



## Helander Metal Spinning Company

An ISO 90001:2008 & AS9100 Rev C. Registered Company

### 20" Hydroforming Press

At the heart of Helander Metal Spinning's hydroforming services is our cutting edge 20" hydroforming press. Sheet hydroforming is an ideal process for manufacturing parts with complex or asymmetrical geometries that would require multiple punch cycles in a matched die stamping process. By replacing one of the rigid dies with highly pressurized hydraulic fluid contained in a flexible diaphragm, its dynamics allow it to take on the form of any conceivable geometry. We use it to create an almost unlimited range of geometric shapes, either shallow or deep drawn, from a wide variety of metals and metal alloys.

Designed by engineering and manufacturing professionals with decades of experience in the machine tool industry, this hydroforming press sets the industry standard in hydroforming technology. Their pioneering pressure containment system offers a significantly reduced press size and operates with outstanding integrity and durability. Modern design software, state-of-the-art hydraulics, and computer-driven controls provide us with the capability to produce seamless parts that are extremely lightweight, strong, and durable.

This flexible press is fully programmable can be used interchangeably in the deep draw or fluid cell process mode. For deep drawn parts or those with curved geometries, the downward-acting bladder holds the material during pressurization as the tool is extended upward by a hydraulic punch cylinder. This draws the material into the bladder and allows it to flow as needed. By contrast, the fluid cell process allows the downward pressure of the bladder to form the material around the tool, allowing multiple parts to be run in a single cycle.

Operating at up to 10,000 psi, this hydroform features and advanced control and hydraulic systems that allows us to precisely manage the forming pressure of punch travel, which facilitates the production of net-shaped parts. Its "open" feature enables our operators to visually inspect parts mid-cycle, after which they can either continue the cycle or abort in order to modify the recipe – a significant time saver in new part development projects.

Maximum punch tool diameter is 15", while draw depth capacity is 10". Outfitted with components from well-known names in industrial automation, it gives us the capability to for an extensive PM program.

This exceptional press provides us with a high-reliability solution for production of complex shapes for tight tolerance parts that need little to no finish work. Single tool technology dramatically lowers tooling costs, and process flexibility makes it an excellent choice for prototype and new product development projects. Our operators have a solid understanding of the hydroforming process as well as the technical skills to take advantage of the high-performance features this press has to offer, and we pass those benefits onto you.

**Helander's future plans are to expand our department with larger machinery to 32" hydroforming press and 1" thick spinning capacity. If you would like to be part of our plans, please contact us at [spin@helandermetal.com](mailto:spin@helandermetal.com)**

