



3DEO

METAL
3D PRINTING

Innovate.
Design.
Scale.

Who We Are

3DEO is an award-winning design, engineering and manufacturing service specializing in complex metal 3D printed components. Our end-to-end service interfaces with customers at any stage of the development lifecycle to ensure seamless transitions into production at scale without having to use multiple suppliers for the same part.

As the leading high volume Additive Manufacturing firm, our mission is to empower product and engineering teams to innovate, design and scale cutting-edge products using 3DEO's patented technology and industry-leading capabilities.

3DEO is ISO 9001:2015 Certified

We enable engineers to do the impossible, unlocking new opportunities in product design and development.

What We Do

3DEO's full-scale approach to the product development process will ensure not only that you launch the best possible product successfully, but that the management and continual improvement of those parts is a smooth and sustainable path. Whether you need in-house design expertise to build prototypes that seamlessly transition to scale or are seeking innovative solutions to a complex supply chain, 3DEO can help.



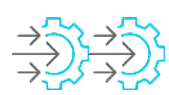
Early-stage
design



Component functionality
optimization



Design for Additive
Manufacturing



Production
at scale

How it Works

Intelligent Layering® is 3DEO's award-winning proprietary metal 3D printing technology, built to tackle the limitations customers face with traditional manufacturing.

- 1 Intelligent Layering® begins by spreading a thin layer of metal powder onto a build tray.
- 2 Next, a spray system uniformly applies binder over the entire layer of powder, across the full build tray.
- 3 Micro end mills cut into the bound powder outlining the perimeter of the part.
- 4 The process continues in a layer-by-layer operation repeating steps 1-3.
- 5 The green part is sintered in a furnace to achieve high densities in the final part.



Specifications & Capabilities

Harnessing the design freedom of 3D printing, we create complex geometries that traditional methods cannot achieve. With our proprietary process, we deliver components of near-wrought density and superior surface finish, ensuring the highest quality for your products.

Qualified Materials & Key Properties

17-4PH Stainless Steel	Hardness (HRC)	40	(H900)
316L Stainless Steel	Elongation (%)	78	(As-Sintered)
Pure Copper	Electrical Conductivity (% IACS)	65	(Hot Isostatic Pressed)

Materials in Development

Tungsten Carbide

Max Build Envelope

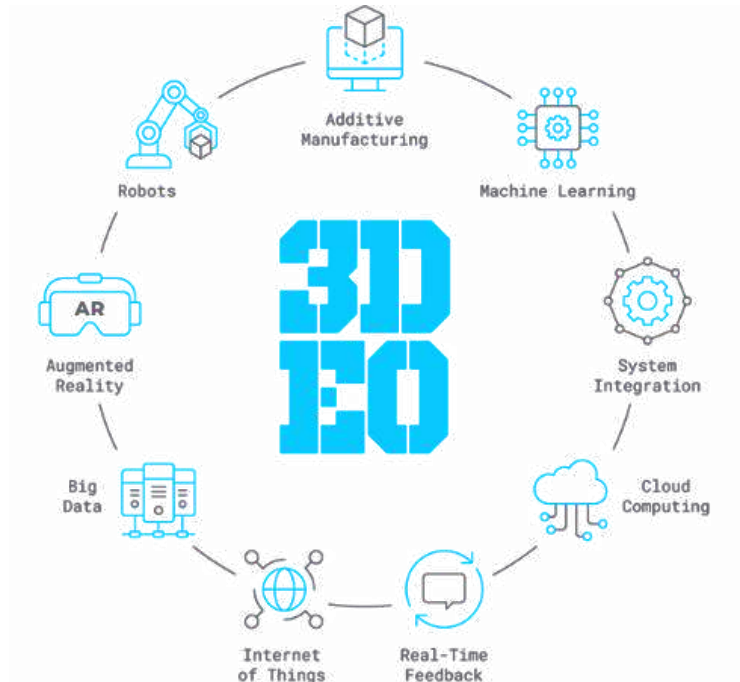
9 in x 9 in x 9 in

3DEO's Fully Integrated Ecosystem

The metal 3D printer is just one piece of the puzzle. Without a holistic approach to production, the overall process will become disjointed, no matter how reliable the technology.

Powered by over 20 proprietary patents encompassing Additive Manufacturing to big data and augmented reality, 3DEO's integrated ecosystem expedites production while maintaining exceptional quality.

We leverage this technology to provide our customers with swift, premium manufacturing services, setting us apart in the competitive landscape.



Why 3DEO

We consider ourselves an extension of your team, bringing fresh perspective and inventive solutions that enhance competitiveness and foster growth. At 3DEO, we're not just revolutionizing manufacturing, we're helping to realize the future of your business.



Shorten development cycles with real-time iterations



Optimize your resources & operate more efficiently



Partner with our expert design & engineering team



Launch & scale with a competitive advantage

Leveraging Our Experience

Having delivered numerous successful projects and over one million parts shipped across various industries, 3DEO has positioned itself as a trusted specialist in utilizing our technology to navigate manufacturing complexities.

We base our solutions on an in-depth understanding of our customers' individual challenges, using our wide-ranging industry experience to drive innovation and lead our partners to a successful, competitive launch.



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Industries Served



Aerospace



Medical Devices



Automotive



Semiconductors



Consumer Products



Oil & Gas



Electronics & Electrical



Pharmaceutical & Biotech



Industrial Equipment



Rail & Transportation



Innovative design meets cutting-edge technology

LACE by Jenny Wu wanted to reimagine a classic accessory with an innovative, 3D printed twist. Their objective: to create a new chain link bracelet with a unique, clasplless interlocking design.



Challenge

LACE by Jenny Wu sought to revolutionize the traditional chain link bracelet with a clasplless interlocking design. Achieving such intricacy was beyond the capabilities of conventional 3D printing and traditional manufacturing processes, requiring a highly specialized and inventive solution.



Solution

LACE and 3DEO co-developed the novel chain design, utilizing Intelligent Layering®. Crucially, prototypes and final parts are produced on the same machines, enabling a seamless transition from design to manufacturing. This collaborative approach guaranteed a smooth process without compromising the original vision.



Outcome

The successful partnership resulted in Link - a unique, high-quality product redefining the traditional chain link bracelet. This success story showcases the transformative potential of 3DEO's advanced manufacturing technology and custom design services, revolutionizing intricate object design and production efficiency.



"This collaboration has been several years in the making. I'm especially excited because 3DEO's innovative technology allows me to produce an interlocking chain that I have not been able to do previously directly with 3D printing."

Jenny Wu

Founder of LACE by Jenny Wu

Elevating precision in aerospace manufacturing

An aerospace manufacturer sought to bypass traditional manufacturing restrictions and achieve unprecedented quality and performance standards in their tube for a ball-nut assembly.



Challenge

The specific requirements—tight tolerances on the tube's inner diameter and the recirculation of extremely small ball bearings—rendered traditional manufacturing methods inadequate. Suppliers failed at the task, delivering flawed prototypes. In a desperate move, the supplier turned to 3DEO for help.



Solution

3DEO took a partnership approach, collaborating closely with the customer's engineering team. Through extensive brainstorming, a unique solution was co-designed—a superior ball return tube. Utilizing 3DEO's technology and inherent geometric flexibility, the team not only optimized the design for 3D printing but also eliminated an expensive post-machining step.



Outcome

3DEO's part outperformed in rigorous fatigue testing, enduring 20,000 cycles without fail, surpassing the minimum requirement of 12,000 cycles and outclassing legacy parts. The 3DEO ball return tube displayed less wear than the ball bearings post-testing, emphasizing its exceptional durability and underscoring the power of 3DEO's engineering process.



"This was a critical component in the assembly that we could not make any other way. 3DEO partnered with us to deeply understand the application and help us solve the problem, and this collaboration was essential to our success."

President

Tier 3 Aerospace Manufacturer

Contact Us

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