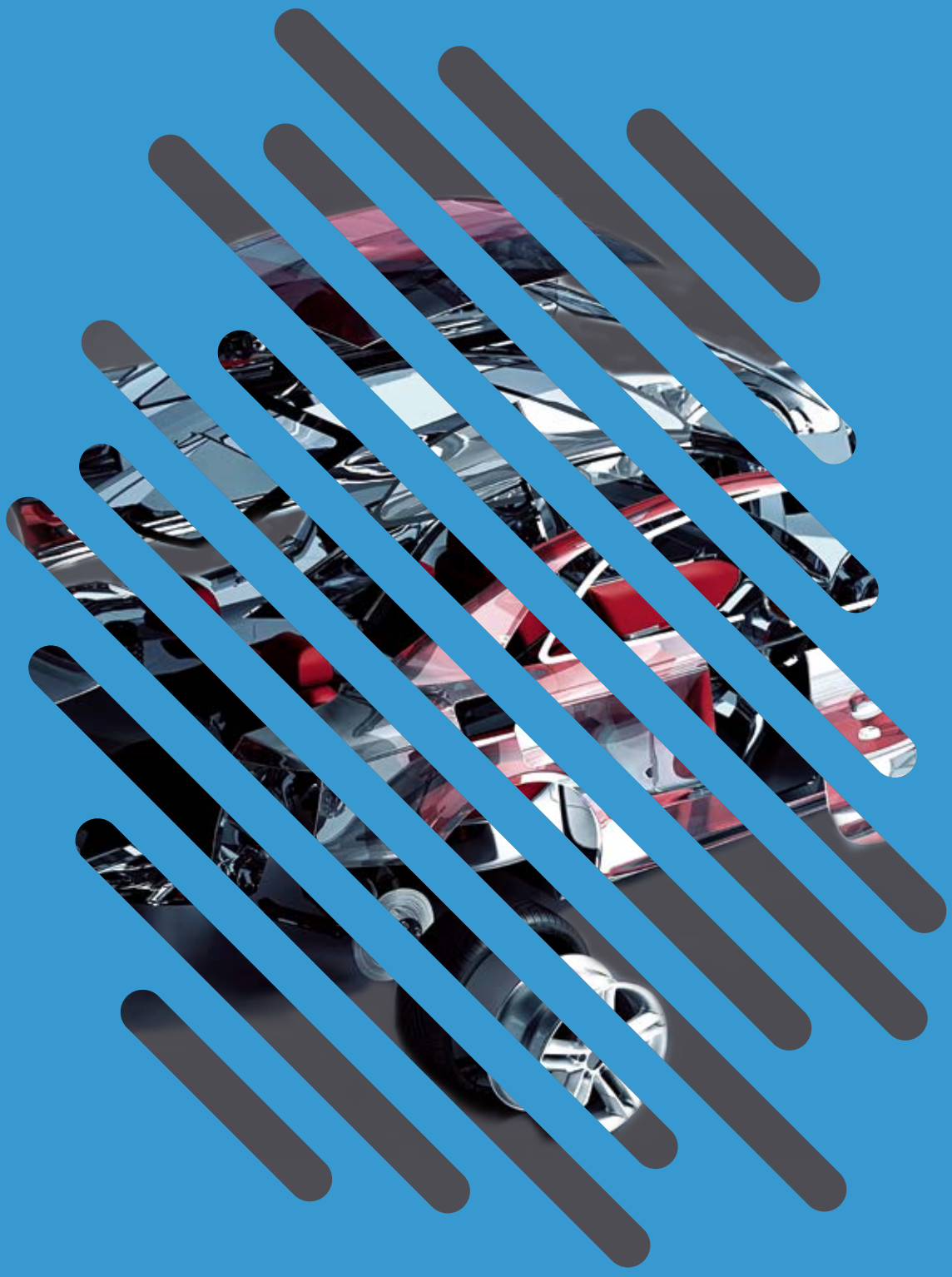
Unlock the Potential™

Low Cost, On-Demand Metal 3D Printing

3DEO



Contents

www.3DEO.co

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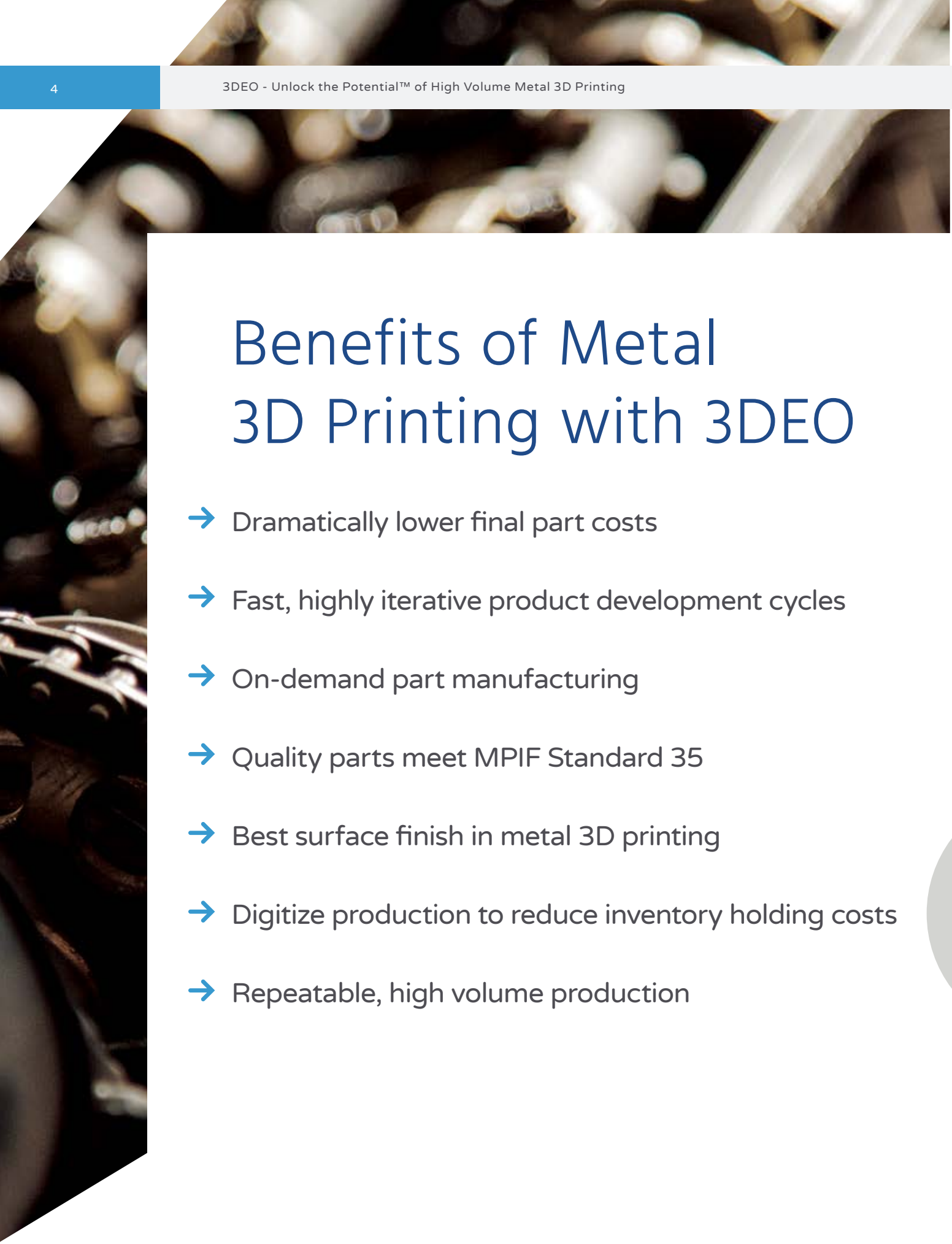
About 3DEO

Unlock the Potential of Metal 3D Printing

3DEO's breakthrough Intelligent Layering® technology unlocks metal 3D printing by drastically reducing final part cost. Despite the low cost, our parts meet the high industry benchmark MPIF Standard 35 while still achieving tight tolerances and an impressive surface finish. Intelligent Layering® will open metal 3D printing to the majority of the industries that can't afford today's expensive options.

Leveraging its unique technology as a parts supplier, 3DEO sells low-cost metal components on demand for a variety of applications across a wide range of industries. *3DEO is selectively accepting new part applications of 100+ pieces.*

We obsess about three things: *PART COST, QUALITY, and RESPONSIVENESS.*



Benefits of Metal 3D Printing with 3DEO

- Dramatically lower final part costs
- Fast, highly iterative product development cycles
- On-demand part manufacturing
- Quality parts meet MPIF Standard 35
- Best surface finish in metal 3D printing
- Digitize production to reduce inventory holding costs
- Repeatable, high volume production

MANUFACTURERS CURRENTLY ADOPTING AM

2/3

"3D printing could very well have a larger impact on manufacturing than any other technology."

-Wohlers Report
Wohlers Associates, Inc.

"[3D Printing] is really fundamentally changing the way we think about the company."

-Mark Little, CTO at GE

COST

#1

BARRIER TO ADOPTION

METAL AM GROWING AT

76%

EXPONENTIAL GROWTH: GROWING TO

5 Million

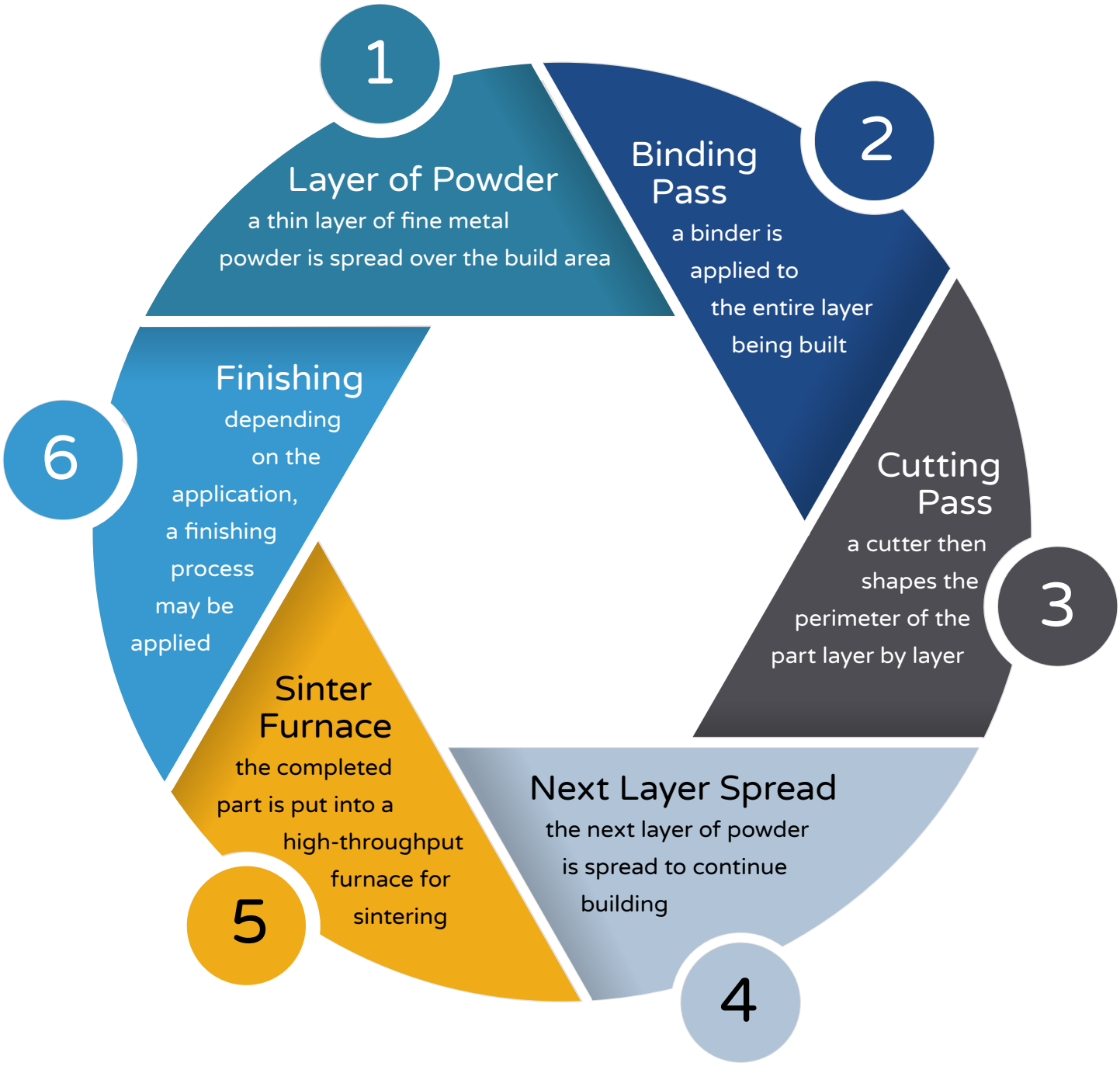
UNITS SOLD IN 2019
WITH 250,000, UNITS SOLD IN 2015

Intelligent Layering® Technology

Intelligent Layering® is a fundamentally new metal 3D printing technology that reduces final part cost by as much as 80%. The process follows six steps to build parts that meet MPIF Standard 35 for quality — a first in metal 3D printing.

There are three main factors that result in 3DEO's industry-leading low production costs — low machine cost, commodity materials, and creative software design. The entire build process was designed around lowering the per-part cost of metal 3D printing.

Thanks to the low-cost and highly repeatable process, 3DEO is able to manufacture in higher volumes that are economically unattractive to other metal 3D printing technologies.


1
Layer of Powder
a thin layer of fine metal powder is spread over the build area
2
Binding Pass
a binder is applied to the entire layer being built
3
Cutting Pass
a cutter then shapes the perimeter of the part layer by layer
4
Next Layer Spread
the next layer of powder is spread to continue building
5
Sinter Furnace
the completed part is put into a high-throughput furnace for sintering
6
Finishing
depending on the application, a finishing process may be applied

Technical Specifications

FINAL PART PRODUCTION SPECIFICATIONS

Fit: Tolerances of +/- 0.005 in/in or better with secondary operations

Finish: Variety of physical, chemical, and mechanical finishing options available

Function: Engineered densities up to +99% relative to wrought

Feasibility : Lowest per-part cost in metal 3D printing with high volume (100+ piece) potential

Material Possibilities

Currently manufacturing in stainless steel 17-4PH.

Other Materials Under Development

- Inconel, nickel alloy
- Cobalt-chome
- Titanium
- Tool steels
- Low-alloy steels
- Soft magnetic alloys
- Controlled-expansion alloys
- Tungsten carbide
- Tungsten heavy alloy
- Bronze, copper and brass

Manufacturing Capabilities

Secondary Operations: We offer a variety of secondary operations, including heat treating, vibratory deburring, sizing/coining, machining, and steam treating.

Quality Control & Metallurgical Inspection: Complete mechanical testing facility including: optical metallographic equipment, vision system measuring center, CMM, optical comparator, micro-hardness and apparent hardness testers, gear checker, surface roughness testers, humidity chamber, and conductivity meter.

Technology Comparison

TECHNOLOGY	CAPITAL COST	COST PER PART (AVG)	COMPLEXITY	VOLUME	LEAD TIME
3DEO	$	$	High	Low-High (100 - 10,000+)	Low
OTHER METAL 3D PRINTING	$$$	$$$	High	Low (1-100)	Low
SUBTRACTIVE MANUFACTURING / MACHINING	$$	$$	High	Low - Medium (1-1,000)	Med - High
METAL INJECTION MOLDING (MIM)	$$	$	Medium	High (20,000+)	High
CASTING	$$	$	Low	High (20,000+)	High
HOT DROP FORGING	$$$	$	Low	High (20,000+)	High

Key advantages include lower part cost due to our proprietary technology, faster build times through Intelligent Layering®, and significantly higher volumes than other metal 3D printing machines.

Stop losing money on outdated manufacturing and unlock the potential of metal 3D printing.

Industries

- Firearms
- Medical & Dental
- Industrial
- Automotive
- Consumer Applications
- Energy, Power Generation
- Aerospace

Applications

- High volume (100 - 10,000+ pieces)
- High temperature
- High strength
- Complex design possibilities

Work With 3DEO

1 Initial Contact

Contact 3DEO to ask questions about our process or your application and requirements.

2 Design Review

Send us your design file(s). We will review and respond with detailed feedback, suggestions, and observations. If your part is a good fit for our capabilities, we will also provide a cost estimate.

3 Quotation

You review the estimate, and we confirm the project scope and submit a formal quotation.

4 Purchase Order

After passing your QA process, a purchase order is signed for a full manufacturing run.

5 Evaluation

We deliver sample parts for your evaluation.

6 Manufacturing

We manufacture and ship the order We manufacture on demand and ship your parts in 48-72 hours.

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