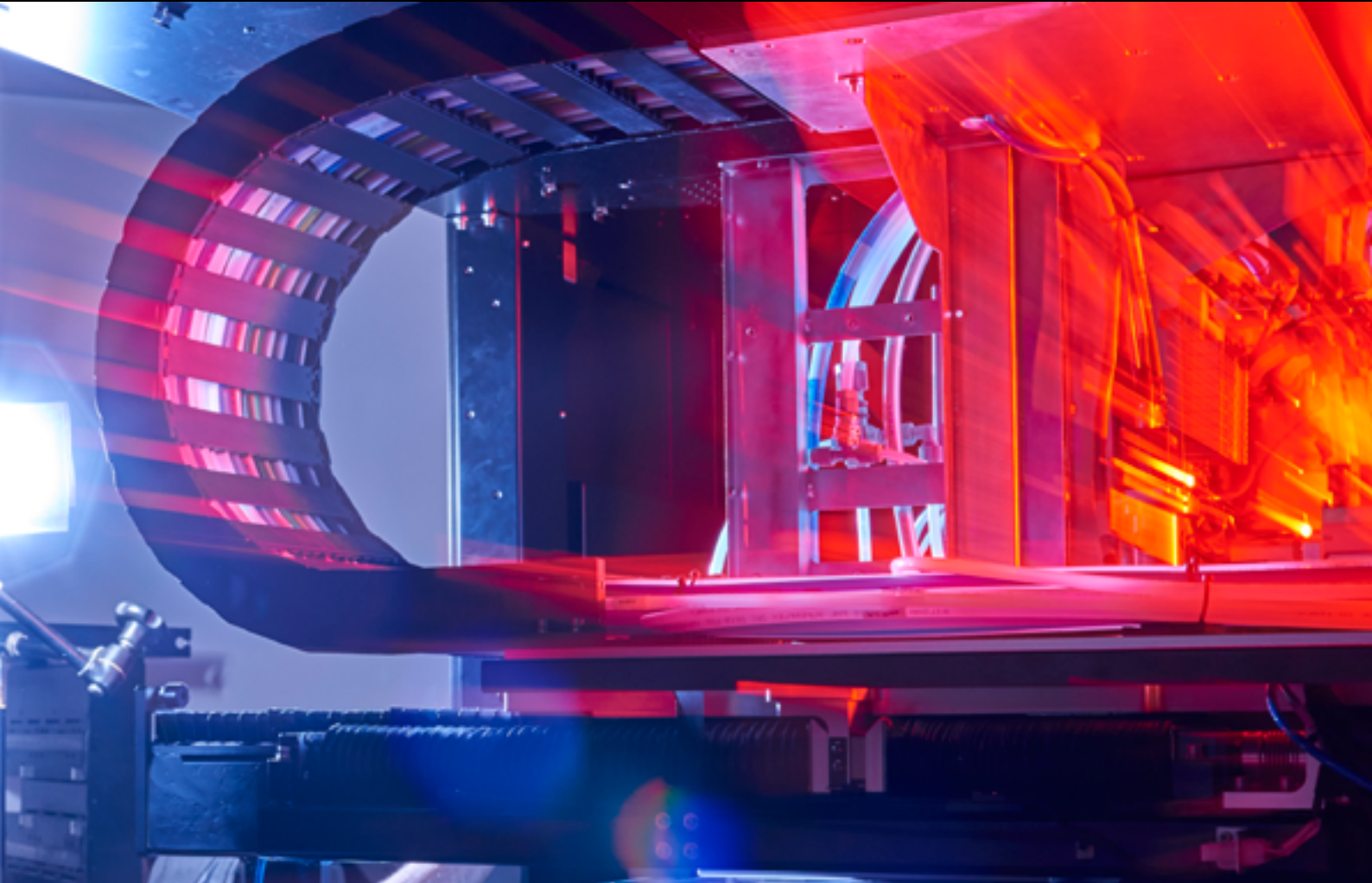


Redefining **X** Ceramic & Metal AM



XJet & NanoParticle Jetting™ Technology

XJET

Technology

Proprietary NanoParticle Jetting™ Technology

XJet's NanoParticle Jetting™ (NPJ) technology is redefining the metal and ceramic additive manufacturing (AM) arenas. The patented inkjet technology enables the production of metal and ceramic AM parts of the highest quality – featuring unprecedented levels of detailing, finish and accuracy – without compromising throughput or build time. With unrestricted support material planning, fabrication and removal, designers can focus on a part's functionality rather than its manufacturability.

3 Dimensions of NPJ Innovation

The culmination of many years of intensive research, XJet's disruptive NPJ technology features "three dimensions" of innovation:

Detail

Thanks to its unique inkjet technology and use of nanoparticles in ultrathin layers, NPJ technology enables superfine details, smooth surfaces and high accuracy at unprecedented levels.



Dispersion

Liquid suspensions for build and support materials are delivered in sealed cartridges, offering unrivaled user safety and operational simplicity.

Design Freedom

With support structures made of a separate material removed effortlessly, manufacturers can easily create finished parts of virtually any geometry, including those with tiny holes, thin walls, challenging arches and sharp edges.

Leveraging these innovations, manufacturers can produce dense, high-quality and high-definition metal and ceramic parts.

Main Applications

Short-run manufacturing

On-demand manufacturing

Functional prototyping

Key Benefits

Unlimited design flexibility

Unrivaled geometrical and physical properties

Unprecedented simplicity and safety

How It Works

Loading



NPJ technology features solid nanoparticles in a liquid suspension delivered within sealed cartridges. In-cartridge build and support materials are loaded easily by hand into the XJet AM system, eliminating the need for hard-to-handle hazardous powders.

Jetting



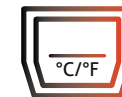
From thousands of nozzles, system printheads simultaneously jet ultrafine drops of both build and support materials onto the system build tray. Multiple materials (build and support) can be jetted simultaneously, as in 2D printing.

Evaporation



Inside the system's build envelope, high temperatures cause the liquid "jacket" around the nanoparticles to evaporate, leaving dense ultrafine layers of the build material. Dense AM parts are created with virtually the same chemical composition of traditionally made parts.

Sintering



Produced parts undergo a simple and standard sintering process, and support materials are easily removed. The easy and clean process enables smooth integration into existing operations, and short and simple post-processing.



Company

The XJet Edge

Renowned team

XJet has assembled a world-class team of skilled industry veterans, many of whom helped develop trailblazing inkjet and AM technologies at market pioneers such as Objet, Indigo, Scodix and HP Scitex.

Groundbreaking technology

XJet's proprietary NPJ technology empowers the manufacturing of detailed high-quality parts with virtually unlimited geometries – all produced in a safe, convenient and productive manner.

Partner-driven approach

With a deep understanding of industry concerns and requirements, XJet partners with its customers to define, examine and execute new solutions to difficult challenges.

Forward-thinking roadmap

Leveraging its robust inkjet technology, XJet plans to introduce a growing number of metal and ceramic build materials to anticipate evolving industry needs.

About XJet

XJet is a provider of groundbreaking metal and ceramic additive manufacturing technologies and products. With a decade of research behind it, XJet's revolutionary *NanoParticle Jetting™* technology enables the production of metal or ceramic parts with the same ease and versatility of inkjet printing without compromising throughput or quality. XJet's world-class team of skilled industry veterans and dynamic R&D specialists holds over 60 registered and pending patents. Leveraging its proprietary technology and proven expertise, XJet is redefining the metal and ceramic AM industries.

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