

TRIFORM

Manufactured by Beckwood

HYDROFORMING EQUIPMENT



WE DIDN'T INVENT SHEET HYDROFORMING,
BUT WE RE-INVENTED THE WAY IT
WORKS FOR OUR CUSTOMERS.

WHY CHOOSE SHEET HYDROFORMING?

At Beckwood, our sheet hydroforming equipment is engineered to put you in control. The technology that drives TRIFORM sheet hydroforming equipment can be learned in just minutes, yet offers more forming flexibility than you ever dreamed possible. With a TRIFORM machine, our customers have gained the ability to consolidate multiple forming operations into one, allowing them to produce complex, near-net finished parts in just a single step. When working in a high mix-low volume production environment, there is no better forming solution.

While aerospace & defense is our #1 market for sheet hydroforming equipment by far, customers in the following industries are also beginning to realize the competitive advantage of our flexible, precision forming equipment:

- Medical
- Appliance
- Automotive
- Energy
- Job Shops
- Research & Development

NEXT-GEN HYDROFORMING

Sourcing reliable sheet hydroforming equipment should be exciting, not challenging. In the past, new equipment was hard to come by and old equipment presented too many risks, and neither were backed by substantial support. Triform equipment takes the roots of the familiar process from Cincinnati & Verson, and modernizes the technology to focus on uptime, repeatability, and consistency. Our team has the ability to adapt new machines to existing tooling and right-sizing the machine for your needs, so you can experience greater process efficiency without the reliance on skilled labor.



INTUITIVE TOUCH SCREEN HMI

All TRIFORM machines are equipped with an advanced, easy to use HMI.

This intuitive system allows users to tightly control diaphragm pressure and punch position with astonishing precision with just a few taps. The ability to save and recall proven recipes greatly reduces the reliance on skilled labor and improves part consistency. Triform's 'In-Sight' feature allows the operator to open the forming chamber at any point throughout the cycle to gain a better understanding of how the material is forming. This feature gives operators the ability to adjust on the fly, significantly reduces new part development, and can also be used for production operations when it comes to adding supplemental tooling such as capping rings. Best of all, this intuitive system takes just minutes to learn.



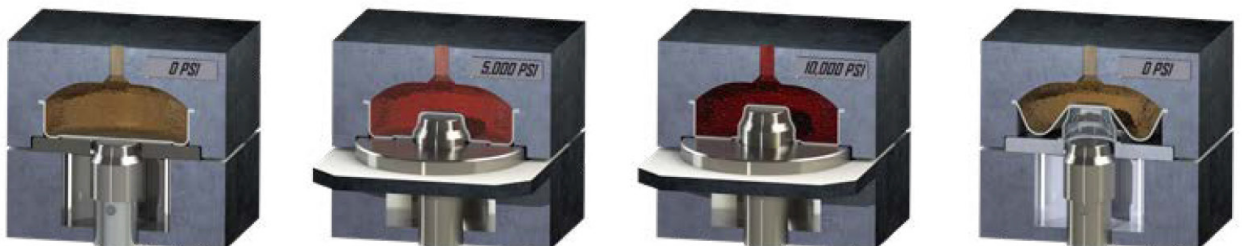
BLADDER OPTIMIZATION

When designing our sheet hydroforming machines, one of the biggest concerns that we knew we had to address was diaphragm changeover time & process specifically when it comes to fluid cell forming. Triform's diaphragms are made from high performance neoprene and urethane for ultimate durability. When the time comes to replace the bladder, a safe and efficient change out is important to get the machine back into production. Bladder changes can be completed in as little as 30 minutes on the smaller Triform models and within 4-6 hours on the larger models.

FLUID CELL



DEEP DRAW



BUILT FOR YOU. BUILT TO LAST.

TRIFORM HYDROFORMING EQUIPMENT SPECIFICATIONS

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All TRIFORM units are capable of precise diaphragm pressure and punch position control:

- Diaphragm Pressure within 2% of Full Scale
- Punch Position within $\pm 0.002''$

STANDARD FLUID CELL SHEET HYDROFORMING MACHINE MODELS



Model	Forming Area	Max Chamber Pressure	*Tray Depth
16-5FC	16" Diameter (406mm)	5,000 PSI (345 bar)	N/A
24-5FC	24" Diameter (609mm)	5,000 PSI (345 bar)	N/A
42-5FC	42" Diameter (1067mm)	5,000 PSI (345 bar)	N/A
3648-10FC	36" x 48" tray (914mm x 1219mm)	10,000 PSI (689 bar)	8" (203 mm)
3678-10FC	36" x 78" tray (914mm x 1981mm)	10,000 PSI (689 bar)	8" (203 mm)
3696-10FC	36" x 96" tray (914mm x 2438mm)	10,000 PSI (689 bar)	8" (203 mm)
36120-10FC	36" x 120" tray (914mm x 3048mm)	10,000 PSI (689 bar)	8" (203 mm)

*Deeper trays available upon request

STANDARD DEEP DRAW SHEET HYDROFORMING MACHINE MODELS



Model	Max Blank Diameter	Max Chamber Pressure	Draw Depth Capacity	**Punch Force
610-20-3DD	6" x 10" Oval (152 x 254mm)	20,000 PSI (1379 bar)	3" (76 mm)	125T (1,245 kN)
12-15-7DD	12" (304mm)	15,000 PSI (1034 bar)	7" (178 mm)	280T (2,790 kN)
16-10-7DD	16" (406mm)	10,000 PSI (689 bar)	7" (178 mm)	280T (2,790 kN)
20-10-10DD	20" (508mm)	10,000 PSI (689 bar)	10" (254 mm)	470T (4,683 kN)
25-10-12DD	25" (635mm)	10,000 PSI (689 bar)	12" (304 mm)	750T (7,473kN)
32-10-12DD	32" (813mm)	10,000 PSI (689 bar)	12" (304 mm)	1170T (11,657kN)
42-10-12DD	42" (1066mm)	10,000 PSI (689 bar)	12" (304 mm)	2023T (20,157kN)

**Higher punch forces and forming pressures available upon request.

Don't see exactly what you need? Ask about our custom TRIFORM engineering capabilities.