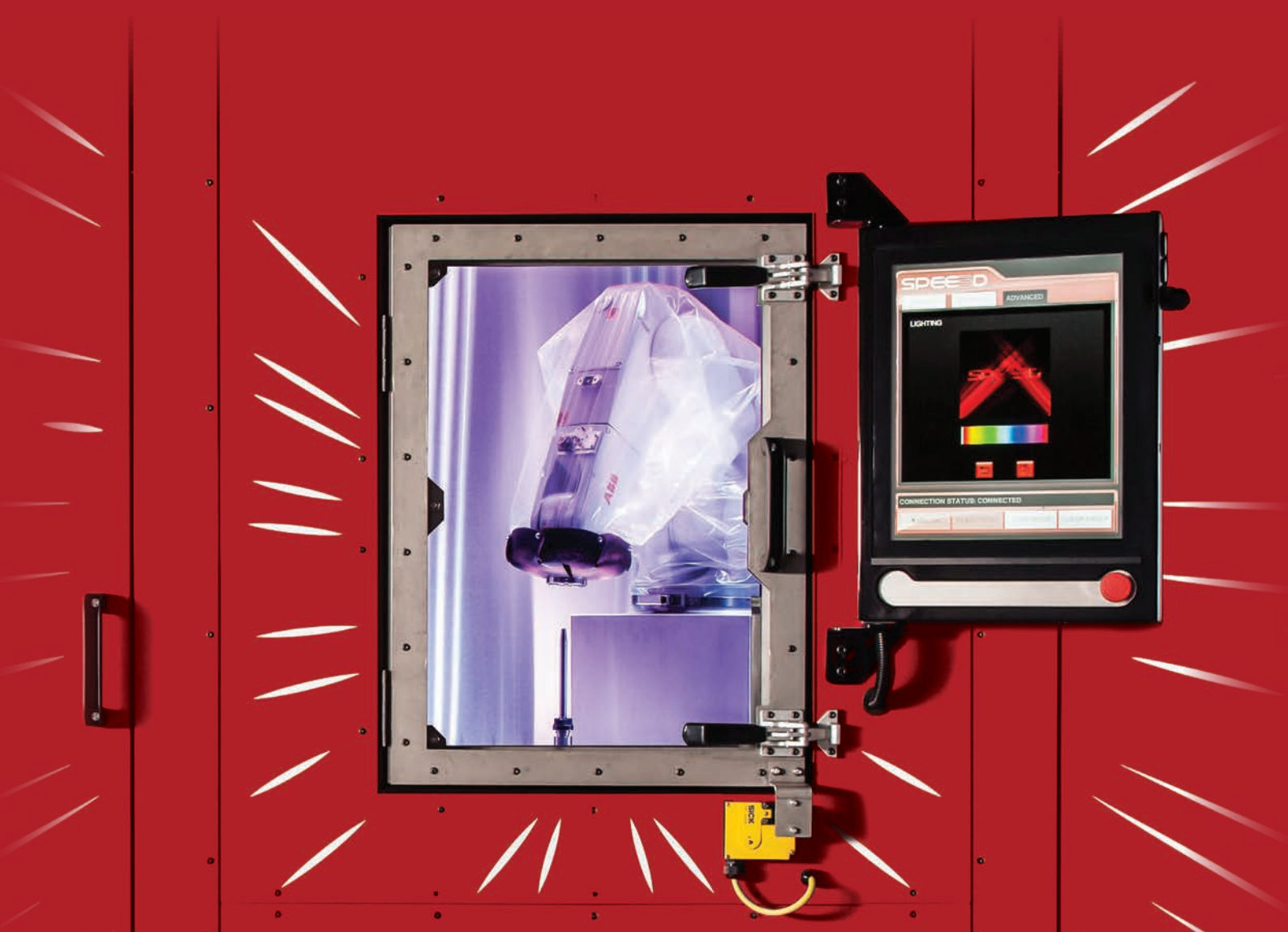
SPEE3D™

WORLD'S FASTEST METAL PRINTERS



SPEE3D

The world's fastest metal additive manufacturing technology.

SPEE3D printers can rapidly and inexpensively manufacture metal parts, suitable for real-world commercial and industrial applications.

This technology is ideally suited for either producing parts currently manufactured by sand or die casting or rapidly printing parts on demand. It does this faster and more efficiently with all the added flexibility offered by 3D printing.

BENEFITS

ULTRA HIGH SPEED

1000 times faster than traditional 3D printing

FLEXIBLE

On-demand part production of 1 to 10,000

LOW COST

Similar cost to casting using common materials

MOBILE

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

BIG & STRONG PARTS

Unlike other additive manufacturing processes, with SPEE3D you can make large parts (up to 40kg), that are full-density, robust and strong

EASY

No fancy redesign of parts and support material required, just load your file and print

SAFETY & ECO-FRIENDLY

Safe & healthy environment for your workers

ALUMINIUM 6061 CAMLOCK

PRINT TIME 24.4 MINUTES
MATERIAL ALUMINIUM 6061
WEIGHT 660 GRAMS
COST $66 (USD)

STARTER FLYWHEEL

PRINT TIME 25 MINUTES
MATERIAL ALUMINUM BRONZE
WEIGHT 2.5KG
PRINT COST $125 (USD)

GUNNER'S RATCHET

PRINT TIME 60 MINUTES
MATERIAL ALUMINIUM BRONZE
WEIGHT 2KG
PRINT COST $103 (USD)

BILGE PUMP HOUSING

PRINT TIME 83 MINUTES
MATERIAL ALUMINIUM BRONZE
HOUSING WEIGHT 8.3KG
HOUSING PRINT COST $415 (USD)

316 STAINLESS VALVE HANDLE

PRINT TIME 60 MINUTES
MATERIAL 316 STAINLESS STEEL
WEIGHT 1.2 KG
PRINT COST $96 (USD)

WATER-COOLING AUTOMOTIVE

PRINT TIME 40 MINUTES
MATERIAL ALUMINIUM 6061
WEIGHT 580G
PRINT COST $58 (USD)

COPPER ROCKET NOZZLE LINER

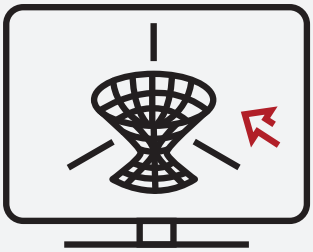
PRINT TIME 199 MINUTES
MATERIAL COPPER
WEIGHT 17.9KG
PRINT COST $716 (USD)

HOW IT WORKS

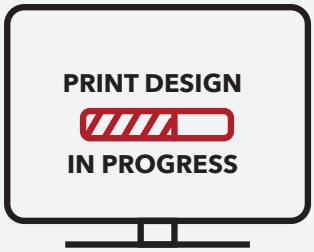
Imagine making 3D metal parts within minutes, without lasers or melting the metal. With SPEE3D's technology, that's possible.

SPEE3D's patented 'supersonic deposition' process works by accelerating metal powder particles up to three times faster than sound with a rocket engine, firing them at a substrate maneuvered with precision by a 6-axis robot arm. The sheer kinetic energy that results causes the particles to bind together to form a strong, full-density metal part.

THE PROCESS



Design in CAD



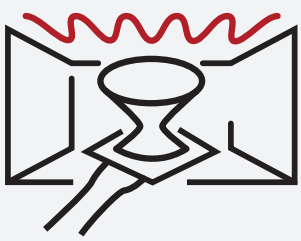
Import into TwinSPEE3D

Check simulation

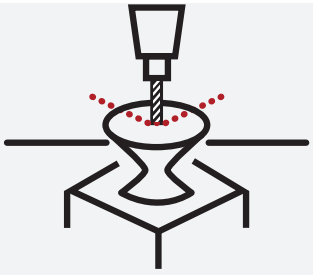
Load feedstock

Press print

Remove part



Heat treat



Post process

FEATURES

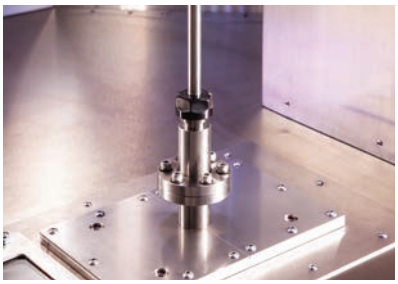
USEFUL METALS

The feedstock for our process is readily available metal powders

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

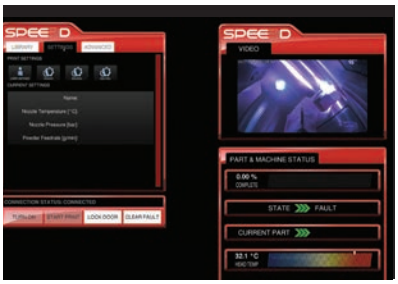
PRECISION ROBOTICS

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



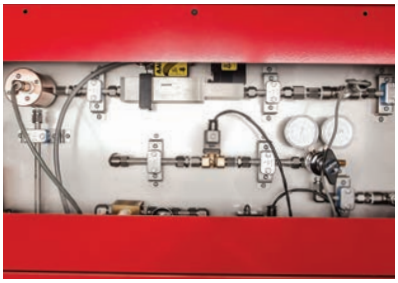
ROCKET POWERED

- 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

LIGHTSPEE3D

MANUFACTURE PARTS UP TO Ø350mm x 300mm

LIGHTSPEE3D

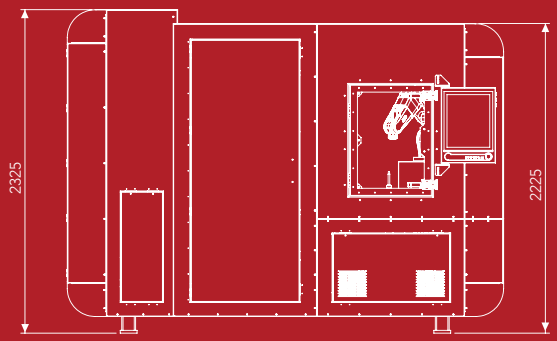
- Fully integrated design including enclosed build chamber, powder feeder, electronics and print head.
- Touch screen HMI
- High speed robotics
- Very high build rates – up to 100grams/minute.

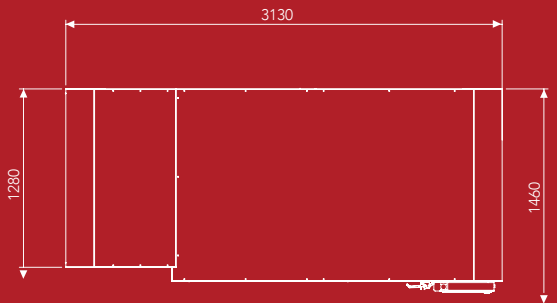
Technical Specifications*

PART BUILD INFORMATION
Maximum part size 300 x 300 x 300mm (27L)
Maximum part weight 4kg
Deposition rate 100g/minute (maximum)
Materials Copper, Aluminium
Deposition spot size 6mm

PERFORMANCE SPECIFICATIONS
Electrical Power Supply 415V (3 phase), 32A socket
Compressed Air Supply minimum 35Bar, 1.0m3/min
Noise < 85dBA @1m
Machine footprint (mm) 3130 x 1460 x 2325mm (approx)
Machine weight Approx 2500kg

TWINSPEED SOFTWARE
CAD input STL format
User Interface Touch Screen
Works with PC running Windows 8 and above





WARPSPEE3D

MANUFACTURE PARTS UP TO 1000mm Ø x 700mm

WARPSPEE3D

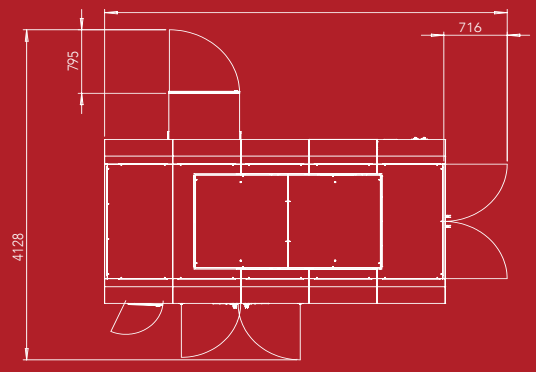
- Fully integrated design including enclosed build chamber, powder feeder, electronics and print head.
- Touch screen HMI
- High speed robotics
- Very high build rates – up to 100grams/minute.

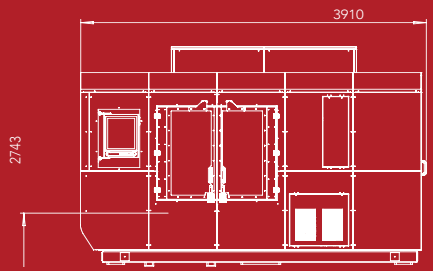
Technical Specifications*

PART BUILD INFORMATION
Maximum part size ø 1m x 0.7m (approx)
Maximum part weight 40kg
Deposition rate 100g/minute (maximum)
Materials Copper, Aluminium
Deposition spot size 6mm

PERFORMANCE SPECIFICATIONS
Deposition rate Up to 100g/minute (maximum)
Electrical Power Supply 415V (3 phase), 32A socket
Compressed Air Supply minimum 35Bar, 1.0m3/min
Noise < 85dBA @1m
Machine footprint (mm) 3910 x 2723 x 2742mm (approx)
Machine weight 4000kg (approx)

TWINSPEED SOFTWARE
CAD input STL format
User Interface Touch Screen
Works with PC running Windows 8 and above





* Technical Specifications subject to change without notice.
This datasheet is current as of April 2022.

SPEE3D™

LandForces
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

FINALIST
InnovationAus
2021 AWARDS FOR EXCELLENCE
ADVANCED MANUFACTURING

tct AWARDS
TCT AWARDS 2018
HARDWARE
NON-POLYMER SYSTEM
WINNER

TECH23.2016
CELEBRATING AUSTRALIAN INNOVATION

BOSCH
Venture Forum
Awards 2015

Premier's New South Wales Export Awards 2018
Supported by the NSW Government
eca Export Council of Australia
FINALIST
Emerging Exporter Award

GERMAN DESIGN AWARD NOMINEE 2018

Endeavour Awards
MANUFACTURERS' MONTHLY

PREMIER'S DESIGN AWARDS

tct AWARDS
RISING STAR
HIGHLY COMMENDED

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