

Deep Draw Sheet Hydroforming



Features & Benefits

- High-performance drawing capability for a variety of materials, including the strongest alloys
- Easily configured to operate in fluid cell mode for increased forming flexibility
- Dramatically lower tooling costs through elimination of mated dies
- Minimized reliance on skilled labor through an intuitive, programmable control system with built-in recipe handling
- Simplified part development with the "In-Sight" feature
- Fast, inexpensive bladder changes for increased up-time
- Reduced unplanned downtime with simple preventive maintenance

Hydroforming Technology, Reinvented

Triform's deep draw sheet hydroforming presses use a state-of-the-art controls system in conjunction with a pressurized rubber diaphragm to form complex geometries up to 12" deep in a single cycle.

As pressure is applied, the tool is extended on a hydraulic cylinder, drawing the material into the diaphragm. Since the diaphragm acts as a universal female die, matched tooling is not required. This can reduce tooling costs by 50% -90% compared with conventional press tooling! Additionally, tools can be made from a variety of materials including steel, aluminum, 3D printed substrates, epoxies, and even wood.

Cans, boxes, or parts with curved flanges, which have a tendency to wrinkle, also benefit greatly from Triform's controlled flow of material.

Removing the Guesswork from New Part Development

Triform deep draw technology leverages a proven, decades-old forming process with several integrated enhancements that increase forming capability.

Bladder pressure and punch position can be tightly controlled (to 1% of full scale and +/-0.002" respectively), and Triform's 'In-

Sight' feature allows you to pause the cycle at any point in the forming to inspect the results. Depending on those results, you can continue the cycle or abort it to modify the recipe. This ability to look inside the chamber during formation greatly expedites new part development, saving valuable time & materials.



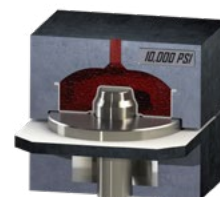
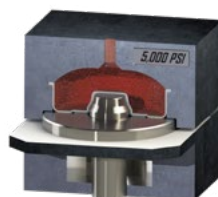
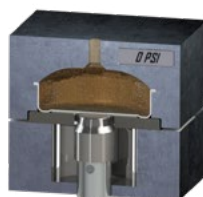
Service & Support After the Sale

Every Triform press features our proprietary PressLink Connect Module which remotely joins technicians with the press in the field. In addition to fast, complimentary support, PressLink facilitates program updates and distance learning without the need for an on-site visit.

On-board diagnostic systems, preventive maintenance packages, and built-in equipment redundancies further our commitment to minimizing unplanned downtime.

TRIFORM
Manufactured by Beckwood

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See how deep draw sheet hydroforming works

Learn more about sheet hydroforming

Machinery Specifications



Model	610-20-3SC	12-15-7BD	16-10-7BD	20-10-10BD	25-10-12BD	32-10-12BD	42-10-12BD
Max Blank Diameter:	6" x 10" oval (152 x 254 mm)	12" (304 mm)	16" (406 mm)	20" (508 mm)	25" (635 mm)	32" (813 mm)	42" (1066 mm)
Max Chamber Pressure:	20,000 PSI (1379 bar)	15,000 PSI (1034 bar)	10,000 PSI (689 bar)	10,000 PSI (689 bar)	10,000 PSI (689 bar)	10,000 PSI (689 bar)	10,000 PSI (689 bar)
Draw Depth Capacity:	3" (76 mm)	7" (178 mm)	7" (177 mm)	10" (254 mm)	12" (304 mm)	12" (304 mm)	12" (304 mm)
Max Punch Diameter:	4" (101 mm)	8" (203 mm)	12" (305 mm)	15" (381 mm)	19" (483 mm)	27" (685 mm)	36" (914 mm)
Lower Punch Force:	125 tons	381 tons	280 tons	471 tons	1,130 tons	1,850 tons	2,023 tons
Cycle Time:	<30 seconds	<30 seconds	<45 seconds	<45 seconds	<60 seconds	<60 seconds	<75 seconds
System Dimensions							
Length:	170" (431 cm)	165" (419 cm)	165" (419 cm)	200" (508 cm)	155" (394 cm)	177" (449 cm)	192" (487 cm)
Width:	55" (139 cm)	70" (177 cm)	70" (177 cm)	70" (177 cm)	70" (177 cm)	75" (190 cm)	87" (221 cm)
Height:	105" (266 cm)	135" (343 cm)	135" (343 cm)	157" (398 cm)	260" (660 cm)	304" (772 cm)	340" (863 cm)
Weight:	17,000 lbs (4,535 kg)	44,000 lbs (19,958 kg)	44,000 lbs (19,958 kg)	62,000 lbs (28,122 kg)	130,000 lbs (58,967 kg)	230,000 lbs (104,326 kg)	275,000 lbs (124,737 kg)
Pit Depth:	n/a	n/a	n/a	3' (91 cm) or platform	5' (152 cm)	7' (213 cm)	7' (213 cm)
Power System							
Total System Horsepower:	50 HP	170 HP	170 HP	170 HP	170 HP	250 HP	400 HP
Working Fluid:	AW 46	AW 46	AW 46	AW 46	AW 46	AW 46	AW 46
Reservoir Capacity:	80 gallons (302 liters)	300 gallons (1,135 liters)	300 gallons (1,135 liters)	400 gallons (1,514 liters)	500 gallons (1,892 liters)	800 gallons (3028 liters)	800 gallons (3028 liters)
Control System							
Programmable PLC:	Allen Bradley CompactLogix	Allen Bradley CompactLogix	Allen Bradley CompactLogix	Allen Bradley CompactLogix	Allen Bradley CompactLogix	Allen Bradley CompactLogix	Allen Bradley CompactLogix
Touchscreen Interface:	17" Color	17" Color	17" Color	17" Color	17" Color	17" Color	17" Color

* Consult Triform rep for higher pressure or increased lower punch force.

* Cycle times calculated at 5,000 PSI, 50% draw depth, and 50% of max punch diameter.

* Consult a Triform rep for alternate configurations.

