

Figur G15

Digital Sheet Forming

On-demand, flexible manufacturing without dies to revolutionize the way complex sheet metal parts are formed





DIGITALLY DRIVEN METAL SHEET FORMING

Traditional sheet metal forming is a capital- and time-intensive process that requires expensive equipment as well as tools and dies with long production lead times. Eliminating metal forming dies gives manufacturers a competitive advantage in supplying customers with unique metal products quickly and without high development costs. Flexible, on-demand production also opens new markets where stamping isn't technically feasible or cost effective.

Figur G15 is the first commercial platform of its kind to shape sheet metal on demand directly from a digital file. A precision-controlled toolhead forms sheet metal at over one meter per second in a machine structure that is purpose-built for Figur's patent-pending Digital Sheet Forming (DSF). DSF technology eliminates the need for a traditional stamping press and dies – delivering sheet metal forming that is accessible, flexible, and cost-effective, even at low volumes.

Whether for automotive, aerospace, or architectural applications, Figur DSF technology helps you take the lead in the digital manufacturing revolution.

Patented technology for quality and precision

Controlling the forming forces that radiate across the sheet metal as force is applied at the tooling point has been a major challenge in the development of digital approaches. This difficult to predict deformation impedes accuracy. Figur's patented and pending process is faster and more predictable. Combining a unique backing system that controls deformation of the sheet for quality and precision with a proprietary tooling system for a pristine surface finish, the G15 replaces die stamping with modern, flexible, on-demand manufacturing.

A complete software-hardware solution

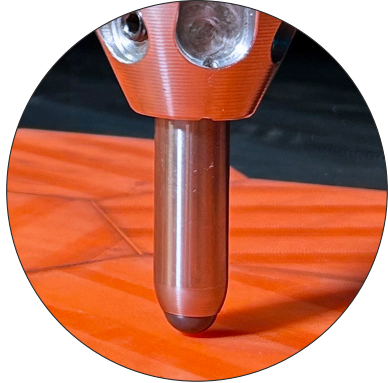
A software guided workflow takes users from digital file to formed part with ease. The included software navigates from importing the digital design file to part orientation within the Figur machine for ideal forming conditions. Next the software automatically generates the "skirt," or angled walls around the formed part in just a few minutes. Finally, the file is sliced into individual 2D layers, or slices. This file is sent to the G15 for layer-by-layer forming of the desired geometry.

Easy operation

With an affordable pricepoint, the Figur G15 combines a simple control system and user-friendly programming to ensure easy adoption of DSF technology. The low power requirements and quiet operation in a small and robust footprint make sheet metal forming accessible for use in light industrial settings. Use your existing materials with minimal labor requirements to expand your sheet metal capabilities with fast production and first part delivery.

Manufacturing flexibility

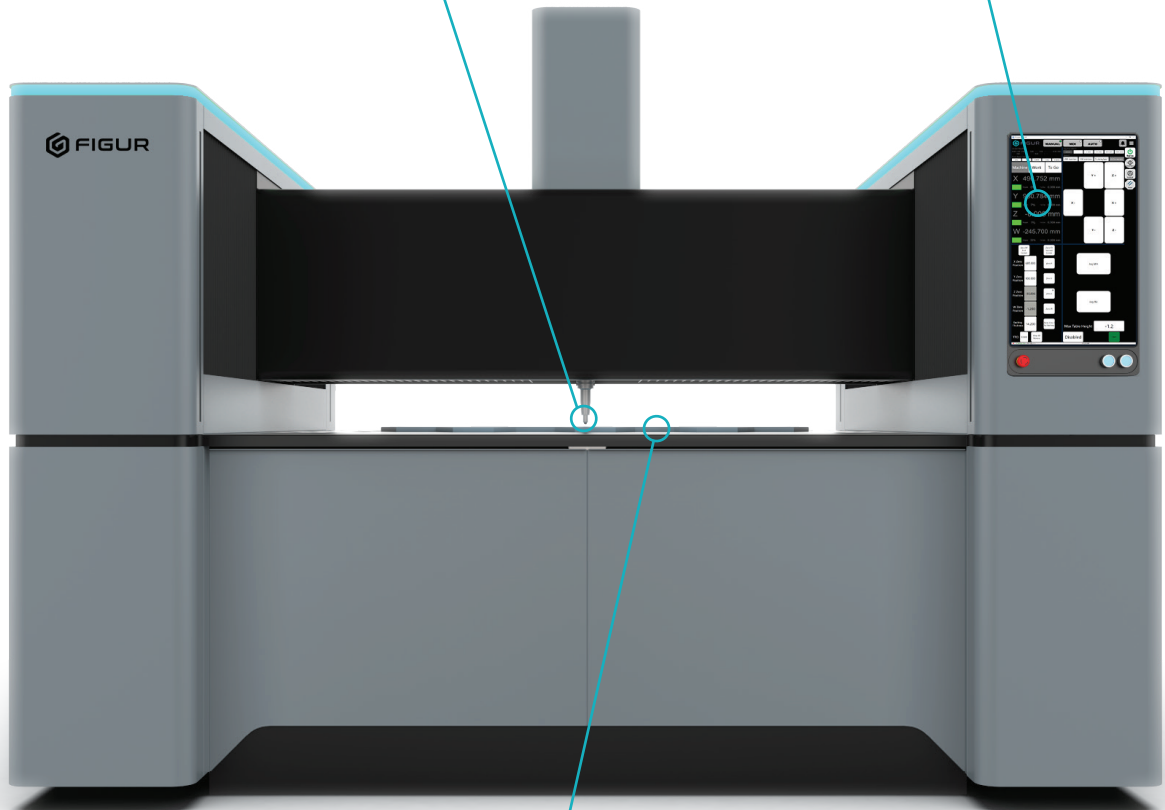
Digital tools enable production to start at quantities of one, helping to eliminate upfront expenditures on dies and providing new agility to iterate and pivot with fast-changing industries. The Figur G15 processes different sheet sizes without swapping out fixturing, giving you the ultimate manufacturing flexibility with minimal labor requirements in hard-to-fill trades. With a compact footprint, fleets of Figur systems enable manufacturing redundancy at an affordable price while the G15 Pro includes added features like automatic tool changeover for easier setup in environments with series of parts.



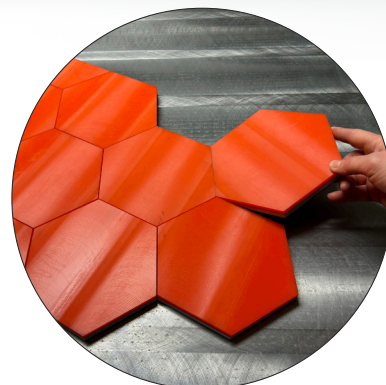
A proprietary tooling system reduces wear while providing smooth surface finishes



Easy-to-use software combines with intuitive touchscreen interface



Patented resilient magnetic backing controls the deformation of the sheet for quality and precision





MATERIAL FLEXIBILITY

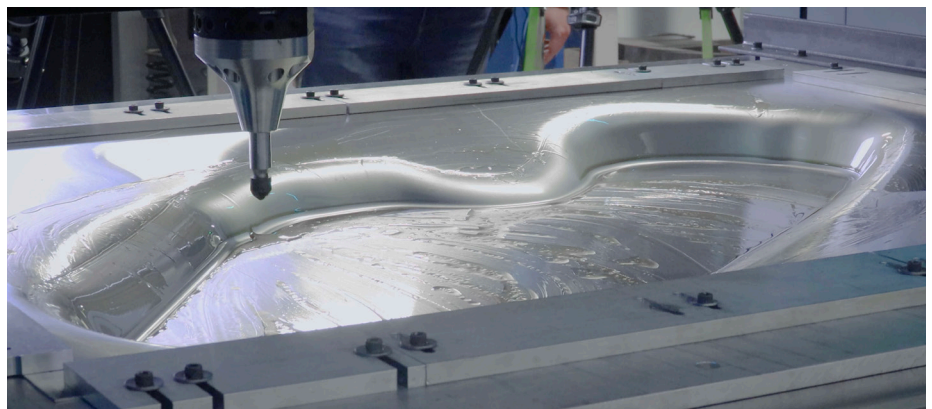
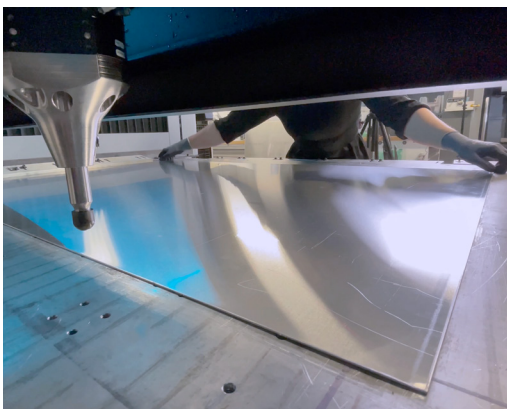
The Figur G15 works with a range of sheet metal to meet the needs of a variety of applications. We've fine-tuned the process for a variety of common materials while we continue to work with our customers to develop manufacturing-ready processes for even more metals including nickel alloys, titanium, and even gold.

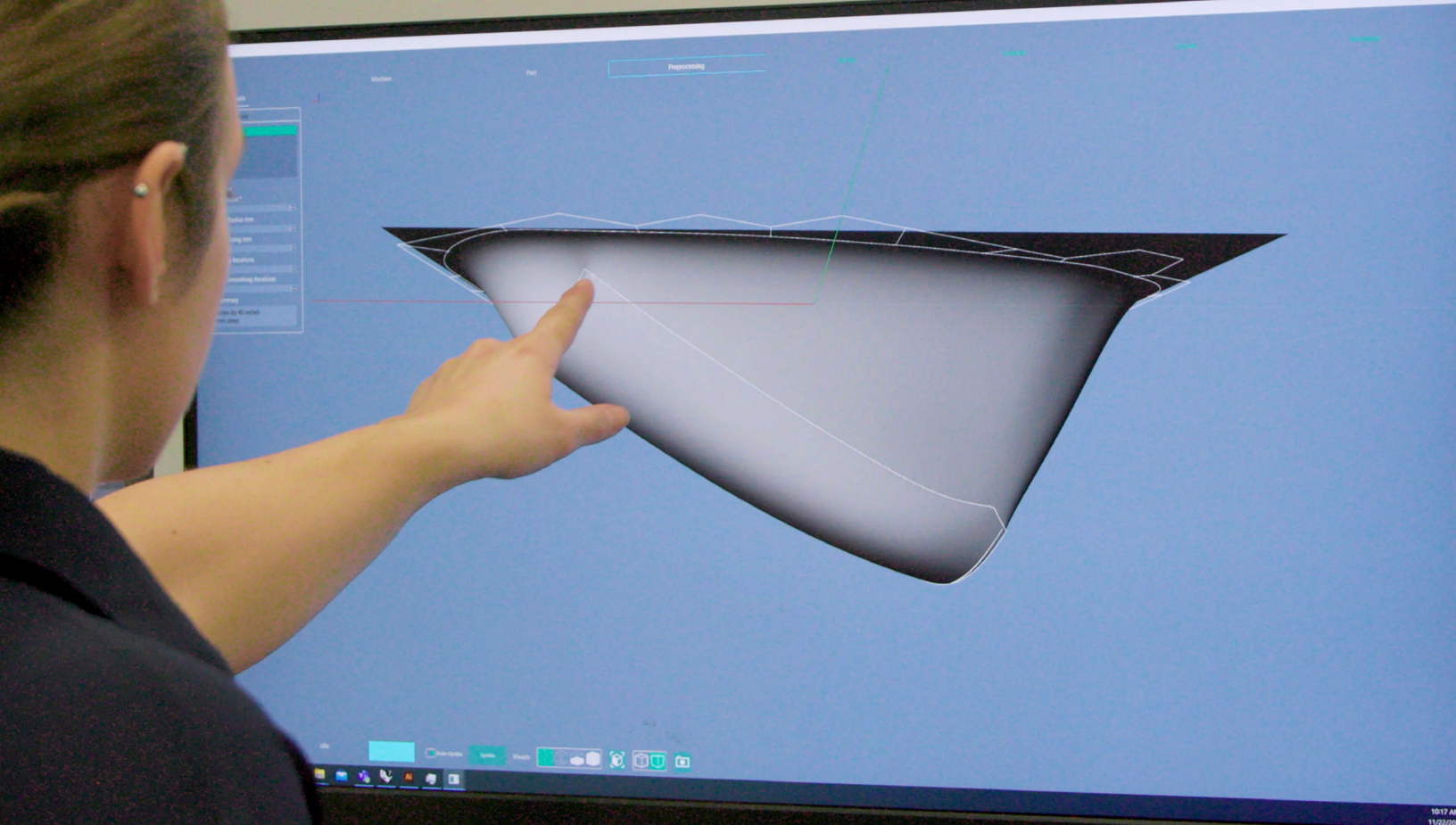
Qualified materials

- Aluminum 6061* up to 3.175 mm (10 Ga)
- Cold Rolled Steel up to 2.0 mm (14 Ga)

R&D materials

- 301 and 304 Stainless Steel
- Aluminum Alloys* 1011, 2024, and 5052
- Copper





USER-FRIENDLY WORKFLOW

To ensure easy adoption of Digital Sheet Forming technology, the Figur G15 comes included with the software you need to go from design file to formed part.

Digital files are imported into our platform in preparation for the DSF process. Parts are first oriented within the G15 platform. The software automatically places the design in the optimal position to optimize specifications like thinning and processing time. After orienting the part for forming, the program analyzes the setup to generate the “skirt” material. Within a matter of minutes, the software automatically creates a sacrificial skirt around the part - making the angled walls created on the sheet during forming.

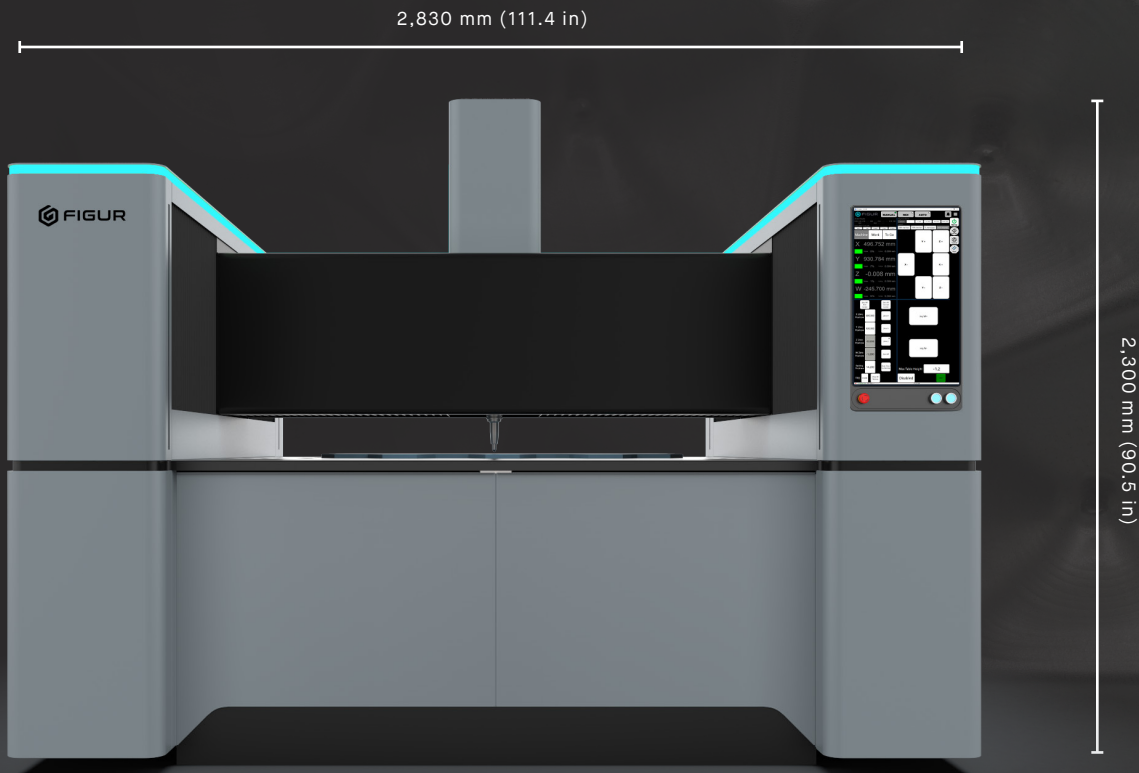
Finally, the design is converted to a file DSF process. By slicing the design into individual layers, similar to 3D printing processes, the Figur G15 receives a roadmap of layer-by-layer instructions to form complex sheet metal designs without dies or other hard tooling.

Software controlled process offers an easy approach





TECHNICAL SPECIFICATIONS



Technology	Patent-pending Digital Sheet Forming (DSF)
Max sheet size	1,600 x 1,200 mm (63.0 x 47.2 in)
Forming area	1,450 x 1,000 mm (57.1 x 39.4 in)
Z travel	400 mm (15.7 in)
Forming force, max	2,000 lbs X, Y & Z
Forming speed, max	1 m/sec
Capacity — aluminum	3.175 mm (10 Ga)
— steel	2.0 mm (14 Ga)
Power	480 V, 3-phase, 20 kw
Air	0.14 m ³ /min at 6-8 bar (5 cfm at 80 - 100 psi)
Weight	3,700 kg (8,140 lbs)
Machine dimensions	2,830 x 2,330 x 2,300 mm (111.4 x 91.7 x 90.5 in)

The G15 Pro includes added features that allow for easier set up and maintenance:

- Automatic 4-tool changer
- Tool measurement probe
- Automatic part lubrication
- Automatic machine lubrication

LEARN MORE

VIDEO

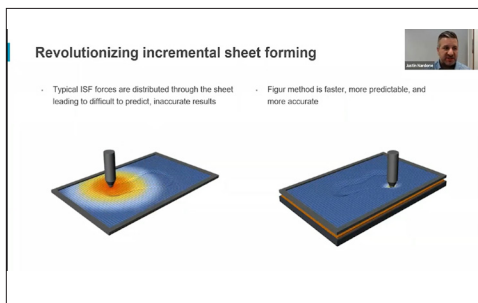


Digital Solutions Replace Strenuous Work at Custom Auto Shop

Saltworks car company builds bespoke one-offs and low-volume production creations for the custom automotive world. Digital Sheet Forming on the G15 enables the company to turn design files into custom metal panels accurately, repeatably, and without hard tooling or long lead times.

TeamDM.com/Saltworks

WEBINAR



How Digital Sheet Forming is Revolutionizing Sheet Metal Forming

Gain a better understanding of how the DSF process works without a stamping press or custom tools, molds, and dies. Learn how the Figur G15 shapes standard sheet metal on-demand, directly from a digital design file. Explore example forms and applications that benefit from making sheet metal forming affordable, even at low volumes.

TeamDM.com/FigurWebinar

Learn the latest about the G15 and Digital Sheet Forming technology at TeamDM.com/Figur

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Desktop Metal (NYSE:DM) is driving Additive Manufacturing 2.0, a new era of on-demand, digital mass production of industrial, medical, and consumer products. Our innovative 3D printers, materials, and software deliver the speed, cost, and part quality required for this transformation. We're the original inventors and world leaders of the 3D printing methods we believe will empower this shift, binder jetting and digital light processing. Today, our systems print metal, polymer, sand and other ceramics, as well as foam and recycled wood. Manufacturers use our technology worldwide to save time and money, reduce waste, increase flexibility, and produce designs that solve the world's toughest problems and enable once-impossible innovations. Learn more about Desktop Metal and our #TeamDM brands at [DesktopMetal.com](https://www.desktopmetal.com)