

Extrusion Stretch Forming



Features & Benefits

- Synched or independent arm actuation
- Programmable pressure and position facilitates both traditional and tangential stretch forming
- 'Closed-loop' control system allows precise, repeatable tension and angle control
- Accurate, uniform tension force throughout the cycle minimizes wrinkling
- Programmable post-load cycle minimizes material spring back and increases the yield strength
- Built-in recipe functionality for repeatability and fast set-up
- Manual Control Mode allows direct control of the cycle profile to expedite new part development
- Heat integration, joggle ram adapters, and bar code scanners can be incorporated as needed

Stretching the Limits of Metal Forming

Stretch forming is a unique metal forming application commonly used in the aerospace industry to form parts of varying complexity. From simple, curved parts like aircraft skins to those with intricate geometries or non-uniform cross sections, stretch forming offers the flexibility and precision necessary to support aerospace manufacturing. In fact, most leading edge parts, joined structural sections, and contoured trim are created using a stretch forming machine.

How Does it Work?

During the stretch forming (or wrap forming) process, metal sheets or extrusions are stretched to exceed their inherent elastic limit and wrapped around contoured dies to create the desired shape. This "stretching" results in stronger finished parts with better shape control, surface quality, and yield strength than rolled or drawn parts.

Custom Machinery to Enhance Productivity

Every Triform extrusion stretch forming machine is customized to optimize

formability. Tonnage, jaw distance, jaw size, and table size are extensively evaluated by Triform's application experts to determine the best machinery configuration for the part being formed.

Arm actuation (both position and speed) is fully programmable, allowing for both synched and independent movement while a modern 'closed-loop' control system allows precise, repeatable tension and angle control during operation.



Supplemental accessories such as heat integration for high strength alloys and hydraulic joggle rams for setting bends in the formed extrusions can be incorporated as needed.

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