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Markforged's FX20 and New Continuous Fiber Reinforced ULTEM™ 9085 Filament to Expand Use of 3D Printing in Demanding Industries like Aerospace and Automotive

New 3D Printer and Proprietary Materials Increase Markforged's Addressable Market for Bigger, Faster, Stronger, and Heat Resistant Parts

WATERTOWN, Mass.--(BUSINESS WIRE)-- [Markforged](#), creator of the integrated metal and carbon fiber additive manufacturing platform, [The Digital Forge](#), is advancing its position as a leader in point-of-need production of industrial-strength end use parts with the FX20 printer. This new production-ready hardware prints the flame-retardant, high-performance thermoplastic material with ULTEM™ 9085 filament in combination with Markforged's proprietary Continuous Fiber Reinforcement printing technology for high-strength, heat resistant, and higher performance parts that can meet the needs of the most demanding industries such as aerospace, defense, automotive, and oil & gas.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20211026005408/en/>



Built to scale distributed global production, the FX20 is precision-designed and sensor-driven to deliver breakthrough accuracy, quality, and reliability to fabricate parts directly at the point-of-need with the simple click of a button. As the biggest, fastest, and smartest 3D printer Markforged has ever produced, the FX20 pairs size and throughput to make larger parts at incredible speeds.

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fabricate parts directly at the point-of-need. The FX20 and ULTEM™ 9085 filament are expected to ship worldwide in the first half of 2022. (Photo: Business Wire)

This new technology, alongside high-temperature printing capabilities, elevates

the Digital Forge platform from accessible industrial-strength composite manufacturing to robust production applications. The FX20 has a heated build chamber capable of maintaining up to a 200°C temperature and the capacity to print parts up to 525 mm x 400 mm x 400 mm in size. The FX20 is up to eight times faster than the default print settings on Markforged's existing line of composite printers and prints nearly five times larger builds than its next largest printer, the X7.

Bringing together ULTEM™ 9085 filament with Markforged's proprietary Continuous Fiber Reinforcement technology will help manufacturers move from augmenting manufacturing operations with composite 3D printing to replacing entire segments of the supply chain by bringing strong, accurate parts that solve demanding, end-use applications right where needed.

[Vestas Wind Systems A/S](#), a global leader in sustainable energy solutions, plans to use the FX20 with existing Markforged composite materials and the new ULTEM™ 9085 filament with continuous fiber reinforcement to print stronger, higher volume parts.

“The Digital Forge has given Vestas a powerful platform to circumvent expensive, multi-step, and time-consuming conventional manufacturing methodology,” said Jeremy Haight, Principal Engineer at Vestas. “When you factor in design iterations, these conventional parts are obsolete in a year or two. With the FX20 and ULTEM™ 9085, we will be able to design and manufacture larger, stronger parts, press a button and take that part right off the print bed to use it immediately with the confidence that it is very durable and robust.”

Printing the ULTEM™ 9085 filament with Continuous Fiber Reinforcement expands the advantages manufacturers can realize through additive technology. Adding the FX20 to the Digital Forge platform addresses a broader set of needs and applications.

“Markforged continues to build on our innovative legacy and lead the way in composite 3D printing—the future of manufacturing. With the releases of the FX20 and Continuous Fiber Reinforced ULTEM™ 9085 filament, we're now fulfilling that promise to manufacturers who previously, in the most demanding environments, were unable to experience the benefits of the Digital Forge and our unique materials,” said Shai Terem, President and CEO of Markforged. “By helping move composites toward robust production, we'll unlock more functional parts, made of stronger materials of even more impressive size, with applications from the factory floor to flight.”

The FX20 and ULTEM™ 9085 filament are expected to ship worldwide in the first half of 2022. FormNext attendees can see the printer at Markforged's booth, 12.0 D01, from November 16-19. To learn more, please join us for [“Introducing the FX20” webinar](#) on Nov. 9 at 10 a.m. ET, or visit our [website](#).

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About Markforged

Markforged (NYSE: MKFG) is reimagining how humans build everything by leading a technology-driven transformation of manufacturing with solutions for enterprises and societies throughout the world. The Markforged Digital Forge brings the power and speed of agile software development to industrial manufacturing, combining hardware, software, and materials to solve supply chain problems right at the point-of-need. Engineers, designers, and manufacturing professionals all over the world rely on Markforged metal and composite printers for tooling, fixtures, functional prototyping, and high-value end-use production. Markforged is headquartered in Watertown, Mass., where it designs its products with over 350 employees worldwide. To learn more, visit www.markforged.com.

Special Note Regarding Forward-Looking Statements

This press release contains forward-looking statements that are based on beliefs and assumptions and on information currently available. In some cases, you can identify forward-looking statements by the following words: “may,” “will,” “could,” “would,” “should,” “expect,” “intend,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “ongoing” or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. These statements involve risks, uncertainties and other factors that may cause actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although Markforged believes that it has a reasonable basis for each forward-looking statement contained in this press release, Markforged cautions you that these statements are based on a combination of facts and factors currently known by it and its projections of the future, about which it cannot be certain. Forward-looking statements in this press release include, but are not limited to, statements regarding the impact of the newly-announced FX20 and Continuous Fiber Reinforced with ULTEM™ 9085 filament on the manufacturing industry and Markforged, statements related to product development and innovation, and statements regarding the potential benefits to consumers of Markforged products including, but not limited to, FX20 and Continuous Fiber Reinforced with ULTEM™ 9085 filament. Markforged cannot assure you that the forward-looking statements in this press release will prove to be accurate. These forward looking statements are subject to a number of risks and uncertainties, including, among others, general economic, political and business conditions and other factors discussed under the header “Risk Factors” in the Proxy Statement and Prospectus filed pursuant to Rule 424B(3) with the SEC on June 24, 2021, those included under the header “Risk Factors” in Markforged’s periodic report on Form 10-Q for the quarter ended June 30, 2021 and other filings with the SEC. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that Markforged will achieve its objectives and plans in any specified time frame, or at all. The forward-looking statements in this press release represent Markforged’s views as of the date of this press release. Markforged anticipates that subsequent events and developments will cause its views to change. However, while Markforged may elect to update these forward-looking statements at some point in the future, Markforged has no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing Markforged’s views as of any date subsequent to the date of this press release.

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