



ExOne Launches the World's Fastest, Office-Safe Metal 3D Printer in Exclusive Partnership with Rapidia

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- The ExOne Metal Designlab™ and X1F advanced furnace is a complete metal 3D printing system using technology that will now be marketed and sold exclusively by ExOne
- The original two-step method of 3D printing and sintering water-bound metal parts, first revealed by Rapidia in 2019, delivers proven Print Today, Parts Tomorrow™ performance
- The 3D printer operates with the ease of an entry-level plastic printer, using a nozzle to build designs in HydroFuse™, an innovative water-based paste containing metal or ceramic powders
- This technology allows printed parts to go directly into a furnace, skipping long chemical or thermal debinding steps on competing systems that take 3-5 days to deliver final parts
- Rapidia founder Dan Gelbart, a serial inventor and entrepreneur, as well as a popular engineering YouTube personality, will now serve as an ExOne technology advisor

NORTH HUNTINGDON, Pa.--(BUSINESS WIRE)--Feb. 8, 2021-- The ExOne Company (Nasdaq: XONE), the global leader in industrial sand and metal 3D printers using binder jetting technology, today announced the launch of the ExOne Metal Designlab printer and X1F advanced furnace in an exclusive partnership with Rapidia, a Vancouver, Canada-based technology company founded by Dan Gelbart.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20210208005241/en/>



Orders are being accepted starting today, with the system printer and furnace available for delivery in the second quarter.

Under terms of this strategic partnership, ExOne has a right of first refusal for majority ownership of Rapidia, and Gelbart will now become a technology advisor to ExOne.

Gelbart is an electrical engineer who co-founded companies such as Creo, Inc., a laser technology company sold in 2005 to Kodak for \$1 billion, and Kardium, a medical device company. He has been issued 135 U.S. patents for inventions ranging from package tracking technology to atrial fibrillation treatment. His [popular YouTube series on prototyping](#) is used for instruction by several universities.

The ExOne Metal Designlab™ and X1F advanced furnace, offered through an exclusive partnership with Rapidia, is a complete metal 3D printing system using technology that will now be marketed and sold exclusively by ExOne. The original two-step method of 3D printing and sintering water-bound metal parts, first revealed by Rapidia in 2019, delivers proven Print Today, Parts Tomorrow™ performance. (Photo: Business Wire)

Rapidia's two-step 3D printing technology, developed over several years and first revealed in 2019, was the first to allow water-bound metal and ceramic parts to go directly from a printer into a furnace without a debinding step. The efficiency is made

possible by HydroFuse, an innovative water-based paste containing metal or ceramic powders, which does not require debinding before final sintering. Two materials are currently offered: 17-4PH and 316L stainless steels, with other metals and ceramics to follow soon.

The ExOne and Rapidia teams are collaborating on system and process enhancements to offer this true Print Today, Parts Tomorrow™ to the marketplace, with more innovations expected. The new X1F advanced furnace, with about 10 liters of usable volume, will also be offered across ExOne's binder jet lineup, where it is an ideal complement to the Innovent+ or InnoventPro 3L or 5L printers.

"We are delighted to partner with the visionary Dan Gelbart and the Rapidia technology team to offer the new ExOne Metal Designlab and X1F furnace," said John Hartner, ExOne's CEO. "This technology is a true time-saving innovation that complements ExOne's portfolio. Now, researchers, educators, and industrial designers will be able to bypass days of waiting and produce high-quality parts without the limitations faced by parts that require traditional debinding."

"We set out to develop a simple, environmentally friendly system that creates the toughest, most intricate parts overnight," added Dan Gelbart, Rapidia

Founder. "Today, we're excited to leverage ExOne's global marketing and sales team to help customers around the world enjoy the benefits of our revolutionary technology. I also expect a lot of innovation to come from combining the deep technical knowledge of both companies. Now, users can 3D print complex parts today without any thickness limitations for solid parts and produce high-strength parts overnight."

A True Print Today, Parts Tomorrow™ Innovation

Most other bound metal 3D printing technologies require either three steps (print, debind and sinter) or 3D printing followed by a very slow thermal debinding in the sintering furnace. Either method usually takes 3-5 days to produce a final part and comes with limitations on part thickness, so that the part can properly burn off the polymer binders. Often, these systems limit parts to 5-10 mm (0.2"-0.4") thickness, which also limits the final strength and applications for the final part.

By contrast, the HydroFuse paste developed by Rapidia replaces 98% of the binder with water, which evaporates while printing, enabling true Print Today, Parts Tomorrow™ technology. This technology also removes the limitation on maximum part thickness. The new ExOne Metal Designlab can print 100% solid metal of any thickness, delivering maximum strength parts suitable for a wide variety of demanding pre-production and end-use applications.

The ExOne Metal Designlab will compete directly with other bound metal 3D printing systems, such as the Desktop Metal Studio System 2 and Markforged Metal X.

For more information about the ExOne Metal Designlab and X1F advanced furnace, or to reach a sales representative, please visit www.exone.com/metaldesignlab.

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, metalcasting 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 or on Twitter at @ExOneCo. We invite you to join with us to #MakeMetalGreen™.

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Investors:

Douglas Zemba
Chief Financial Officer & Treasurer
(724) 765-1331
douglas.zemba@exone.com

Monica Gould
Investor Relations/The BlueShirt Group
(212) 871-3927
investor.relations@exone.com

Media:

Sarah Webster
Chief Marketing Officer
724-516-2336
sarah.webster@exone.com

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