PRESS RELEASE

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AddUp partnership brings industrial-scale metal 3D printer, FormUp 350, to CDME

AddUp, Inc. (Cincinnati, OH) and The Ohio State University are pleased to announce the installation of a FormUp 350 Laser Powder Bed Fusion printer at Ohio State's Center for Design and Manufacturing Excellence. The partnership will offer students, researchers, and faculty expanded opportunities to develop cutting-edge additive manufacturing processes and complement AddUp's six FormUp 350 printers being installed at its nearby Cincinnati facility.

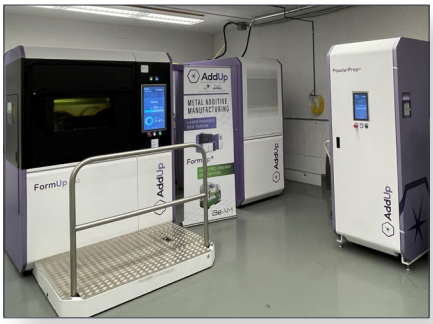
"The FormUp 350 has already equipped us with capabilities which we do not have with our other printers," Edward Herderick, the Director of Additive Manufacturing at CDME, said. "It has an open platform that allows us to tune strategies by accessing build parameters and enables us to achieve enhanced material properties through processing fine powder. We now can take on more complex projects requiring larger parts."

"This machine provides the largest build plate of all our machines in the additive lab at the CDME, with the capacity to print 350X350. Within its first few weeks of operation, the FormUp 350 has quickly established itself as a reliable, operator-friendly platform," Herderick continued.

CDME houses more than $5 million worth of additive manufacturing equipment, including industrial 3D printers capable of processing metals, polymers, composites, biomaterials, and ceramics. The FormUp 350 machine will enhance the center's metal 3D printing capabilities while enabling engineers to deliver reproducible series of industrial parts at high productivity levels.

"AddUp was familiar with Ohio State's CDME and their robust AM program, so we were happy to partner with the facility to showcase the FormUp 350," Ken Wright, President of AddUp, Inc., said. "The FormUp 350 features our latest technology. It prints faster, is more efficient, and was designed for operator safety. We are committed to innovation and leading the industry in PBF technology, so what better place to showcase that technology than in our own backyard at CDME."

Pictured left to right:
Noah Gula (Graduate Research Assistant, CDME), Sammy Passell (Process and Applications Engineer, AddUp), Nathanael Henry (Research Assistant, CDME), Ben DiMarco (Additive Manufacturing Technologist, CDME)



AddUp's FormUp 350 at Ohio State's Center for Design and Manufacturing Excellence (CDME)

AddUp Inc. is the North American headquarters for AddUp and is located in Cincinnati, OH, less than two hours from Ohio State's campus and the CDME.

"We are excited to play a part in developing the future talent of the additive manufacturing industry," Wright continued.

CDME works with companies and researchers to translate new technologies into market-ready products. These projects give student employees real, hands-on experience integrating new technology while providing customers the workforce advantage necessary to compete in the global marketplace. CDME works with companies across a variety of industries, including aerospace, automotive, medical, energy, and tooling, to provide design, engineering, prototyping, and product enhancement utilizing the additive manufacturing laboratory. This partnership offers an opportunity for AddUp to showcase their new technology, presented on the FormUp 350, to a new customer base through the university.

"We are excited to partner with Ohio State and the CDME to participate in the research for new material and process developments for 3D printing using the FormUp 350," Wright said. "Both AddUp and CDME are members of America Makes, so this partnership provides an opportunity to collaborate on rapid innovation projects to further the research for additive manufacturing applications."

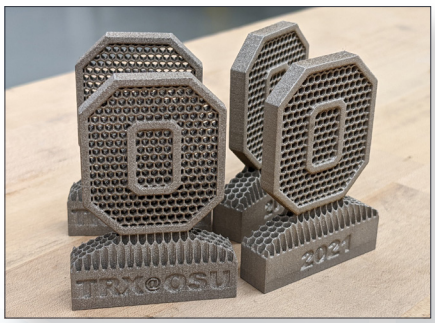
AddUp designed the FormUp 350 to address issues commonly faced in industrial 3D printing, including quality, productivity, operator safety, and scalability. With its customers representing a wide range of sectors, the FormUp 350 has been engineered to meet the quality requirements of industries like aeronautics, space, defense, medical and motorsports.

"The FormUp 350 provides a unique powder rolling system that has helped us print complex part geometries while maintaining quality," Ben DiMarco, Additive Manufacturing Technologist for the CDME, explained. "More specifically, the quality of the surface finish is significant for our partners in the aerospace and medical industries."

"The FormUp 350 stands out among other PBF machines because it provides the highest-quality parts while ensuring user safety," Wright said. "The FormUp meets part quality requirements in terms of mechanical properties, geometric properties (up to 0.1 mm dimensional accuracy), and material density (up to 99.99%). Also, operators can work in safety, having zero contact with the powder thanks to our Autonomous Power Module, powder storage, machine feeding, and unfused powder recovering and sieving."

CDME students operating the AddUp FormUp 350

Hot off the press! ~ Ohio State's "Block-O" trinkets created on the FormUp 350 were used as giveaway momentos for the attendees of the recent TRX conference hosted by America Makes.



"TRX @ OSU" mementos created on AddUp's FormUp 350

With the FormUp 350 in their tool kit, the students, researchers, and engineers at CDME can further push 3D printing innovation boundaries.

“The FormUp 350 offers a modular build platform, which means we can quickly and economically scale from small research projects to full-scale industrial applications. This is a strong benefit for customers,” DiMarco stated. “The machine also offers an open interface that’s user-friendly. The software is easy to navigate and implement changes to the machine parameters. This feature is particularly valuable when training our student employees on the machine.”

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AddUp

AddUp is a joint venture between two major French industrial groups, Michelin and Fives, established in 2016 to be an important player in metal additive manufacturing. AddUp is headquartered in Cébazat, France with its North American subsidiary based out of Cincinnati, Ohio. The company manufactures metal 3D printers using both powder bed fusion (PBF) and direct energy deposition (DED) technologies. PBF is a manufacturing process that can achieve intricate geometries not possible through conventional manufacturing process. This makes it ideal for parts that have been topology optimized for weight, structural and/or thermal performance. DED is a manufacturing process that can deposit material to existing substrates making it ideal for repair applications, adding features to existing parts or creating larger near net shapes without support structures.