



## ExOne Announces Pioneering Binder Jet 3D Provider to Use Innovent+ Metal 3D Printer

December 3, 2020

- FreeFORM Technologies is led by a team of engineers experienced in metal injection molding, powder metallurgy, engineering software, and automation
- New 3D contract manufacturer will specialize in metal binder jetting, starting with an Innovent+®
- The world's best-selling metal binder jet system, Innovent+ can 3D print more than 20 materials

NORTH HUNTINGDON, Pa.--(BUSINESS WIRE)--Dec. 3, 2020-- The ExOne Company (Nasdaq: XONE), the global leader in industrial sand and metal 3D printers using binder jetting technology, today announced that FreeFORM Technologies, a new 3D printing contract manufacturer and engineering service bureau focused on metal binder jetting has accepted delivery of its first system, an Innovent+.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20201203005145/en/>



“ExOne is proud to partner with the innovative and experienced team at FreeFORM, who will help customers tap the incredible value offered by our high-speed binder jetting technology,” said John Hartner, ExOne’s CEO. “This team demonstrates how binder jetting is a perfect complement to metal injection molding (MIM) operations.”

Based in St Marys, Pennsylvania – known as the Powdered Metal Capital of the World – FreeFORM was founded this fall by a team of engineers experienced in MIM, powder metallurgy, engineering software, and automation.

“We believe metal binder jetting is a revolutionary technology that represents the next generation of metal production using metal powders,” said FreeFORM President Nate Higgins. “We’re excited to begin producing parts on our Innovent+ and to help customers tap the benefits of complex metal parts without the need for expensive tooling. Binder jetting can also affordably produce lower volumes of MIM-like parts and consolidated or lightweight parts that deliver more value. We’re committed to providing world-class engineering and manufacturing services

FreeFORM Technologies is a new contract manufacturer specializing in metal binder jet 3D printing. The company was founded this fall by a team of experienced engineers (left to right): Eric Wonderling, VP of Quality & Applications; Andy Reasinger, VP of Engineering; Chris Aiello, VP of Business Development; and Nate Higgins, President. (Photo: Business Wire)

around binder jetting.”

ExOne’s patented binder jet 3D printing process transforms powdered materials — metal, sand or ceramic — into highly dense and functional precision parts at high speeds. An industrial printhead selectively deposits a binder into a bed of powder particles creating a solid part one thin layer at a time, just like printing on sheets of paper. The technology is viewed as a desirable and sustainable production method, largely because of its high speed, low waste and cost, as well as material flexibility.

Launched in 2016, the Innovent family of 3D printers has become the world's best-selling and most-researched metal binder jetting system, with machines installed worldwide at some of the world's best-known universities and industrial brands. The Innovent+ is compact, easy to use, and affordable. Loaded with ExOne’s patented Triple Advanced Compaction Technology (ACT), the system delivers industry-leading quality and repeatability, with final dimensional tolerances routinely below 1% with tuning.

ExOne has qualified more than 20 metal, ceramic and composite materials for its patented binder jetting process. FreeFORM intends to focus primarily on metal part production, with stainless steels such as 17-4PH and 316L, as well as M2 Tool Steel. The new company also intends to qualify materials internally and for customer-specific applications.

### About ExOne

ExOne is the pioneer and global leader in binder jet 3D printing technology. Since 1995, we've been on a mission to deliver powerful 3D printers that solve the toughest problems and enable world-changing innovations. Our 3D printing systems quickly transform powder materials — including metals, ceramics, composites and sand — into precision parts, metal casting molds and cores, and innovative tooling solutions. Industrial customers use our technology to save time and money, reduce waste, improve their manufacturing flexibility, and deliver designs and products that were once impossible. As home to the world's leading team of binder jetting experts, ExOne also provides specialized 3D printing services, including on-demand production of mission-critical parts, as well as engineering and design consulting. Learn more about ExOne at [www.exone.com](http://www.exone.com) or on Twitter at @ExOneCo. We invite you to join with us to #MakeMetalGreen™.

#### **About FreeFORM**

FreeFORM is a first-of-its-kind metal binder jet 3D printing contract manufacturer. Founded in 2020 by a group of engineers, FreeFORM aims to bring binder jet technology to the masses through technology adoption. FreeFORM's co-founders bring a diverse outlook into metals manufacturing and are committed to providing world-class services to the customer while providing low cost of ownership and speed to market. Our vision is to be the benchmark for additive manufacturing. Learn more about FreeFORM at [www.freeformtech.com](http://www.freeformtech.com)

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