

MARKFORGED INDUSTRIAL 3D PRINTER

FX20

An ULTEM™ Filament capable large format 3D printer for big, strong, high temp parts — usable from factory floor to flight.

The FX20 brings the Digital Forge and Continuous Fiber Reinforcement to a new realm of parts, problems, and industries.

The biggest, hottest, and most sophisticated 3D printer we've ever built.



Continuous Fiber Reinforcement, now with ULTEM™ 9085 Filament.

About the FX20

The FX20 is the largest and most precise machine Markforged has ever produced.

This large format 3D printer features an 84L heated build chamber and massive, verified-flat vacuum bed with print sheets. The motion control system offers closed loop control through precision linear encoders, and is tuned to move the 3kg print head rapidly and accurately. FX20's turbo mode builds parts faster than any Markforged machine, while new XL spools offer four times the material without spool changeover.

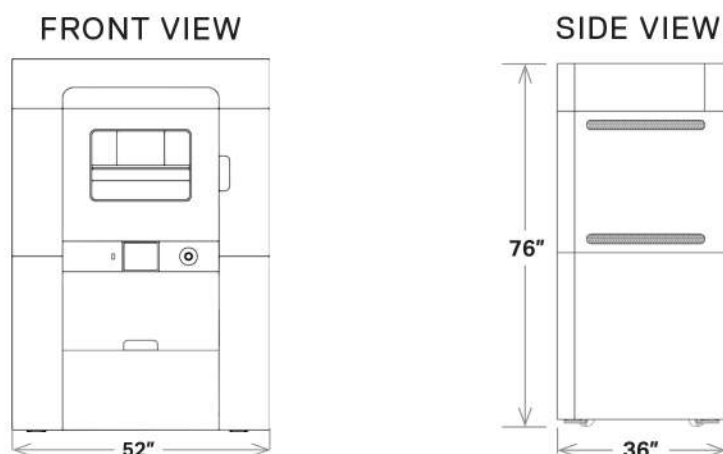
The FX20 is remarkably easy to use. It features a 7 inch touchscreen from which users can control every aspect of the printer. Automated calibration and leveling reduces operator input, while a wide variety of sensors give live feedback on machine performance. A material bay contains two active XL spools and can store two more with precise moisture control.

PRODUCT SPECIFICATIONS

FX20

FX20 is the biggest, fastest, smartest printer in the Markforged lineup. Engineered to deliver maximum strength, accuracy, and consistency, FX20 produces mission-critical parts for the most demanding applications, from the factory floor to the skies and beyond. Replace long lead-time metals with high-temperature thermoplastics and continuous fiber reinforced composites—with FX20 and the cloud-connected, continuously learning Digital Forge platform, globally distributed production at the click of a button is now a reality.

Printer Properties	Process	Fused Filament Fabrication, Continuous Fiber Reinforcement
	Build Volume	Single-nozzle builds: 525 x 400 x 400 mm (20.6 x 15.7 x 15.7 in) Multi-nozzle builds: 500 x 400 x 400 mm (19.7 x 15.7 x 15.7 in)
	Weight	530 kg (1 170 lbs)
	Machine Footprint	1325 x 900 x 1925 mm (52.2 x 35.5 x 75.75 in)
	Temperature Control	Up to 200°C steady-state
	Print System	Direct-drive print head with three nozzles (two plastic, one fiber)
	Power	200-240 VAC 2W+PE 40A // 200-240 VAC 3Ø+PE 24A // 347-415 VAC 3Ø+N+PE 14A; 50-60 Hz
	Safety	IEC/UL/CSA 62368-1 certified, CE Marked, EU Machinery Directive compliant
Materials	Plastics	Vega, ULTEM™ 9085 filament, Onyx, Onyx FR
	Continuous Fibers	Carbon Fiber, Fiberglass, Aramid Fiber (Kevlar®), High Temperature Carbon Fiber, Carbon Fiber FR
Part Properties	Layer Height	50 µm minimum, 250 µm maximum
	Accuracy	+/- 125 µm or +/- 0.0015 mm per mm (whichever is greater)
Software	Eiger	Secure digital library, powerful slicer, and printer management (premium options available at cost)
	Security	Two-factor authentication, org admin access, single sign-on, MFP print files encrypted by default and tamper resistant
	Connectivity	Eiger connection and over-the-air updates via Ethernet



* All specifications approximate and subject to change without notice. Support for Markforged plastic and fiber materials will be added over time, though not in every combination. The ULTEM™ and 9085 trademarks are used under license from SABIC, its affiliates or subsidiaries. Dupont™ and Kevlar® are trademarks and registered trademarks of E.I. du Pont de Nemours and Company.

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