

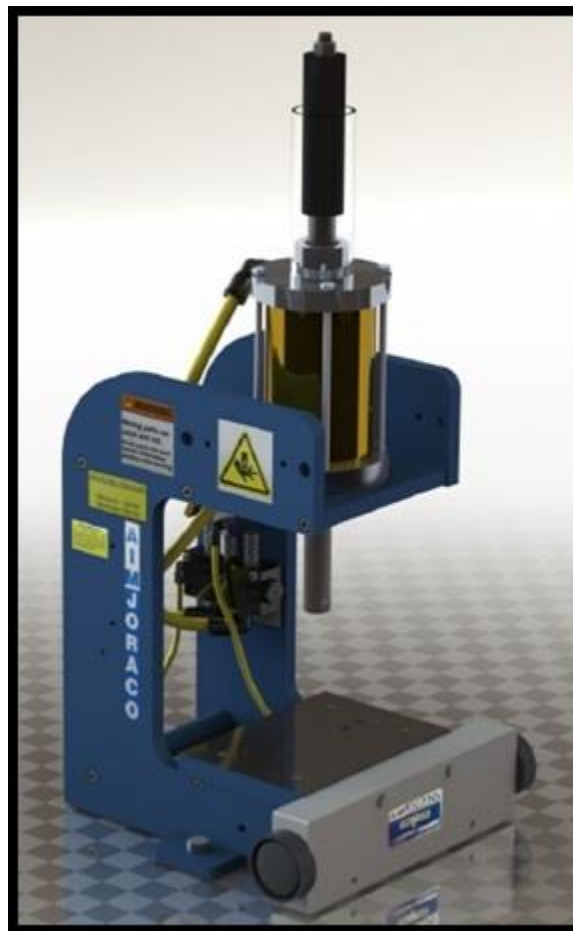
AIM JORACO®



"The Pneumatic Toggle Press Innovators". Since 1947.

AUTOMATED INDUSTRIAL MACHINE, INC TOGGLE-AIRE® DIVISION

347 Farnum Pike
Smithfield, RI, USA
02917
401-232-1710
www.joraco.com



Installation, Operation and Maintenance Direct-Aire Series Bench Presses

IMPORTANT

It is the responsibility of the employer/purchaser to provide his or her employees with proper point of operation guards, and to ensure that this equipment is used in accordance with the manufacturer's recommendations as well as any OSHA, federal, or state regulations that are applicable to such equipment. Because it is impossible to anticipate the conditions under which our equipment will be operated, additional safety devices and methods may be required to ensure operator safety. Besides conforming to all federal, state, and local codes, the buyer should consider the safety of the entire operation involving any press, and see that any additional guarding, training, and maintenance deemed necessary is developed and enforced to protect the well-being of the operator.

THINK SAFETY . . .
 . . .WORK SAFELY

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DIRECT-AIRE SERIES PRESSES

OVERVIEW, INSTALLATION, AND OPERATION

SECTION I: PRESS OVERVIEW

1.1 DESCRIPTION

The DIRECT-AIRE® pneumatic press series features a straight pneumatic cylinder for applications requiring full force over the entire stroke such as assembling bushings, posts, inserts, fasteners, and related products. Suitable for a wide range of manual and semi-automatic assembly operations, this press is offered with a standard 4.5” stroke, providing from 650 to 2,300 lbs.

1.2 FEATURES

Standard features include the following:

- 4.5” Standard Stroke
- 6” Through Space for Flexible Working Area
- 8” Open Height
- 4.25” Throat Depth

1.3 OPTIONS

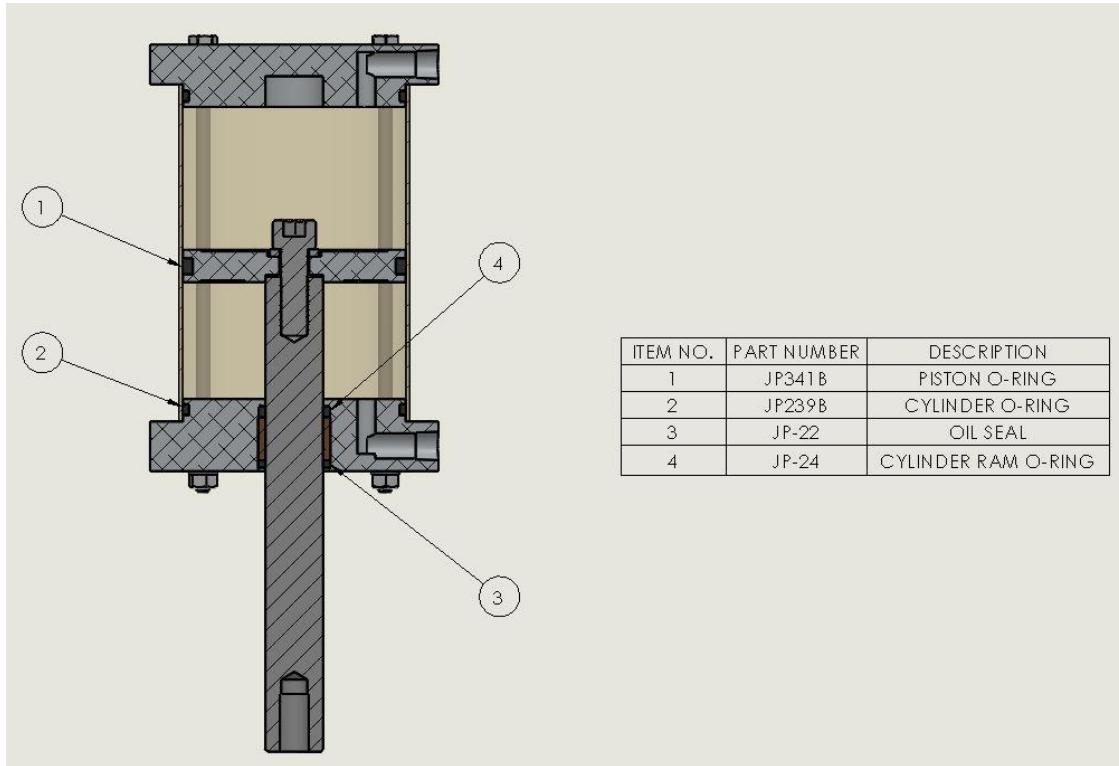
Options include the following:

- Filter, Regulator, Lubricator (FRL)
- Non-Rotating Ram
- Adjustable Ram Speed Control
- Adjustable Stroke
- PLC Ready
- EZ Dial
- Dwell Timer
- Optical “No-Touch” Anti-Tie Down Actuation

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1.4 Seal Kit Components



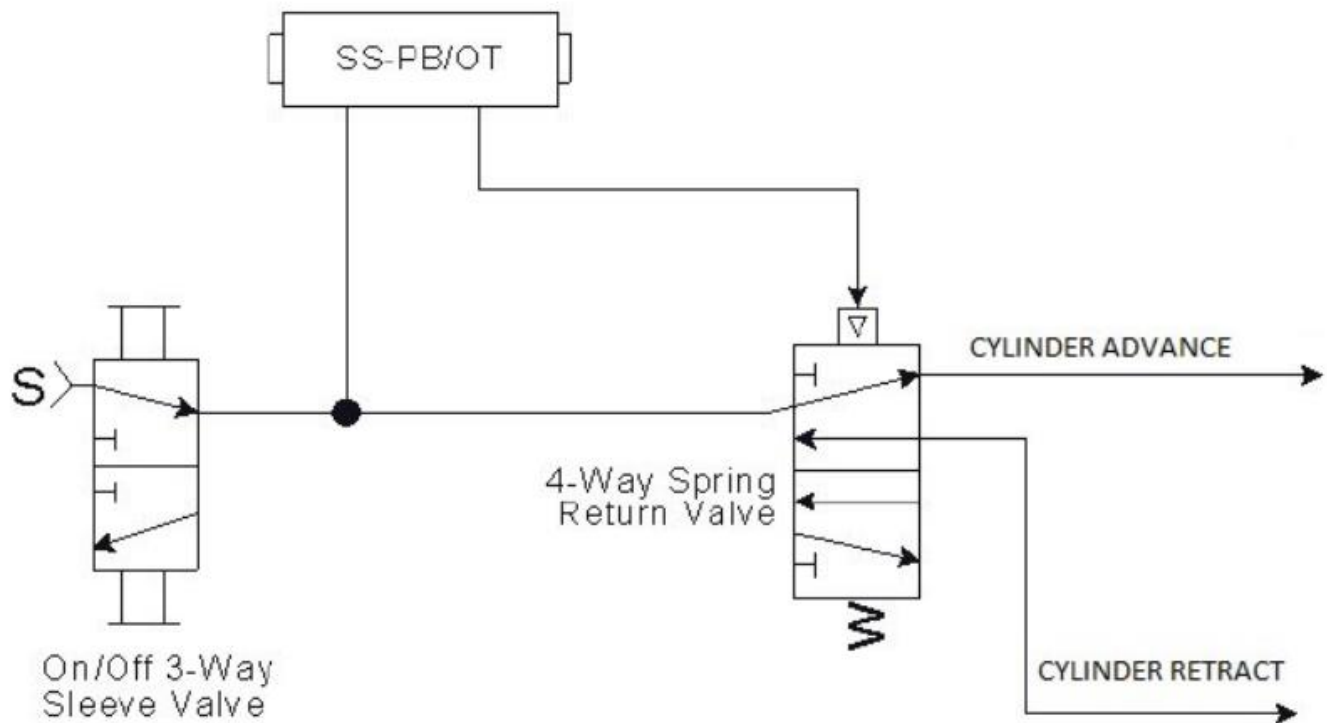
Model NO.	Replacement Seal Kits
DA-300	SK300
DA-300AHS	SK300AHS
DA-400	SK400
DA-400AHS	SK400AHS
DA-400T	SK400T
DA-400TAHS	SK400TAHS
DA-800	SK800

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SECTION II: VALVING

PNEUMATIC CIRCUIT: CSR (Constant Signal Required)



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SECTION III: INSTALLATION

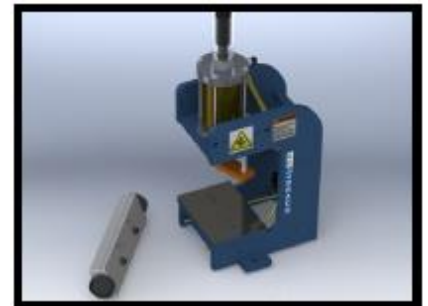
3.1 Un-boxing

Carefully remove the press from the crate, taking note of separately packed items such as the "Quick Exhaust Unit"(Optional), FRL Unit (Optional) and "Synchro-Sig" Actuator.

Synchro-Sig may come mounted on some models

3.2 Synchro-Sig Installation

- A. Locate the 1/4" yellow tubing found under the press platen. Connect the tubing to the appropriate fittings on the actuator. See markings on the tubing. **DO NOT OVERTIGHTEN** normally, 1/2 turn past finger tight is sufficient for an airtight connection.
- B. Using the 1/4-20 hex head bolts supplied, mount the "Synchro-Sig" to the press as shown.



NOTE: To insure operator safety some applications may require that you locate the "Synchro-Sig" actuator further away from your tooling.

**- PICTURES ARE FOR REFERENCE ONLY-
SOME SECTIONS OF THIS MANUAL MAY NOT APPLY
TO YOUR PRESS UNIT.**

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3.3 Mounting Press

- A. Select a bench of suitable size and strength.
- B. Bolt the press to the bench using the holes located in the press frame below the platen area. Never operate the press unless it is securely mounted on a bench or stand.

CAUTION: WHENEVER CONNECTING YOUR AIR SUPPLY TO THE PRESS BE CER-TAIN TO FOLLOW SAFE OPERATING PROCEDURES AND KEEP ALL PARTS OF YOUR BODY AWAY FROM THE MOVING PARTS OF THE PRESS!



3.4 Connect Air Supply

- A. The air supply must be clean and conditioned. Preferably, a Filter, Regulator, Lubricator Unit, Follow the instructions by the manufacturer of the FRL unit. Unit should be located within 6 feet of the press. For optimum results all air lines, fittings, and hoses used to supply the press should be the equivalent of poly-flo 1/2" minimum. **Adjust the drip rate to approx. one drop per 50 press strokes. Only use oil specifically formulated for use in pneumatic equipment.**
- B. The minimum air pressure for operation is 50 PSI; the maximum is 100 PSI. The optimum operating range is 60-100 PSI. If your application consistently required substantially more than 100 PSI it may indicate the need for a stronger.
- C. Connect air supply to the press at the inlet port.



NOTE: If lower air pressure is required consult factory about EZ-Dial option.

NOTE: A three way Shut Off Valve like the one supplied must always be used to insure complete bleeding of the press circuits when air supply is off.



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3.5 Turn On Air Supply

Remove the yellow lock out device found on the On-Off Valve. To turn the air on simply move the gold colored sleeve downward until it stops. Slide the sleeve upward to the stop to shut the supply off. With the supply on, check for air leaks and be sure all connections you have made are secure and air tight. If air leaks from inside the "Synchro-Sig" actuator the connections are incorrect. Correctly reconnect the tubing, taking note of the tubing labels.

CAUTION: ENSURE HANDS ARE CLEAR OF ANY TOOLING BEFORE TURNING OFF AIR SUPPLY. THE WEIGHT OF A HEAVY TOOL MAY CAUSE IT TO DROP UNEXPECTEDLY. IF HEAVY TOOLING IS BEING USED BE SURE TO PLACE A STOP UNDER TOOLING BEFORE TURNING OFF AIR SUPPLY.

NOTE: When the press is not in use or being serviced or maintained, always SHUT OFF the air supply and replace the lockout device. Secure with a padlock, etc. to prevent unauthorized use of the press.

CAUTION: BEFORE PROCEEDING, MAKE SURE THE TABLE AND WORK AREA IS CLEAR OF ALL TOOLS, FOREIGN OBJECTS, AND BODY PARTS.

3.6 Test The Installation

Test the "Synchro-Sig" Two Hand Actuator by simultaneously depressing the palm buttons on the Model SS-PB or by simultaneously placing a finger in each sensing "button" on the Model SS-OT. The press should cycle once, return to the top of the stroke, and await another signal from the actuator. If the buttons are continuously held down the press should remain in the down position until one or both levers or buttons are released.



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SECTION IV: SET UP AND OPERATION

4. Mount Your Tooling

NOTE: Prior to installing any tooling in the press, proper point of operation guarding, specifically designed for your tooling, must be built and mounted on or around your tooling.

CAUTION: NEVER OPERATE, SERVICE OR ADJUST THIS MACHINE WITHOUT PROPER INSTRUCTION.

NEVER SERVICE THIS MACHINE WITHOUT FIRST SHUTTING OFF AIR SUPPLY.

NEVER OPERATE THIS MACHINE WITH SAFETY GUARDS REMOVED.

Using the tapped holes in the press platen, mount the lower portion of your tooling to the press. The platen is machinable and can be drilled and tapped as necessary. Attach upper portion of tool to ram. The end of the ram should bear against the upper portion of your tooling.

NOTE: If your tool incorporates guide pins etc., be sure the tooling easily moves along the full length of travel with no binding or misalignment. Correct any problems found in the tool before placing tooling into production.



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SECTION V: TROUBLESHOOTING

5.1 Ram Will Not Extend

Cause	Solution
Air is not on	Turn on air supply
Insufficient air supply	Increase air supply pressure
Defective valve	Contact AIM Joraco to replace
Tooling is binding	Inspect / repair tooling

5.2 Ram Will Not Retract (stuck in down position)

Cause	Solution
Insufficient air supply	Increase air supply pressure
Defective valve	Contact AIM Joraco to replace
Tooling is binding	Inspect / repair tooling

5.5 Press Not Generating Pressure

Cause	Solution
Insufficient air supply	Increase air supply pressure
Cylinder out of working range	Adjust tooling
Damaged / worn seals	Send cylinder to AIM Joraco

5.6 Ram Does Not Fully Retract

Cause	Solution
Insufficient air supply	Increase air supply pressure
Tooling is binding	Inspect / repair tooling
Air trapped in oil reservoir	Refer to section 5.1

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SECTION VI: ENGINEERING DATA

6.1 Standard Specifications

SPECIFICATIONS	300	400	400T	600	800	1000
Force	650LBS	1200LBS	2300LBS	2800LBS	5000LBS	7800LBS
Strokes/Min	240	180	100	80	50	15
Open Height (Standard)	8.0"	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE
Stroke	4.5"	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE
Throat Depth	4.5"	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE	CUSTOM SIZE AVAILABLE
Air Consumption Per Stroke @80PSI	.2 ft ³	.39 ft ³	.64 ft ³	.92 ft ³	1.66 ft ³	2.59 ft ³

6.2 Cycle Times

Cycle times vary depending on the volume of air being delivered by the customer, the length of the stroke, and the weight of the tooling.

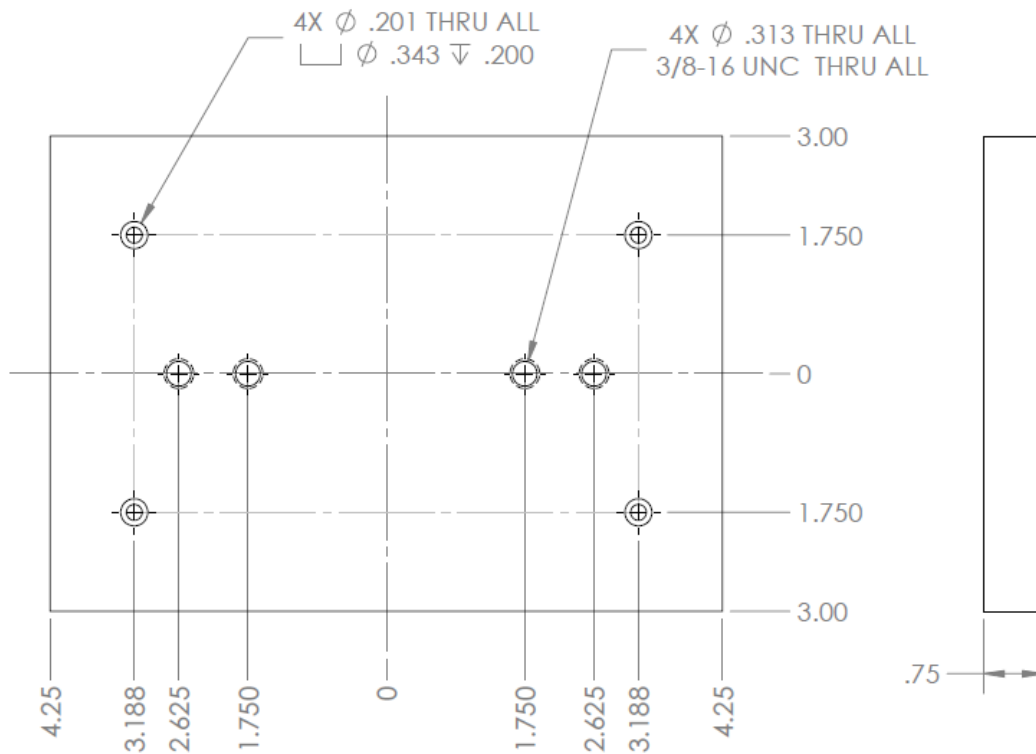
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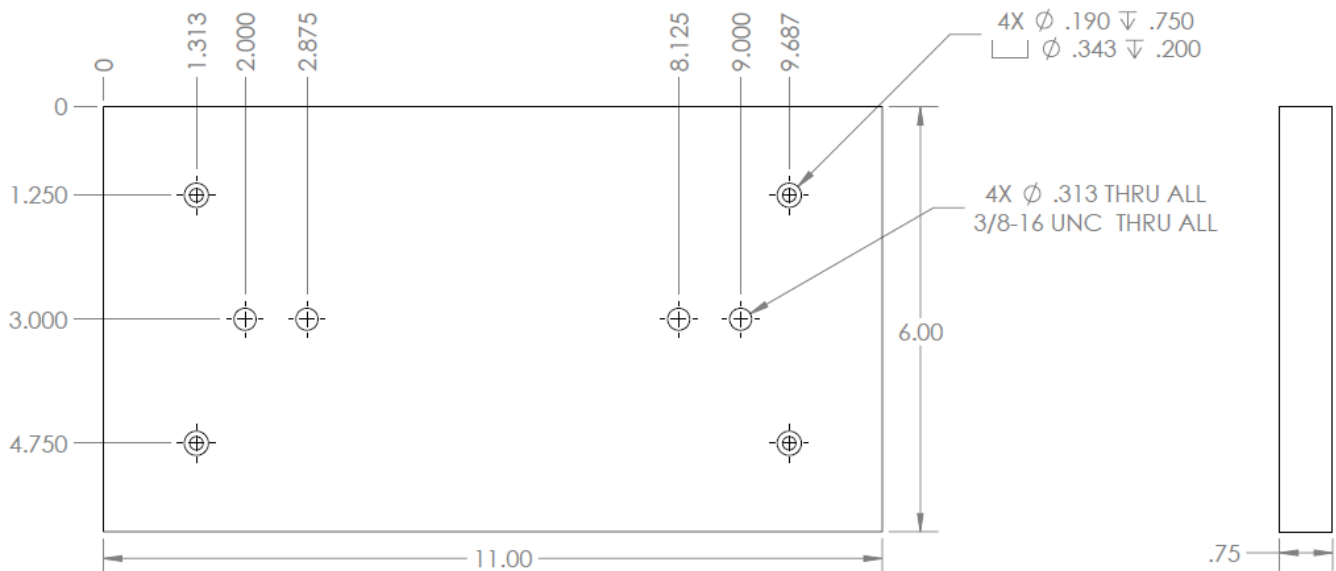
6.3 Bolster Plate Mounting

C-Frame Hole Locations:

DA300, DA400 & DA400T



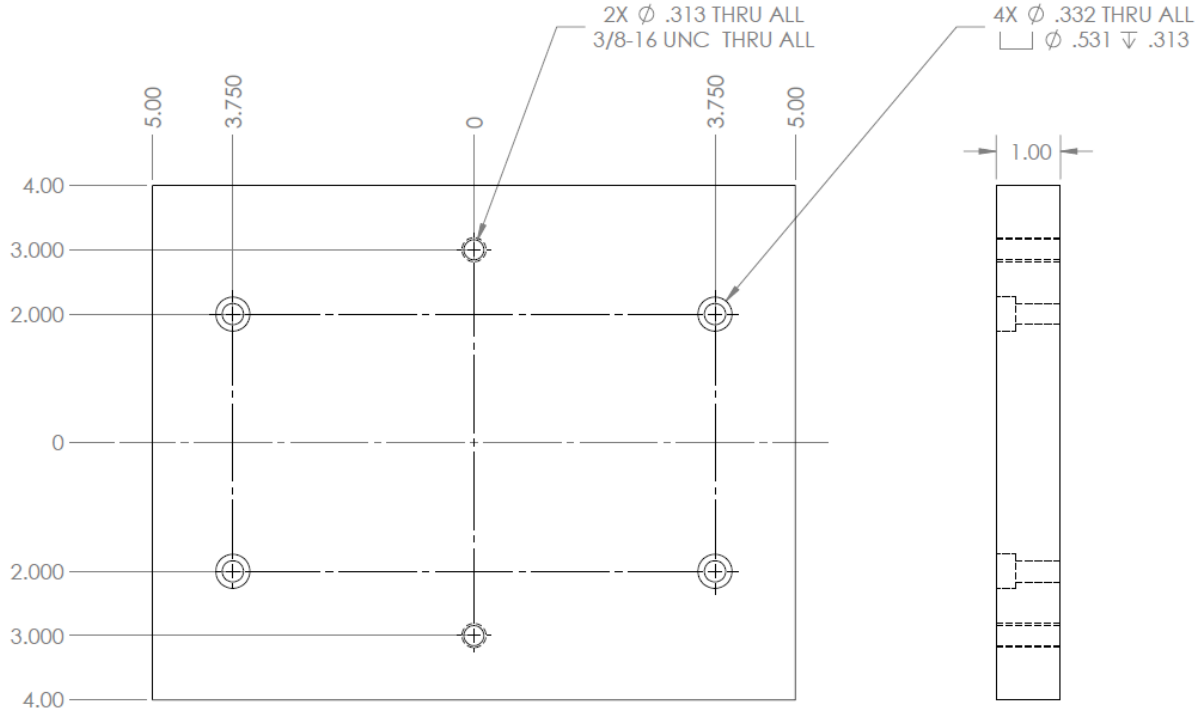
DA800



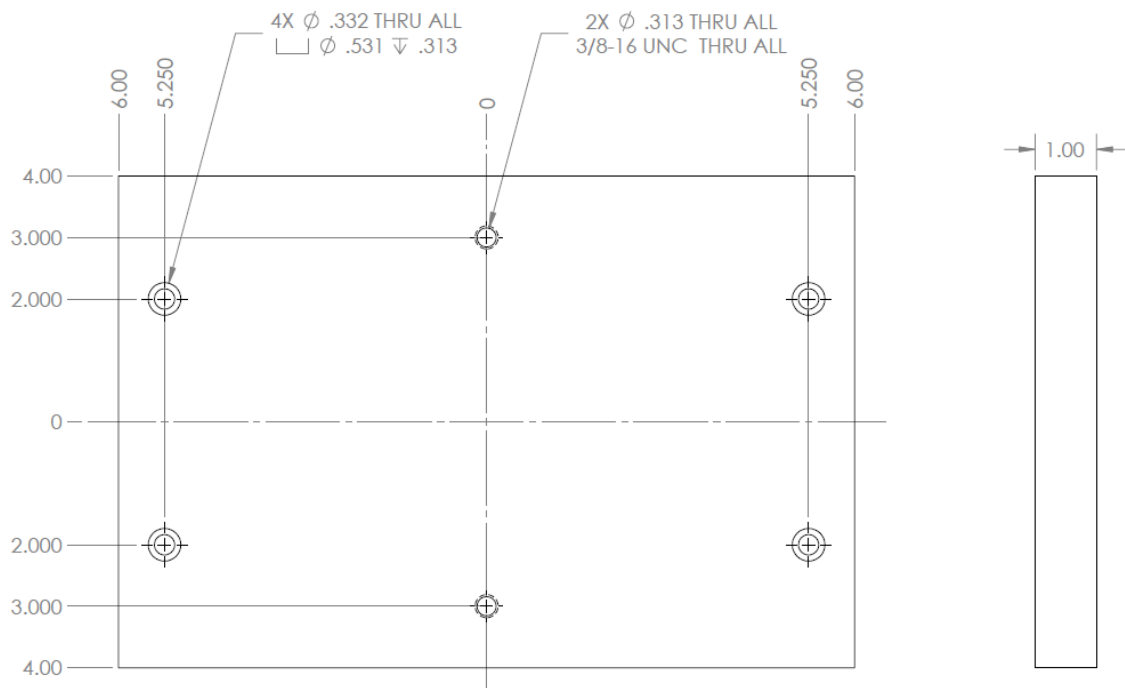
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H-Frame Hole Locations: DA300, DA400 & DA400T



DA800



NOTE: CUSTOM MOUNTING HOLES AVAILABLE UPON REQUEST

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Factory Support

Our staff is available to assist you with any questions you may have regarding your AIM Joraco press.

World Headquarters
Automated Industrial Machine, Inc
347 Farnum Pike
Smithfield, RI 02917 USA

Call: 1-888-889-4287
Fax: 1-401-232-1711
Email: sales@joraco.com
www.JORACO.COM

Europe

Sunlab Equipment Limited
South Shropshire
DY14 8AN, England

Tel: +44 (0) 7779 427 814
+44 (0) 845 475 0550
Fax: +44 (0) 845 475 0551

Email: guy@sunlab.co.uk

WARRANTY

Automated Industrial Machine, Inc., (hereafter referred to as the manufacturer) warrants that all TOGGLE-AIRE®, DIRECT-AIRE®, and HYDRO-AIRE products will be free from defects in material and workmanship for a period of 180 days (6 months) from the date of shipment to the original purchaser. Any claim made against this LIMITED WARRANTY must be made by contacting the customer service department of the manufacturer. At its option Automated Industrial Machine, Inc., will repair or replace any product it deems defective under the terms of this warranty. If factory service is required, transportation costs to and from the factory are to be paid by the purchaser. This warranty does not apply to equipment which has been subject to abuse, misapplication, negligence, improper maintenance, alteration, or failure to follow Automated Industrial Machine, Inc., instructions.

Automated Industrial Machine, Inc's., SOLE OBLIGATION UNDER THIS WARRANTY IS STATED ABOVE. THIS WARRANTY IS IN LIEU OF ALL OTHERS, EXPRESSED OR IMPLIED AND UNDER NO CIRCUMSTANCES WILL Automated Industrial Machine, Inc., BE LIABLE FOR ANY CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF ITS PRODUCTS.

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