Hydraulic Ring Expanders

Triform Ring Expansion Systems are used in aerospace forming facilities to produce strong, symmetrical, ring-shaped parts for turbine engines. The ring expansion process minimizes material thinning and eliminates the stress point issues associated with traditional rolling and machining. Rings can be made from a variety of high-strength materials including Inconel, Hastelloy and Titanium, among others.

From jaw diameter, height and travel to tonnage capacity and controls, every Triform ring expander is fully customizable to ensure your machine perfectly fits your forming operation. Additionally, our easy-to-use controls platform offers precision programmability and recipe functionality, so process repeatability is a breeze.

Hot Joggle Presses

Many aerospace parts, including stiffeners, stringers, ribs, firewall assemblies, webs, formers, and covers, require joggles to ensure proper overlap during assembly. Traditionally, this secondary operation has been performed by hard-to-find skilled ‘artisans’ who manually hammer each bend into place.

Triform brings accuracy and repeatability to the joggle forming process with custom machinery that precisely controls the force, angle, and direction of every bend. By eliminating the need for hand-finishing, our customers experience reduced scrap rates and improved process efficiency. Additionally, by adding supplementary equipment such as heated platens, customers are able to expand their product lines to include high-strength alloys.

Supplemental Technologies to Enhance Productivity

- All press structures engineered for ‘Infinite Life,’ using FEA design software
- Extended duration testing uncovers performance issues prior to shipment
- Built-in redundancies, such as dual linear and pressure transducers, prevent unexpected downtime
- On-Board Pre-Preventive Maintenance technology automatically monitors machine performance, relaying critical maintenance data to key user personnel
- PressLink communication module provides fast, complimentary remote support from factory-trained Beckwood technicians