

AH-Series HYDRA-PNEUMATIC PRESS

Air over Oil Press



SELF CONTAINED HYDRAULIC INTENSIFIED AIR PRESS-NO POWER UNIT NEEDED

OVERVIEW

AH-Series Hydra-Pneumatic Presses, or sometime referred to as “air over oil” presses, are an alternative solution to conventional hydraulics presses by providing a cleaner, quieter, and more cost effective solution to a wide variety of pressing and forming applications. These units provide a rapid low force approach stroke with a self-contained hydraulic intensified power stroke all in one complete package.

ADVANTAGES

- Quick Approach Stroke with a Self-Contained Hydraulic Intensified Power Stroke
- No Hydraulic Power Unit Needed
- Low Air Consumption
- More Cost Effective Than Full Hydraulic Presses
- Cleaner, Quieter, and Energy Efficient Operation
- User and Environmentally Friendly
- Heavy Duty Design and Construction

OPERATION

Actuating valve #1 pressurizes port #1, causing the floating piston to extend, transferring oil from the oil chamber onto the working piston at preset air pressure. This extends the cylinder rod at low pressure (low force).

When the cylinder rod meets resistance, valve #2 is automatically actuated, pressurizing port #2. This causes the booster piston and rod to extend, intensifying the hydraulic pressure on the working piston and creating the power stroke (high force).

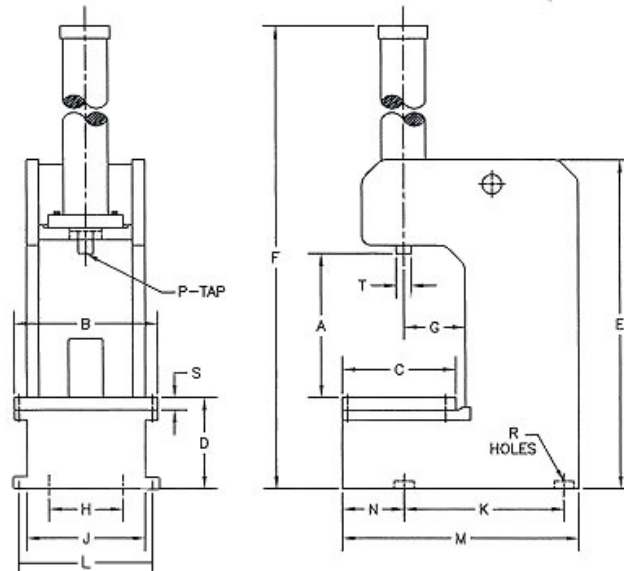
Upon completion of the work, both valves are reversed, pressurizing port #3 and 3A, retracting the cylinder back to home position.



SPECIFICATIONS

Description	Model AH4L-CF	Model AH8L-CF	Model AH10L-CF	Model AH15L-CF	Model AH20L-CF	Model AH30L-CF	Model AH50L-CF
Force at 100 psi (lbs.)	8,754 lbs.	15,886 lbs.	25,950 lbs.	31,408 lbs.	38,671 lbs.	65,134 lbs.	105,546 lbs.
Standard Daylight/ Throat Depth	14.88"/ 6.25"	14.50"/ 6.25"	14.50"/ 6.25"	14.50"/ 8.25"	14.50"/ 8.25"	14.50"/ 8.25"	Consult Factory
Approach Force (lbs.) @ 100 psi	829	1256	1963	1963	1963	2827	5026
Return Force (lbs.) @ 100 psi	681	1108	1649	1649	1649	2337	4320
Overall Stroke	6.0" / 8.0"	6.0" / 8.0"	6.0" / 8.0"	6.0" / 8.0"	6.0" / 8.0"	6.0" / 8.0"	6.0" / 8.0"
Power Stroke	.500"	.500"	.500"	.500"	.500"	.500"	.500"
Maximum Operating Speed	1.5 Ft/sec.	1.5 Ft/sec.	1.5 Ft/sec.	1.5 Ft/sec.	1.5 Ft/sec.	1.5 Ft/sec.	1.5 Ft/sec.
Air Consumption Per Cycle	.426 SCFM	1.079 SCFM	1.079 SCFM	1.356 SCFM	1.568 SCFM	2.510 SCFM	4.204 SCFM
Port (NPT)	.375"	.375"	.500"	.500"	.500"	.750"	.750"

AH-SERIES PRESS DIMENSIONS



DIM KEY	Description	AH4-CF	AH8-CF	AH10-CF	AH15-CF	AH20-CF	AH30-CF	AH50-CF
A	Daylight Opening	14.88	14.50	14.50	14.50	14.50	14.50	Consult Factory
B	Press Platen Width	14.50	14.50	14.50	19.00	19.00	21.00	Consult Factory
C	Press Platen Depth	11.50	11.50	11.50	13.50	13.50	13.50	Consult Factory
D	Platen to Floor	9.25	9.25	9.25	12.00	12.00	14.00	Consult Factory
E	Overall Frame Height	33.50	33.50	33.50	40.00	40.00	43.00	Consult Factory
F	Overall Press Height (Approx.)	65.49	68.33	69.06	72.59	76.99	84.15	Consult Factory
G	Throat Depth	6.25	6.25	6.25	8.25	8.25	8.25	Consult Factory
H	Centerline of Interior Mtg. Holes R to L	7.50	7.50	7.50	11.00	11.00	12.50	Consult Factory
J	Frame Width	11.25	11.25	11.25	16.00	16.00	18.00	Consult Factory
K	Centerline of Mtg Holes F to B	16.25	16.25	16.25	22.25	22.25	22.25	Consult Factory
L	Centerline of Outer Mtg. Holes R to L	13.00	13.00	13.00	17.50	17.50	19.50	Consult Factory
M	Frame Depth	24	24	24	30	30	30	Consult Factory
N	Centerline of Mtg. Holes F to B	6.25	6.25	6.25	6.25	6.25	6.25	Consult Factory
P	Cylinder Rod Thread	.625 -18	.750 -16	.750 -16	1.375 -12	1.375 -12	1.375 -12	Consult Factory
R	Diameter of Mtg. Holes	0.40	0.40	0.40	0.53	0.53	0.53	Consult Factory
S	Platen Thickness	1.25	1.25	1.25	1.50	1.50	2.00	Consult Factory
T	Cylinder Rod Diameter	1.375	1.375	2.00	2.00	2.00	2.50	Consult Factory
	Cylinder Port Size	.375	.375	.500	.500	.500	.750	Consult Factory

Note: Approximate dimensions. Dimension in U.S. Inches

AH-SERIES MODELS

Our objective is to offer you a solution to your assembly and forming needs. If our standard features or available options do not meet your application requirements, please consult our factory to see about us offering an affordable solution to meet your design needs.

STANDARD FEATURES

- No Hydraulic Power Unit or Electric Motor Needed
- 6.0" Overall Stroke Cylinder with .500" Hydraulic Intensified Power Stroke
- High Pressure Port for Sensing
- Heavy Duty C-Frame Construction
- Removable Press Platen
- Heavy Duty Designed Tie Rod Cylinder
- Total Air/Oil Separation

AVAILABLE OPTIONS

- Matching Floor Stands
- Two-Hand Non-Tie Down Control Packages
- Pressure / Dwell / Distance Return Options
- Jog Control Circuit
- Fault Circuit Control Package (E-FI)
- Increased Stroke Lengths
- Press Frame Modifications
- Anti-Rotation Ram Guide
- Cylinders sold separately

CUSTOM DESIGNED OPTIONS

- Light Curtains & Guarding Packages
- PLC Control Options
- 4-Post and 2-Post Designs
- Load Cell & Distance Monitoring Packages
- Selectable Modes of Operation
- Control Systems Designed for Future Expansion
- Custom Tooling and Fixture Packages
- Emergency Stop Control Circuit
- 24vDC Control Circuit
- Linear Position Transducer
- Custom Control Packages

MODEL AH8L-CF**15,886 LBS.**

@ 100 psi of Factory Supplied Air

6.0" Stroke

with .500" Hydraulic Power Stroke

14.50" Daylight Opening**6.25" Throat Depth****MODEL AH15L-CF****31,408 LBS.**

@ 100 psi of Factory Supplied Air

6.0" Stroke

with .500" Hydraulic Power Stroke

14.50" Daylight Opening**8.25" Throat Depth****MODEL AH50L-CF****105,546 LBS.**

@ 100 psi of Factory Supplied Air

6.0" Stroke

with .500" Hydraulic Power Stroke

**Consult Factory for Daylight
Opening and Throat Depth**

AH-SERIES STANDARD CONTROL PACKAGES

EDP = Electric Logic
(110v electricity required)

DP = Pneumatic Logic
(No electricity required)

EDP-1 or **DP-1**: Basic two-hand non-tie down control package with single regulator
Operator initiates and maintains both actuators at the same time to advance the press stroke. Once the operator releases one or both actuators, the ram returns to home position.

EDP-1-NP or **DP-1-NP**: Two-hand non-tie down control package with jog control
Operator initiates and maintains both actuators at the same time to advance the press stroke. If the operator releases one of both actuators during the downward stroke, the ram stops downward motion. The operator can either proceed with the downward cycle by re-initiating the actuators until the auto ram return option is met (see auto ram return options), or the operator can manually retract the ram to home position by pressing the manual ram return button
(Note: includes P-TD or E-TD Pressure with Timer Return as the standard auto ram return option)

Auto Ram Return Options:

(Add to the above standard control packages – excluding the DP-1-NP or EDP-1-NP)

E = Electric Logic / P= Pneumatic Logic

E-TD or **P-TD**: Pressure with Timer Return:
Pressure sensor initiates an adjustable press dwell timer which returns the ram

E-DR or **P-DR**: Distance Return with Timer Return
Distance sensor initiates and adjustable press dwell timer which returns the ram

E-PSRO or **P-PSRO**: Pressure Only Return:
Pressure sensor only initiates the return of the ram

E-FI: Fault Circuit (only available in electric logic)
Fault indicator with reset for short stroke notification (press stroke did not complete the normal cycle). Pressure sensor initiates an adjustable press dwell timer which returns the ram. Also, includes illuminated manual reset indicator

E-FIRR: Ram Capture (only available in electric logic)
Pressure initiated ram capture (muting); allowing the operator to remove their hands from the actuators and an adjustable press dwell timer returns the ram. Complete with illuminated ram capture indicator and manual retract button

Other Available Options

(please consult factory)

- 24vDC Control Circuit • Programmable Logic Controller (PLC) • Emergency Stop Control Circuit • Light Curtains and Guarding
- Rod End Load Cell • Linear Position Transducer • Press Force and Distance Monitoring • Custom Designed Control Systems

***Note: all control packages are assembled complete with necessary F-R-L unit, air lock-out valve, flow control valve, directional valve and exhaust mufflers.

ISO 9001 REGISTERED (WITH DESIGN)

Air-Hydraulics is committed to delivering quality products on time to achieve customer satisfaction. Air-Hydraulics uses a process approach to achieve this policy in accordance with ISO 9001 and is committed to continually improve at this process.

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