the best option for getting equipment in service as fast as possible. Phoenix can rebuild and upgrade any brand or style of hydraulic press.

Common Rebuilding Services Include:

- ▶ Replacing hydraulic lines and fittings
- ▶ Cleaning valves, reservoir, press surfaces
- ▶ Adding or replacing operator interface
- ▶ Building new panel and enclosure
- ▶ Replacing damaged or worn parts
- ▶ Complete hydraulic system rebuild
- ▶ Upgrading machine functions
- ▶ Adding capabilities
- ▶ Re-machining bed of press
- ▶ Painting entire press

Contact Phoenix to customize your press rebuild project!



H Frame includes remote operator station for safety

Our customer, a leading manufacturer of batteries, requested Phoenix to design a laboratory press for powder compaction. The 25 ton H frame press was built with a remote operator station and power unit approximately 15' from the press. The press also includes an explosion proof push button and emergency stop button.

The press' design features a 10,000 PSI hydraulic system, with daylight of 6 $\frac{7}{8}$ " to 43 $\frac{3}{8}$ ". The press bed height is easily adjustable with a hand winch. Close manufacturing tolerances allows even load distribution over four alloy pins. The cylinder stroke is 14 $\frac{1}{4}$ ".

The hydraulic system includes a two speed high output electric pump, a three way valve, and a 2 $\frac{1}{2}$ diameter pressure gauge. Separate, mounted palm buttons are used to start the hydraulic motor and switch on hydraulics to extend the ram. The pump runs during the dwell time to assure that peak force is applied to the material for the duration of the dwell time. Upon release of the palm buttons, the ram retracts but the motor stays on for a period of time. The standard E stop button is mounted in a separate enclosure so no motor start button is required.

Electric controls consisted of an Allen Bradley Micro Logix 1000 PC, a manually adjusted dwell timer, and 15' seal tight and wiring for banner buttons to run back from the power unit to the press.

