



Markforged X3

The refined Industrial FFF 3D printer for micro carbon fiber filled nylon parts.

The X3 merges industrial quality and build volume into a benchtop form factor, bringing FFF composite 3D printing to your manufacturing floor.

Manufacturing-Grade FFF Printing

The X3 brings three versatile, advanced, micro carbon fiber filled nylon materials to a precision-built FFF platform, delivering functional part after functional part.

Wide Variety of Optimized Print Modes

Print in a wide variety of print modes all optimized to yield quality parts – including 50 μm resolution, which delivers ultra-high-quality parts without visible layer lines.

Industrial Reliability and Accuracy

Precision-machined hardware, advanced sensors, and unique software drive industry leading accuracy and reliability. Only Markforged industrial 3D printers offer micron-level laser scanning for closed-loop calibration, reliably yielding parts with 50 μm repeatability and industry-leading surface finish.



Print the Future

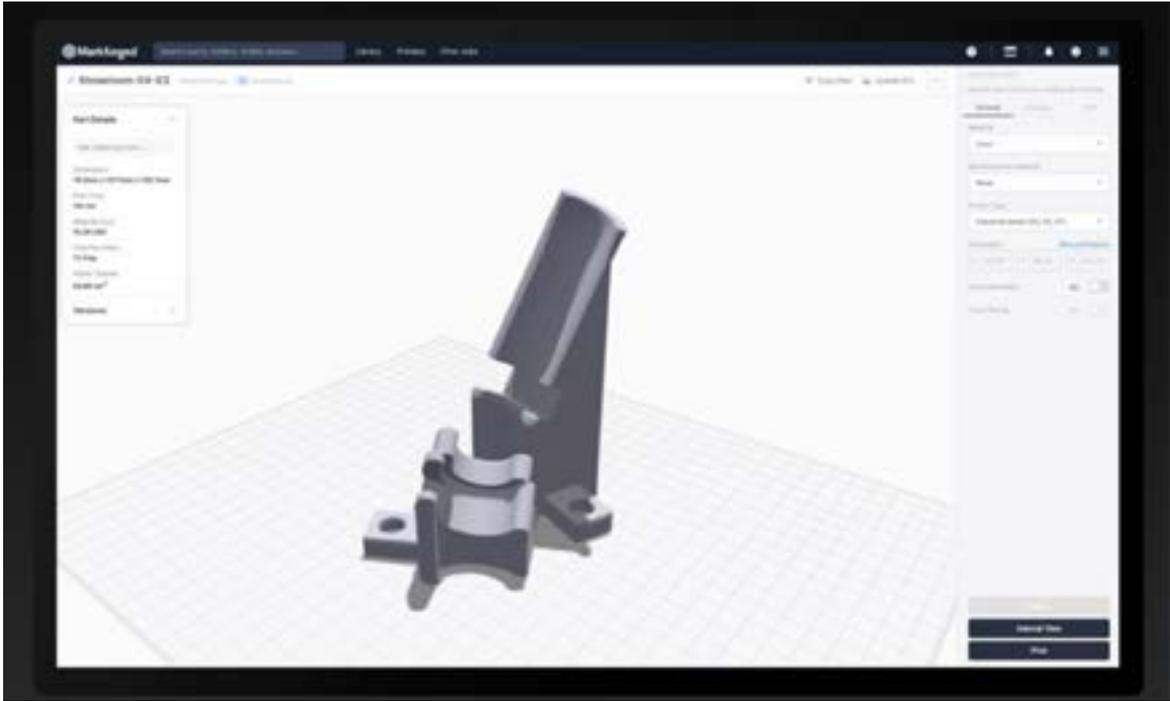
www.3dz.com.mt
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SOFTWARE

The most intuitive, powerful FFF 3D printing software available.

3D Printing Software Meets Production Management.

Design your part, upload it into our browser-based software, select a Composite Base filament, and hit print. It's that simple.



Simple FFF Process.
Robust Parts.

1

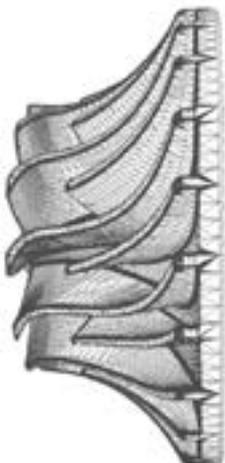
Design

2

Print

3

Use



Print high-quality parts with Markforged's micro carbon fiber reinforced nylon filaments.



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



Onyx FR

Certified UL 94 V-0 rated flame-retardant micro carbon fiber filled nylon

Onyx FR is a flame-resistant variant of Onyx designed for use in applications where parts must be non-flammable. The material earned a UL Blue Card, and is considered V-0 (self extinguishing) at thicknesses greater than or equal to 3mm. It can be reinforced with any Continuous Fiber and is compatible with industrial composite 3D printers.

Applications

- Maschere di saldatura
- Clip e staffe per il settore aerospace
- Posaggi per marcatura laser
- Supporti e fissaggi per elettronica
- Box per apparecchi elettronici



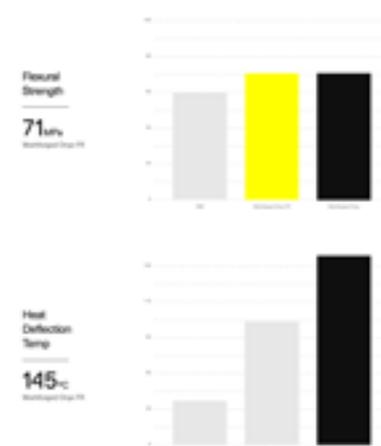
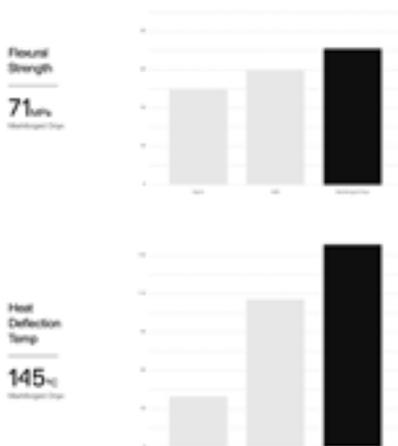
Onyx ESD

Stronger, stiffer, and ESD resistant Onyx variant for industrial applications

Onyx ESD is the most advanced polymer we've ever developed. It's precision-engineered to possess an extremely tight range of surface resistance – meeting ESD-safe requirements of the most stringent manufacturers – while offering the same industry leading benefits that Onyx offers. In fact, it's actually stronger and stiffer than Onyx with similarly impeccable surface finish, making it the go-to material for advanced applications.

Applications

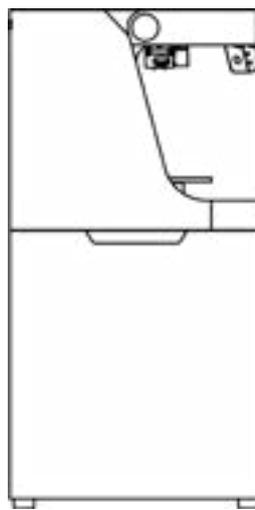
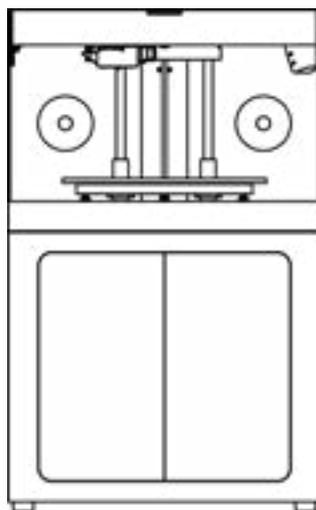
- Weld Fixturing
- Aerospace Clips & Brackets
- Laser Marking Fixtures
- Energy/Electrical Brackets & Fixtures



The Markforged X3 industrial 3D printer combines precision-built hardware, advanced sensors, and best-in-class software to deliver accurate parts repeatably. It features a reinforced, precision-machined gantry and a precision ground print bed that can be removed and replaced with 10um repeatability.

Each piece of hardware in the filament extrusion system – from the nozzles to the extruder hobs – is optimized to resist wear from micro carbon fiber filled nylon filaments and maintain print quality over thousands of hours.

Out of material sensors ensure that you're always printing while a scanning laser on the printhead enables the printer to dynamically adjust the first layers of a print to achieve perfect bed adhesion.



Printing Process

Fused Filament Fabrication (FFF)

Z Layer Resolution

50 µm -200 µm

Printing Media

Composite Base Filaments

Internal Part Geometry

Closed Cell Infill, Triangular Default

Print Bed

Precision Ground Composite

Physical Dimensions

Width – 584 mm
Depth – 483 mm
Height – 914 mm
Weight – 46 kg

Build Volume

Width – 320 mm
Depth – 280 mm
Height – 200 mm



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