



# LAWS PLUS

## Metal Additive Manufacturing

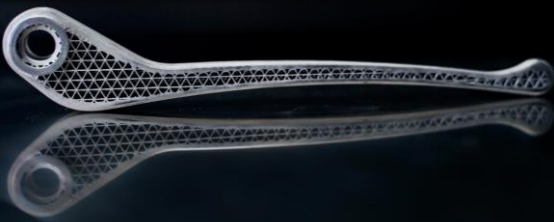


STAINLESS STEEL 17-4PH



### COPPER

The Metal X can deliver the optimal properties of pure Copper while allowing for increased design freedom to achieve complex geometries that would be either impractical or even impossible to produce with subtractive manufacturing.



### H13 AND D2 TOOL STEEL

Harder than 17-4 PH Stainless Steel and capable of maintaining material properties at high temperatures, H13 tool steel is an extremely versatile material to work with. Markforged H13 can be heat treated to 45 HRC with a UTS of 1680 MPa, and is used by Markforged customers for tool bodies, brazing fixtures, and other parts where hardness or heat resistance is required. We also offer D2 tool steel.



### INCONEL 625

Inconel 625 is a nickel-based superalloy that is highly resistant to corrosion and high temperatures. The strength of Inconel 625 is not compromised by multiple heat cycles, and it can withstand temperatures up to 1000°C. Inconel 625 meets chemical requirements of ASTM B443.





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## Composite Additive Manufacturing

At Laws Plus, we have the latest Markforged 3D printers, allowing us to print strong, durable, final use parts, others can't. Not only can we print strong composite parts, but we can also print large composite parts, up to 500x400x400mm (525x400x400mm if not using fibers). We can also fully customise the placement, direction and number of fibers to suit your load requirements.

### CARBON FIBER

We can lay continuous, complete strands of carbon fiber within your part, achieving a tensile strength greater than that of machined 6061 aluminium, with the added bonus of not being held back by traditional machining constraints, meaning we can produce complex internal features as easily as we can external part features.

### KEVLAR

While Kevlar has less tensile strength than Carbon Fiber, Kevlar shines when it comes to reducing shock and vibration in machinery and automotive parts. We recommend Kevlar when you don't need the tensile strength of carbon fiber, and need strong, durable parts that can take periods of high impact.

### FIBERGLASS

Fiberglass is the cheapest of the fibers we use, it is a well-known material in industries such as boating, meaning customers know how it will perform and can rely on how it will fit in their applications and workflows.

We can insert fibers in White Nylon or Onyx (PA12-CF) prints only.



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# LAWS PLUS

Thermoplastics Additive  
Manufacturing



TPU (Thermoplastic Polyurethane) Rubber Fiberoptic Caps



Micro Surface Textured Black ASA Crank Housing

We offer a variety of thermoplastics, including durable, heat resistant, rubberised, colourful and high performance for automotive and aerospace applications.

#### MARKFORGED THERMOPLASTICS OFFERING

- Onyx (PA12-CF)
- Onyx ESD (Electrically Insulated)
- Onyx Flame Retardant
- Vega (PEKK-CF)
- TPU – 95A (Rubber)
- PLA
- Nylon

#### OTHER THERMOPLASTICS

- ASA
- ABS
- ABS-CF
- PETG
- POLYCARBONATE
- POLYPROPYLENE
- PA6-GF
- PA6-CF
- PA12-CF
- PLA VARIETIES
- TPU (FLEXIBLE)

\*\*Special request others\*\*

#### MAXIMUM PRINT SIZE (NO FIBER)

Markforged - 525mmx400mmx400mm

Other Materials - 250x250x250mm

#### PRINT QUALITY (LAYER HEIGHTS)

- 0.025mm (Resembles Injection moulded parts)
- 0.050mm (Very fine detail)
- 0.080mm (Fine detail)
- 0.100mm (High quality)
- 0.125mm (When printing with fibers)
- 0.160mm (Our standard and most popular)
- 0.250mm (Turbo mode, fast and cost effective)
- 0.280mm (Available for select materials only)



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# LAWSLASER

## LASER CUTTING SERVICE



Our CO2 lasers cut a wide variety of materials with cutting surface quality that's hard to beat

### STAINLESS STEEL

Signage, machine parts, structural, cabinets and more. Fabrication and powder coating also available. We cut up to 16mm Stainless Steel.

### MILD STEEL

Coreten and Structural available.

### ALUMINIUM

Anodised and powder coating available.

### ETCHING

Timber, Glass, Acrylic, Aluminium, Stainless Steel, Brass and Anodised Aluminium.

### TIMBER

Plywood, Hard Wood, MDF, Layered Timber (such as whiteboards) and more.

### ACRYLIC/ PERSPEX

Clear, Coloured, two-tone, tinted, 2PAC painted, 3M Double Sided Tape. Up to 30mm thickness.

### PLASTICS

Polycarbonate, Polypropylene, PETG, ABS, Mylar and more.

### FABRIC

Leather, eco panel, carpet and different fabrics.



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