

Markforged Mark Two

Our Flagship Continuous Fiber 3D Printer, built to revolutionize your manufacturing operation.

The only way to make aluminum-strength parts on your desktop – the Mark Two carbon fiber 3D printer enables engineers to effortlessly generate value for their business.

Carbon Fiber Strength

Print Continuous Carbon Fiber reinforced parts on your desktop – stiff, strong, extremely durable and capable of replacing machined aluminum.

Built to Last

A unibody aluminum chassis and precision-machined components deliver lights-out reliability over thousands of print hours.

Precise and Beautiful Parts

Print precise parts with best-in-class surface finish thanks to Onyx, Markforged’s extremely versatile micro carbon fiber filled nylon material.

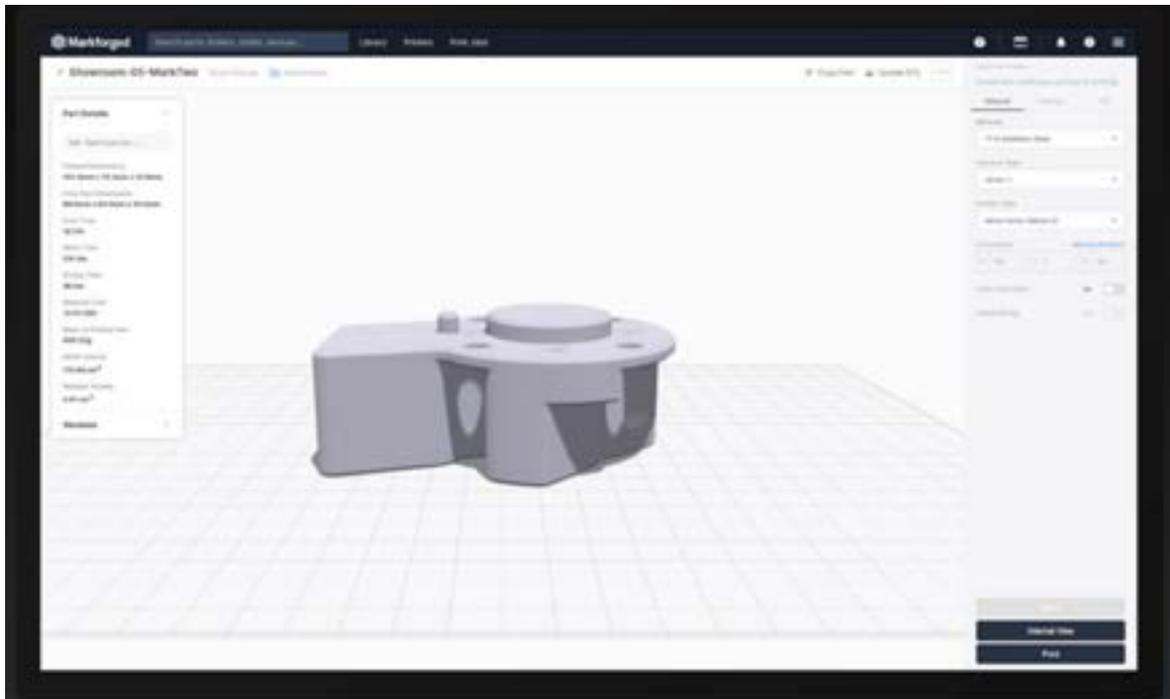


Print the Future

www.3dz.com.mt
info@3dz.com.mt

3D Printing Software Meets Production Management

Design your part, upload it into our browser-based software, select from a wide range of Composite Base materials and Continuous Fibers, and hit print. It's that simple.



Continuous Fiber Reinforcement, Made Easy.

1

Design

2

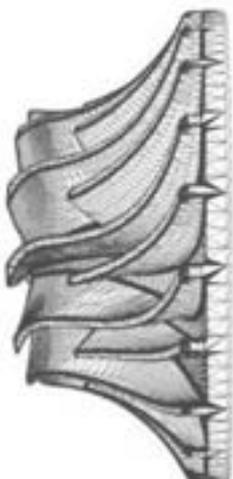
Reinforce

3

Print

4

Use



Print beautiful Onyx parts reinforced with Markforged's full range of Continuous Fibers.



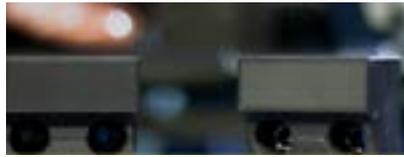
Onyx

Micro carbon fiber filled nylon that forms the foundation of Markforged composite parts

Onyx – our flagship Composite Base material – is a micro carbon fiber filled nylon that yields accurate parts with impeccable surface finish. Few materials have the versatility of Onyx; it offers high strength, toughness, and chemical resistance when printed alone, and can be reinforced with Continuous Fibers to yield aluminum-strength parts. Today, there are more than a million Onyx parts in the field transforming manufacturing.

Applications

- Plastic Part Replacement
- Housings
- Sensor Mounts
- Cosmetic Prototypes



Nylon

Smooth engineering thermoplastic that can be easily painted or dyed

Nylon is an unfilled thermoplastic. It's a non-abrasive material that is great for ergonomic surfaces and workholding for pieces that are easily marred. It can be painted or dyed.

Applications

- Ergonomic Tools
- Assembly Trays
- Cosmetic Parts



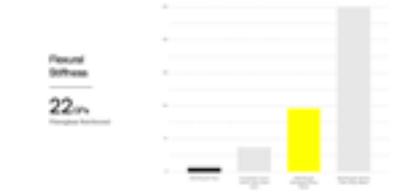
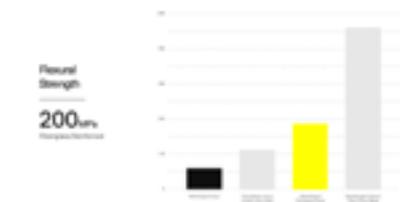
Fiberglass

Entry-level Continuous Fiber for industrial applications

Fiberglass is Markforged's entry-level Continuous Fiber – a material capable of yielding parts 10x stronger than ABS when laid into a Composite Base material like Onyx. Fiberglass is the flagship material of the Onyx Pro and X5 and printable on the Mark Two and X7, providing a more affordable alternative to Carbon Fiber.

Applications

- Softjaws
- Medium-Strength Tooling
- Insulative Reinforcement
- Hand Tools



Print beautiful Onyx parts reinforced with Markforged's full range of Continuous Fibers.



HSHT Fiberglass

Thermally resistant Continuous Fiber for strong parts in high-temperature environments

High Strength High Temperature (HSHT) Fiberglass is defined by two characteristics: high strength (nearly equal to 6061-T6 Aluminum) and strength in high temperatures. Though not as stiff as Continuous Carbon Fiber, Onyx parts reinforced with HSHT are strong at both low and high temperatures. As a result, HSHT reinforcement is best used for parts in high-temperature environments like molds, autoclaves, and others.

Applications

- Polymer Molds
- Prototype (Low-Run)
- Injection Molds
- High-Temperature Fixturing
- High-Temperature Prototypes

Resistenza a trazione
420 MPa



Aramid Fiber (Kevlar®)

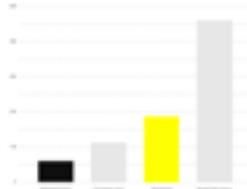
Tough, highly compliant Continuous Fiber for high-impact applications made with Dupont™ Kevlar® Fiber.

Aramid Fiber is a Kevlar® based, specialized Continuous Fiber known for its energy absorption and extreme toughness. When laid into Onyx or another Composite Base material, it yields extremely impact-resistant parts that are nearly immune to catastrophic failure (fracture). It's perfect for use in parts that are in demanding environments or are subject to repetitive loading. Dupont™ and Kevlar® are trademarks and registered trademarks of E. I. du Pont de Nemours and Company

Applications

- End-of-Arm Tooling
- Stanchions, Cradles, & Supports
- Delrin® Part Replacements
- Wear Stops

Flexural Strength
200 MPa



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Carbon Fiber

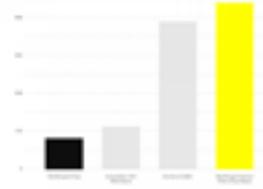
The backbone of aluminum-strength composite parts

Carbon Fiber is Markforged's unique, ultra-high-strength Continuous Fiber – when laid into a Composite Base material like Onyx, it can yield parts as strong as 6061-T6 Aluminum. It's extremely stiff and strong, and can be automatically laid down in a wide variety of geometries by Markforged 3D printers.

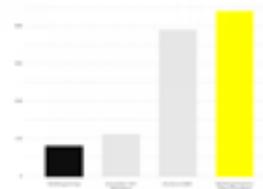
Applications

- High-Strength Tools & Fixtures
- Brackets & Mounts
- Inspection/CMM Fixturing
- Bespoke End-Use Parts
- Functional Prototypes

Flexural Strength
540 MPa



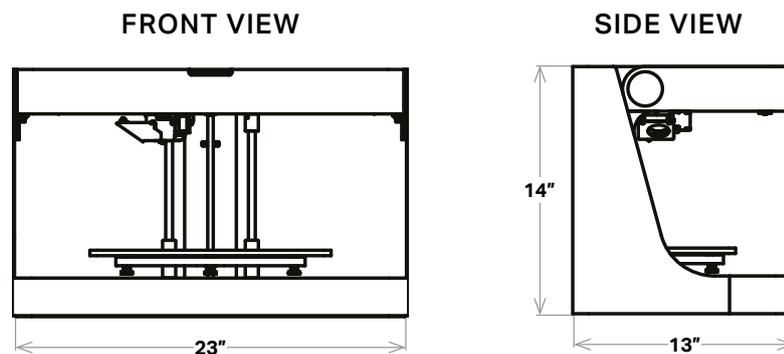
Flexural Strength
540 MPa



Mark Two (Gen 2)

Replace machined aluminum tooling—jigs, jaws, and fixtures—with stronger parts for a fraction of the price. The Mark Two combines our unique continuous carbon fiber reinforcement with workhorse reliability for versatile parts with 26x the strength of ABS, ready same-day for use straight off the printer.

Printer Properties	Process	Fused filament fabrication, Continuous Filament Fabrication
	Build Volume	320 x 132 x 154 mm (12.6 x 5.2 x 6 in)
	Weight	16 kg (35 lbs)
	Machine Footprint	584 x 330 x 355 mm (23 x 13 x 14 in)
	Print Bed	Kinematic coupling — flat to within 160 µm
	Extrusion System	Second-generation extruder, out-of-plastic detection
	Power	100–240 VAC, 150 W (2 A peak)
	RF Module	Operating Band 2.4 GHz Wi-Fi Standards 802.11 b/g/n
Materials	Plastics Available	Onyx, Nylon White
	Fibers Available	Carbon fiber, fiberglass, Kevlar®, HSHT fiberglass
	Tensile Strength	800 MPa (25.8x ABS, 2.6x 6061-T6 Aluminum) *
	Tensile Modulus	60 GPa (26.9x ABS, 0.87x 6061-T6 Aluminum) *
Part Properties	Layer Height	100 µm default, 200 µm maximum
	Infill	Closed cell infill: multiple geometries available
Software	Supplied Software	Eiger Cloud (Other options available at cost)
	Security	Two-factor authentication, org admin access, single sign-on



* Continuous carbon fiber data. **Note:** All specifications are approximate and subject to change without notice.

