E-Plus-3D

EP-M400

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

EP-M400

With a building chamber size of 405*405*450 mm³. Eplus3D Introduces EP-M400 to the successful line of MPBF™ 3D printers. The new 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 it's 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 it's owners remain one step ahead in their field of engagement.

HIGH QUALITY

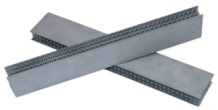
- Printed parts' density > 99.9 %, deviation in parts' mechanical properties < 5 %.
- The optimized gas flow design ensures efficient removal of smoke and splashes as well as achievement of uniform and consistent full size printing.
- Overlapping deviation ⩽ ±0.1 mm. The overall mechanical properties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

HIGH EFFICIENCY

- Build chamber size (X*Y*Z): 405*405*450 mm³, 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.
- Maxiumum building rate of 120 cm³/h.

Shoe Mold
Maraging Steel
255mm*155mm*280mm

Impeller
IN718
⌀380mm*156mm



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

Satellite Component
Aluminum Alloy
323mm*185mm*146mm

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-EFFICTIVE & 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 Chamber (XxYxZ)	405*405*450 mm^3
Optical System	Fiber Laser 500W/2*500W/4*500W
Spot Size	80-120 μm
Max Scan Speed	8m/s
Layer Thickness	20-120 μm
Buliding Speed	120cm^3/h
Material	Titanium Alloy, Aluminium Alloy, Nickel Alloy, Maraging Steel, Stainless Steel, Cobalt Chrome, etc.
Power Supply	380V, 38A, 13.9kW, 50 / 60Hz
Gas Supply	Ar/N_2
Forming chamber oxygen content	≤100ppm
Dimension (WxDxH)	4300*1400*2830mm^3
Weight	5000kg
Software	EPLUS3D, EPHatch
Input Data Format	STL file or other convertible format

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