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**347 Farnum Pike
Smithfield, RI, 02917**

Pneumatic Presses, Rotary Indexers, Custom Tooling, PLC Controlled Solutions

FOR IMMEDIATE RELEASE

AIM-Joraco® Develops Solution for Precision Cup Forming

SMITHFIELD, RI, October 22, 2026- A louver manufacturer returned to AIM-Joraco® to engineer a specialized forming solution capable of producing precision blowouts in metal cups of six different sizes.

The unique shape of the formed cups presented a significant engineering challenge. The finished parts could not be removed from the tray using the same motion in which they were loaded, creating a high risk of collision between the forming tool and the automatic slide tray mechanism. To overcome this challenge, our engineers designed an expanding blowout tool that engages the press plate and forms the cup according to the machine's controlled shut height. A standardized shank diameter and set-screw shank adapter enable efficient tool changes.

The forming tool was designed to expand after reaching the plate, forming the cup and creating the required blowout shape based on the press's shut height. Using a Toggle-Aire® 2530 press, the team integrated expandable custom tooling, an automated pneumatic slide tray, and sensor-based safety controls. Precise shut-height adjustment ensures consistent blowout dimensions while improving operator safety, repeatability, and production efficiency.

To streamline part removal, a pneumatic slide tray mechanism featuring a stainless-steel trap door was developed. After the forming process is complete, the trap door opens over a collection chute, allowing the finished part to drop automatically into the collection area. This approach provides precise tool adjustment and consistent forming results. This approach eliminates the need for the operator to manually remove the formed part from the tray while preventing the cup from contacting the tray's sliding components.

Operator safety is enhanced through protective guarding and integrated sensors that prevent tool collisions. A versatile tray nest and five interchangeable adapter plates accommodate six-part sizes, ensuring precise alignment between each workpiece and its corresponding forming tool while improving operational flexibility, reliability, and ease of maintenance. To simplify tooling changes, engineers developed a split-collar shank adapter and standardized the shank diameter across all six tools. This configuration allows each blowout tool to be removed and installed more easily. Additionally, an optional automatic cycling mode enables operators to configure the press to run at repeating intervals using a timer, reducing the need for continuous manual cycling.

The completed system delivers precise, repeatable blowout forming across six sizes through adaptable tooling and automated material handling. Integrated sensors, guarding, and automatic part ejection enhance operator safety, prevent tool collisions, reduce manual handling, and improve overall production efficiency.

About AIM Joraco

Joraco Press Company has been an innovator in the pneumatic press industry since 1947. The trademarked TOGGLE-AIRE® Series has been the core product of Joraco Press for over 60 years, having been installed in thousands of manufacturing facilities all over the world. Head on over to our website www.joraco.com for all your press needs! The past 20 years have seen Joraco Press expand its benchtop pneumatic press products to cover more applications and more force ranges than ever before. Joraco Press Company is a division of Automated Industrial Machine, Inc located in Smithfield, RI. Our products are designed, fabricated, and assembled at the AIM headquarters.

To learn more, visit us at:

www.joraco.com

(401) 232-1710 FAX (401) 232-1711

sales@joraco.com

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