

# Metal additive 3D printing



THINK IT. DESIGN IT. MAKE IT.

**Based in Danville, Virginia, FasTech is the US division of The Harlow Group, a UK provider of precision sheet metalwork, fabrications and assemblies. Harlow Group are ISO 9001 and AS 9100 Rev D certified.**

FasTech, established in 2018, has enhanced the group's global manufacturing capability. Thanks to our job shop partnership for 3DMP® services with Gefertec, we can provide cutting edge metal additive 3D printing – using the first such machines in the US. We also have our state of the art machining centers in Danville to complete the production process.

This capability will aid our clients around the world to minimize material waste, reduce the end to end lead times and to reduce the overall product cost.

## **Faster lead times and reduced costs**

Up to ten times faster than conventional methods, our wire arc additive manufacturing process, using our Gefertec ARC 405 and ARC 605 machines, delivers 3D metal printing without the use of lasers or powder. The parts, that have been “grown” through our 3D capability, are then finished using our UMC 1000 SS Series or our Grob G350 5-axis Universal Machining Centers.

- Ten times faster lead times than traditional manufacturing methods
- Lower material costs, as nearly 100% material utilization
- Broad range of materials – choices are only limited to available wire stock
- Weld deposition in 5 axis without printing additional support structures
- Extremely flexible, and ideal for one off prototypes to batch runs
- Easy sourcing, handling and storage of base materials

## **Over 45 years of experience**

The Harlow Group is experienced in working across many sectors, including:

- |                        |                    |
|------------------------|--------------------|
| • Aerospace/Space      | • Heavy Equipment  |
| • Shipbuilding         | • Power Generation |
| • Subsea/Shallow Water | • Tool and Die     |
| • Oil & Gas            |                    |



**GEFERTEC 3DMP®arc605**



**UMC 1000 SS Series  
Universal Machining Center**

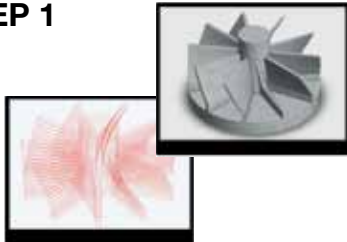


**Grob G350 5-axis Universal  
Machining Center**



# Grow, finish and go – See how our 3D metal printing and milling works

## STEP 1



### Convert CAD into CAM models including reverse engineer from original product

This is where the CAD is converted into individual digital printing layers, i.e. the CAM model. If required, we can even reverse engineer the original product, by scanning, to create the CAM model.

## STEP 2



### Print the net shape part

The blank part is printed fully automatically, using a wire-based arc welding process.

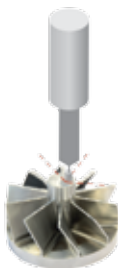
## STEP 3



### Scan for quality control

The part then undergoes a 3D scan and geometry measurements to ensure that the part meets the defined quality requirements defined by the customer.

## STEP 4



### Mill to complete the process

The finished part is milled to complete the shape.

## The FasTech Advantage

- Nearly 100% material utilization
- Up to 60% reduction in product costs depending on material grade and part geometry
- Ten times faster than conventional methods
- Group capabilities for large parts up to 2.837m<sup>3</sup> (100 ft<sup>3</sup>/926lbs)
- Current US capabilities for large parts up to 0.567m<sup>3</sup>/420kg (20 ft<sup>3</sup>/926lbs)

**FABRICATION | ADDITIVE | SUBTRACTIVE | TECHNOLOGY**

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**FASTTECH** LLC  
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