E-Plus-3D

EP-M400

Large Size & High Speed & Cost-Effective Metal Additive Manufacturing System

EP-M400

Eplus3D Introduces EP-M400 to the successful line of MPBF 3D printers. EP-M400 is a marvelous metal printer that makes the production of reliable and high quality large metallic parts viable on industrial scale without requiring any tools. It is optional for single laser, dual laser, and four lasers. Due to its high efficiency, quality production and dependability along with the ease of operation and integration of additive manufacturing into overall manufacturing ecosystem, EP-M400 makes sure its owners remain one step ahead in their field of engagement.

HIGH QUALITY

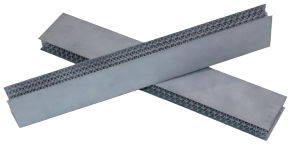
- Printed parts' density > 99.9%, deviation in parts' mechanical properties < 5%.
- The optimized gas flow design ensures efficient removal of smoke and splashes as well as achievement of uniform and consistent full size printing.
- Overlapping deviation ⩽ ±0.1 mm. The overall mechanical properties of the printed part remain the same when compared to printing results with other laser machines.

HIGH EFFICIENCY

- Build volume (X x Y x Z): 400 x 400 x 450 mm (height incl. build plate), build chamber volume > 70 L.
- Printing with increased layer thickness can be realized, increasing the production capacity.
- With in-house developed processing software (EP-Hatch), optimized scanning strategies can be achieved yielding reduced print duration.

Shoe Mold
Maraging Steel
255 x 155 x 280 mm

Impeller
IN718
ϕ 380 x 156 mm



Satellite Lightweight Structural Components
Aluminum Alloy
320 x 58 x 20 mm

Satellite Component
Aluminum Alloy
323 x 185 x 146 mm

RELIABLE

· Excellent core optic components from world-class supplier and mature process control parameter algorithm provides highest part quality.
· High quality uniform part printing due to excellent control over building environment and components.
· Tightly sealed build chamber maintains oxygen concentration ⩽100 ppm and a stable pressure during printing.
· Sustained monitoring of powder left in feeder and ability to add powder without stopping the machine ensures uninterrupted part printing.
· Double protection of chamber door is attained due to dual gas releasing ports on top of printing chamber.

COST-EFFECTIVE & EASY OPERATION

· Three-stage filtration, which can use blow back function to remove the fume, equipped with permanent filter element.
· Highly user friendly software interface and one-click printing technology makes printing super simplified.
· Comparability with different types of recoater blades such as ceramic, PU, alloy steel, etc.
· Traceable print records after every print and real-time display of readings for various sensors.

OPEN SYSTEM

· Open parameters for editing laser power, scan speed, scan direction, up and down facing surfaces etc.
· Open system ensures freedom to choose among wide range of metal powders available in market.
· Process software can be integrated with Siemens NX software to realize effective planning of design, simulation and printing path planning, within one software and highly improving the production efficiency.
· Process software supports SLC and CLI formats.

EP-M400
PARAMETER

Machine Model	EP-M400
Build Volume (X x Y x Z) (height incl. build plate)	400 x 400 x 450 mm (15.75 x 15.75 x 17.72 in)
Optical System	Fiber Laser 500 W / 2 x 500 W / 4 x 500 W
Spot Size	70 - 120 µm
Max Scan Speed	8 m/s
Layer Thickness	20 - 120 µm
Theoretical Printspeed	Up to 190 cm^3/h
Material	Titanium Alloy, Aluminum Alloy, Nickel Alloy, Maraging Steel, Stainless Steel, Cobalt Chrome, Copper Alloy, etc.
Power Supply	380 V, 31 A, 50 / 60 Hz, 16.5 kW
Gas Supply	Ar / N_2
Oxygen Content	⩽100 ppm
Dimension (W x D x H)	4300 x 1400 x 2830 mm
Weight	5000 kg
Software	EPControl, EPHatch
Input Data Format	STL or other Convertible File

Notice: Eplus3D reserves the right to explain any alteration of the specifications and pictures.