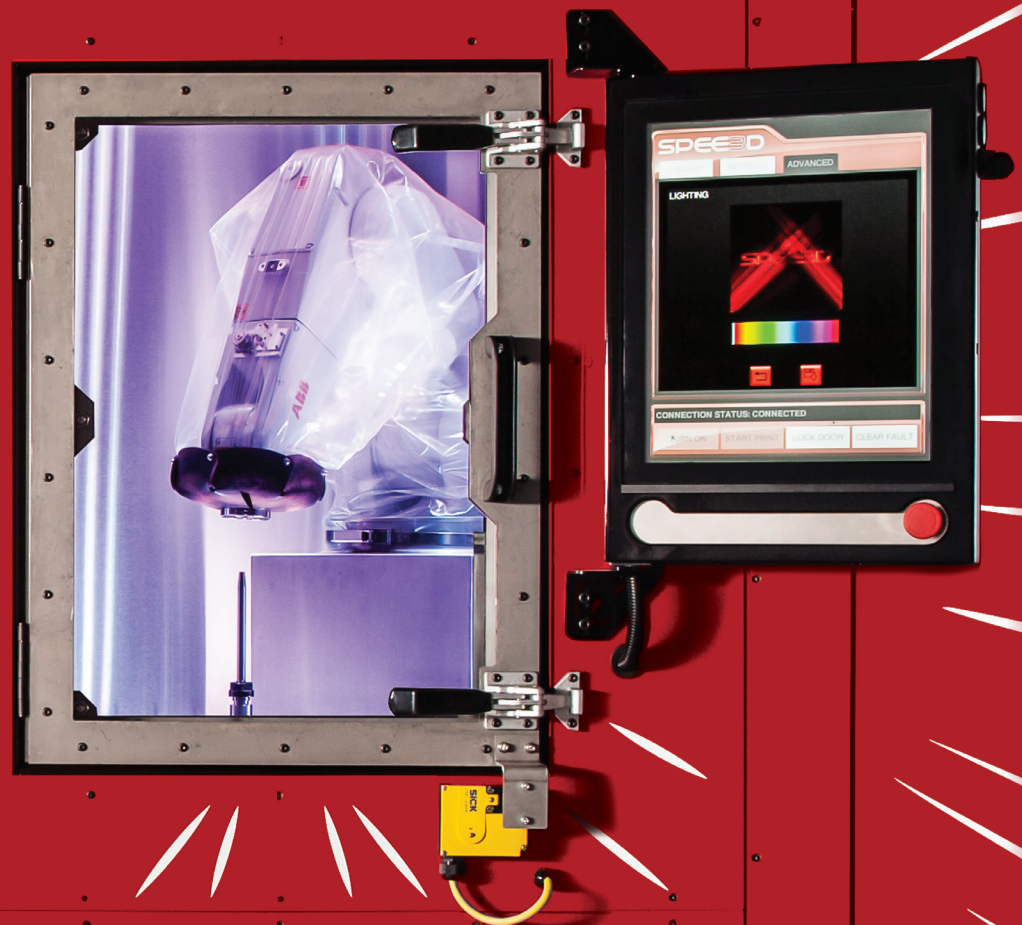


SPEED3D™

HIGH-SPEED METAL MANUFACTURING



SPEE3D

Introducing Cold Spray Additive Manufacturing

SPEE3D technology can rapidly manufacture large, strong, and dense metal parts suitable for real-world military and commercial applications.

Our printers are suited for producing parts currently manufactured by sand or die casting, as well as rapidly printing parts on demand. They do this faster and more efficiently than traditional methods, with the added flexibility offered by 3D printing.

BENEFITS



HIGH SPEED

From design to finished parts in hours and days, not weeks or months.



POWERED BY TWIN SPEED SOFTWARE

Generates a toolpath based on your CAD file and creates a digital prototype in advance of printing.



FLEXIBLE

On-demand part production of 1 to 10,000.



MOBILE

SPEE3D equipment is easily transported and rugged enough to be moved and operated anywhere.



SAFE & SUSTAINABLE

No inert gasses are needed, and our process consumes 33% less energy and emits 60% less CO₂ than traditional casting.



PARTS

Print full density parts up to 40kg (90lbs) and 1m x 0.7m (40"x30") in diameter.

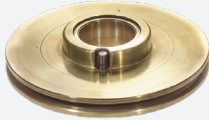


CAMLOCK

PRINT TIME **24.4 MINUTES**

MATERIAL ALUMINIUM 6061

WEIGHT 660G (1.5lbs)



STARTER FLYWHEEL

PRINT TIME **25 MINUTES**

MATERIAL ALUMINIUM BRONZE

WEIGHT 2.5KG (5.5lbs)



GUNNER'S RATCHET

PRINT TIME **60 MINUTES**

MATERIAL ALUMINIUM BRONZE

WEIGHT 2KG (4.4lbs)



BILGE PUMP HOUSING

PRINT TIME **83 MINUTES**

MATERIAL ALUMINIUM BRONZE

HOUSING WEIGHT 8.3KG (18.3lbs)



VALVE HANDLE

PRINT TIME **60 MINUTES**

MATERIAL 316 STAINLESS STEEL

WEIGHT 1.2 KG (2.6lbs)



WATER-COOLING BLOCK

PRINT TIME **40 MINUTES**

MATERIAL ALUMINIUM 6061

WEIGHT 580G (1.3lbs)



ROCKET NOZZLE LINER

PRINT TIME **199 MINUTES**

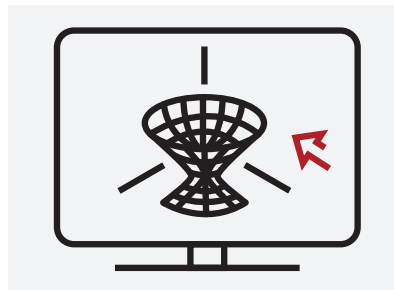
MATERIAL COPPER

WEIGHT 17.9KG (39.5lbs)

HOW IT WORKS

SPEE3D's patented technology uses supersonic deposition in which a rocket nozzle accelerates air up to three times the speed of sound, depositing metal powder onto a substrate attached to a six-axis robotic arm. The sheer kinetic energy of the particles causes the powders to bind together to form a high-density part.

THE PROCESS



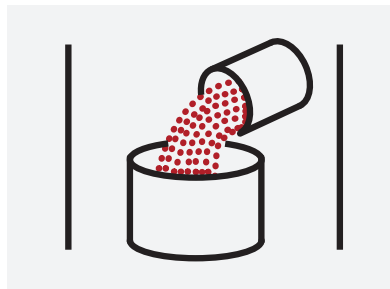
Design in CAD



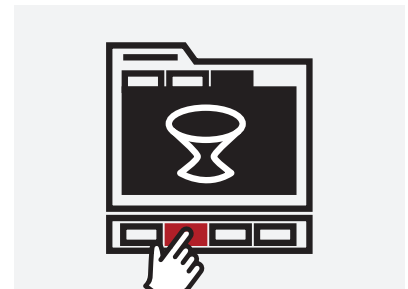
Import into TwinSPEE3D



Check simulation



Load feedstock



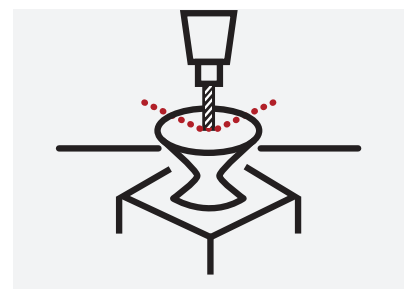
Press print



Remove part



Heat treat



Post process

FEATURES



USEFUL METALS

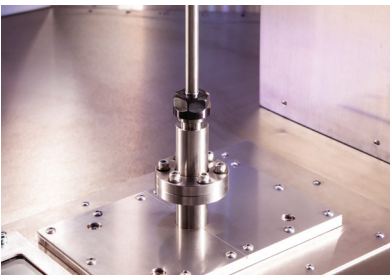
The feedstock for our process is readily available metal powders

- › Aluminium (6061 & pure)
- › Copper (pure)
- › Aluminium bronze
- › 316 Stainless steel
- › More materials in development



PRECISION ROBOTICS

- › Substrate attached to the robotic arm
- › Moves above the powder spray nozzle
- › Shape forms as powder particles fuse on substrate



ROCKET POWERED

- › Rocket nozzle used to propel metal powder particles at supersonic speed onto substrate
- › Fixed to the base of the machine



USER FRIENDLY

- › The HMI (Human Machine Interface) is designed to be intuitive
- › Users can be trained to operate the equipment in under an hour



COMPRESSED AND HEATED AIR

- › No use of expensive inert gases
- › Process operates using normal compressed air



FINISHING

- › Part removed from machine can be handled immediately
- › Finished or machined with less waste than casting

LIGHTSPEED3D

MANUFACTURE PARTS UP TO 350mmx300mm (14"x12") IN DIAMETER



LIGHTSPEED3D

Technical Specifications*

PART BUILD INFORMATION

Maximum part size 350mmx300mm (14"x12") (approx.) in diameter
Maximum part weight 4kg (9lbs)
Deposition rate 100g (3.5oz)/minute (maximum)
Deposition spot size 6mm (0.24")

PERFORMANCE SPECIFICATIONS

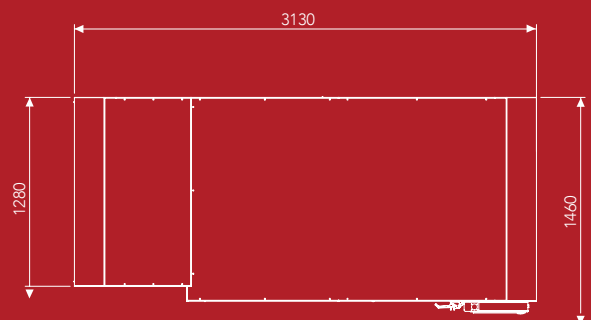
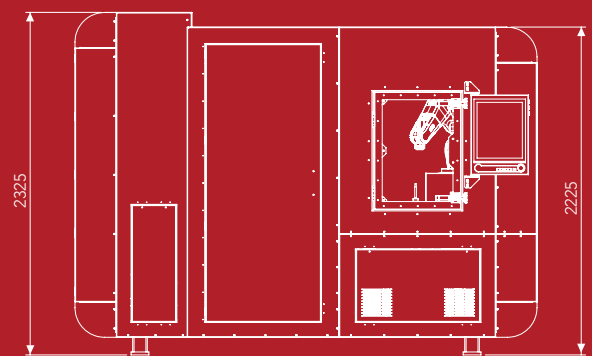
Electrical Power Supply 415V (3 phase), 32A socket
Compressed Air Supply minimum 35Bar, 1.0m³/min
Noise < 85dBA @1m
Machine footprint 3130 x 1460 x 2325mm
(10.3ft. x 4.8ft. x 7.6ft) (approx.)
Machine weight 2500kg (5,512lbs) (approx.)

TWINSPEED SOFTWARE

CAD input STL format
Works with PC running Windows 8 and above

- Fully integrated design, including enclosed build chamber, powder feeder, electronics, and print head
- Touch screen HMI
- High-speed robotics
- Rapid build rates - up to 100g (3.5oz)/minute.

* Technical Specifications subject to change without notice.
This datasheet is current as of April 2023.



WARPSPEE3D

MANUFACTURE PARTS UP TO 1000mmx700mm (40"x30") IN DIAMETER



WARPSPEE3D

Technical Specifications*

PART BUILD INFORMATION

Maximum part size 1000mmx700mm (40"x30") (approx.) in diameter
Maximum part weight 40kg (88lbs)
Deposition rate 100g (3.5oz)/minute (maximum)
Deposition spot size 6mm (024")

PERFORMANCE SPECIFICATIONS

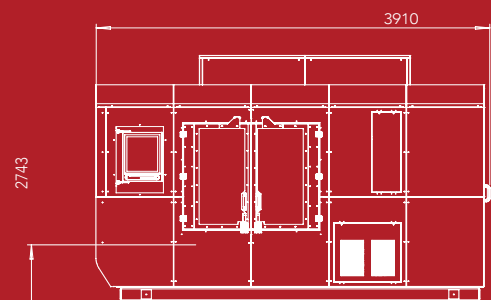
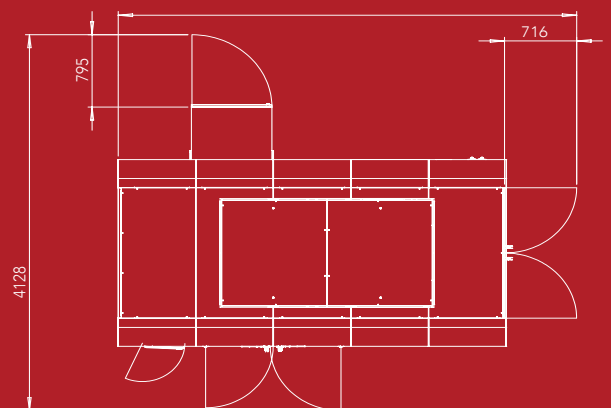
Electrical Power Supply 415V (3 phase), 32A socket
Compressed Air Supply minimum 35Bar, 1.0m³/min
Noise < 85dBA @1m
Machine footprint 4128 x 4553 x 2743 mm
(13.5ft. x 14.9ft. x 9ft)
Machine weight 4000kg (8818.5lbs)

TWINSPEED SOFTWARE

CAD input STL format
Works with PC running Windows 8 and above

- Fully integrated design, including enclosed build chamber, powder feeder, electronics, and print head
- Touch screen HMI
- High-speed robotics
- Rapid build rates - up to 100g (3.5oz)/minute

* Technical Specifications subject to change without notice.
This datasheet is current as of April 2023.



SPEE3D™

MILAM 2022

Award for Expeditionary & Tactical
3D Printing Excellence


Land Forces
AUSTRALIA INDO ASIA PACIFIC
SME INNOVATION
AWARD
WINNER


DEFENCE CONNECT
AUSTRALIAN
DEFENCE INDUSTRY
AWARDS
FINALIST
SME OF THE YEAR
2021

59TH AUSTRALIAN
Export & Investment Awards

National Finalist 2021
ADVANCED TECHNOLOGIES


InnovationAus
2021 AWARDS FOR
EXCELLENCE
ADVANCED MANUFACTURING
**
FINALIST



TCT AWARDS 2018
HARDWARE
NON-POLYMER SYSTEM
WINNER

TECH23.2016
CELEBRATING AUSTRALIAN INNOVATION



BOSCH
Venture Forum
Awards 2015


Export Awards 2018
FINALIST
Emerging Exporter Award
Supported by the
 
NSW GOVERNMENT Export Council of Australia


**GERMAN
DESIGN
AWARD
NOMINEE
2018**


Endeavour
MANUFACTURERS' MONTHLY
Awards


PREMIER'S
DESIGN
AWARDS



RISING STAR
HIGHLY
COMMEDED

SPEE3D

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