

Metal On Demand





Fast. Reliable. Sustainable.

Introducing Cold Spray Additive Manufacturing (CSAM)—and the fastest way to make cast-equivalent metal parts. Our breakthrough technology enables on-site, on-demand metal manufacturing, reducing long lead times, supply chain issues, and carbon emissions while accelerating prototyping and product development.

Stronger parts. Smarter process.

Our WarpSPEE3D and LightSPEE3D printers enable you to avoid melting or sintering metal powders—processes that can reduce part density and increase the likelihood of cracking or fatigue failure.

- Produce components equal or superior to their cast counterparts
- Ensure predictable material properties
- Access a wide range of novel alloys, qualified metals, and multi-material blends



The right tech for fast results

Our proprietary CSAM process sprays metal particles at supersonic speeds onto the substrate to build your part in layers. This enables you to produce denser parts with lower porosity and enhanced mechanical properties that improve part and tool reliability.



WarpSPEE3D

Our flagship large format metal 3D printer enables you to manufacture metal parts up to Ø1m x 0.7m (Ø40" x 30").

Materials

A wider range of metal powders can be used in automated CSAM than in traditional processes, enabling you to produce a more diverse range of metal parts and tools.

Materials currently in full release are:

- Aluminium
- Copper
- Aluminium bronze
- Stainless steel

LightSPEE3D

Use our smallest printer model to manufacture metal parts up to Ø350 x 300mm (Ø13" x 11").



A smarter way to manufacture metal

WarpSPEE3D and LightSPEE3D printers are powered by patented technologies that deliver new possibilities in metal additive manufacturing.

TwinSPEE3D automation software

- Process 3D geometries automatically
- Identify unfeasible part features and incorporate design modification suggestions
- Generate print paths for printing or coating

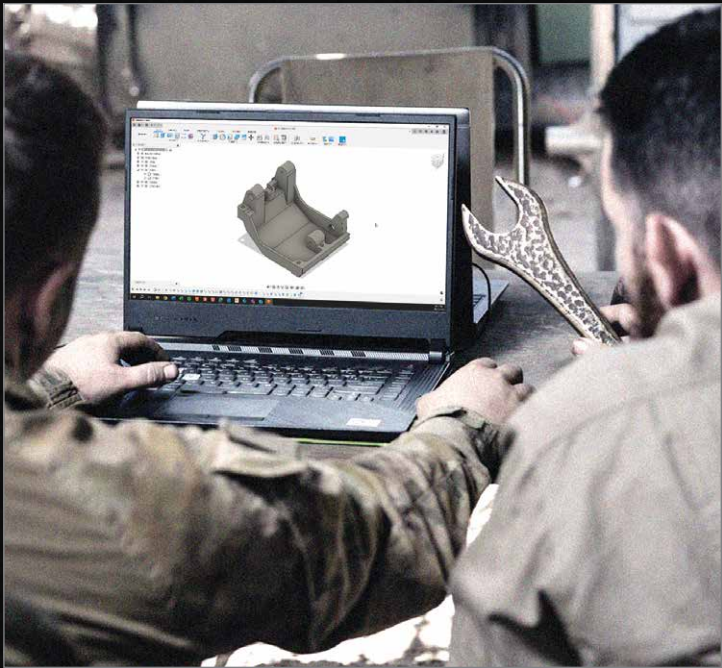
Phaser nozzle

- Produce high-density metal parts
- Increase particle deformation
- Reduce the need for dangerous, expensive gases

How it works

In our highly automated CSAM process, metal particles are sprayed at supersonic speeds onto a substrate to build your part in layers. At such a high velocity, the sheer force of the kinetic energy causes the particles to bind together—creating denser parts with lower porosity and predictable material properties.

By eliminating extreme heating and cooling processes that can cause parts to expand and contract, CSAM puts fewer residual stresses on your part—lowering the risk that it will crack, warp, or distort.



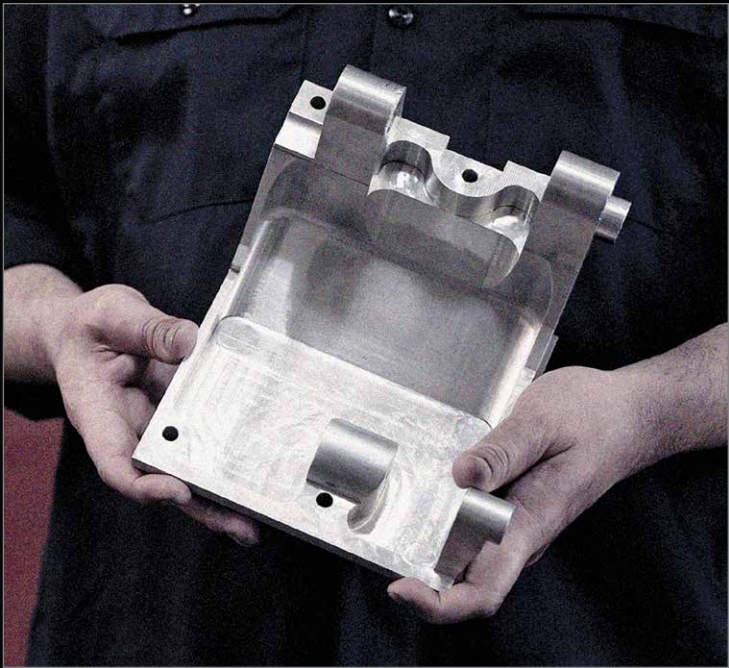
1. Design

Use our TwinSPEE3D automation software to create a tool path from your CAD file or scan, create a full simulation, and modify the design to correct anomalies before you start printing.



2. Print

Use our ultra-high energy phaser nozzle to spray metal powder at supersonic speeds onto a base plate using only compressed air to build your part in aluminum, aluminum bronze, copper, or stainless steel.



3. Cook & Cut

Use our SPEE3DCell expeditionary post-processing unit to heat treat, machine, and test your part before putting it to use.

Rapidly produce cast-equivalent, highly usable parts and tools while reducing waste and energy usage.

The power of CSAM

SPEE3D printers take metal casting into the 21st century, enabling you to rapidly produce cast-equivalent parts on-demand. It's fast, it's efficient, and it's revolutionizing how industries across the globe manufacture metal parts.

Speed

- Drive build rates up to 100g/minute (3.5oz/minute)
- Immediately handle parts after printing

Flexibility

- Choose from aluminium, aluminium bronze, stainless steel, and copper—with other materials in development
- On-demand part production of 1 to 10,000

Automation

- Print directly from your CAD files
- Create a digital prototype before you print your part

Safety

- Reduce the need for inert gases
- Emit 60% less CO2 compared to casting

Simplicity

- Reduce the need for extensive training or special expertise
- Simplify user experience with an intuitive Human Machine Interface (HMI)



Printed part examples

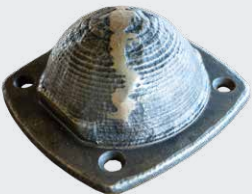
Type C Camlock Fitting

Print Time	24 Minutes
Material	Aluminium 6061
Weight	660g (1.5lbs)



M113 Wheel Bearing Cover

Print Time	29 Minutes
Material	Aluminium Bronze
Weight	2kg (4.4lbs)



Valve Handle

Print Time	60 Minutes
Material	316 Stainless Steel
Weight	1.2kg (2.6lbs)



Bilge Pump Housing

Print Time	83 Minutes
Material	Aluminium Bronze
Weight	8.3kg (18.3lbs)



Copper Rocket Nozzle Liner

Print Time	199 Minutes
Material	Copper
Weight	17.9kg (39.5lbs)





WarpSPEE3D
Large-Format Printer

Part Build

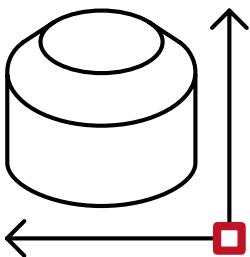
- Maximum part size:
Ø1m x 0.7m (Ø40" x 30")
- Maximum part weight:
40kg (88lbs)
- Deposition rate:
Up to 100g (3.5oz)/minute
- Deposition spot size:
6mm/.24"

Software & Interface

- Software:
TwinSPEE3D
- CAD input:
STL & STEP format
- User interface:
HMI Touch Screen
- Required operating system:
Windows 8 or higher

Performance Specifications

- Electrical power supply:
400V | 3 Phase | 50/60Hz | 18kVA
- Compressed air supply:
Minimum 35Bar, 1.0m3/min
- Noise:
<85dBA @ 1m
- Machine footprint:
Meters: 3.9(L) x 2.1(W) x 2.7(H) |
Feet: 13(L) x 7(W) x 9(H) (approx.)
- Machine weight:
4700kg (10400lbs) (approx.)



Maximum part size:
Ø1m x 0.7m
[Ø40" x 30"]



LightSPEE3D
Small-Format Printer

Part Build

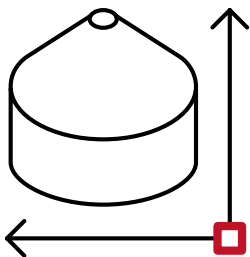
- Maximum part size:
Ø350 x 300mm (Ø13" x 11")
- Maximum part weight:
5kg/11lbs (approx.)
- Deposition rate:
Up to 100g (3.5oz)/minute
- Deposition spot size:
6mm/.24"

Software & Interface

- Software:
TwinSPEE3D
- CAD input:
STL & STEP format
- User interface:
HMI Touch Screen
- Required operating system:
Windows 8 or higher

Performance Specifications

- Electrical power supply:
400V | 3 Phase | 50/60Hz | 18kVA
- Compressed air supply:
Minimum 35Bar, 1.0m3/min
- Noise:
<85dBA @ 1m
- Machine footprint (doors closed):
Meters: 3.2(L) x 1.4(W) x 2.4(H)
Feet: 11(L) x 5(W) x 8(H) (approx.)
- Machine weight:
2200kg (4850lbs) (approx.)



Maximum part size:
Ø350 x 300mm
[Ø13" x 11"]

Minimize downtime and accelerate part production



SPEE3D metal printers put the power of metal manufacturing in your hands—so you can control operations, create new processes, explore new materials, and develop new solutions.

- Reliable, predictable material properties
- Rapid build rates up to 100g (3.5oz)/minute
- No extensive training required



SPEE3D

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Learn more today

Ready to bring your metal additive manufacturing application to life?

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