

EP-M150

High Compact & High Precision
Metal Additive Manufacturing Equipment



EP-M150

EP-M150 adopts metal powder bed selective melting MPBF™ (Metal Powder Bed Fusion) technology, single and dual-laser printing modes are optional, supporting 200 and 500 W laser, which can be perfectly used for the rapid production of high performance, high-precision parts. Compatible with most popular metal powder materials, including titanium alloy, aluminum alloy, nickel-based superalloy, maraging steel, stainless steel, cobalt, chromium alloy, ect. It has been applied in versatile applications such as industrial manufacturing, medical, education, dental, materials development, etc.



» HIGH PERFORMANCE

- The density of printed parts can reach nearly 100%.
- Volatility of mechanical properties < 5%.
- In dual laser printing mode, precision deviation in alignment area ≤ 0.15 mm.



« HIGH PRECISION

- High laser beam quality.
- Tiny laser spot.
- High consistency and uniform laser beam quality from different positions in the building platform.



« HIGH EFFICIENCY

- The layer thickness can be up to 100 μm .
- With the latest upgraded technology combining dual-laser with large layer thickness mode, the productivity has been risen accordingly.

» OPENNESS

- High consistency, different machines could use the same set of process parameters.
- Machine compatible with multiple materials, the same machine can print multiple materials without adjusting the optical path.



2 minutes quick operation



One-click printing

» AFFORDABLE OPERATION COST

- Air consumption during processing < 3 L/min.
- Powder supply is accurate, stable and controllable, and high utilization rate of powder.
- The existing material parameter packages are provided for free.



Safety Design



Anti-electric Shock



Prevention of Misoperation



Fire Prevention



Anti-pollution



Working Environment Monitoring



Gas Source Status Monitoring



Anti-waste



« USER FRIENDLY OPERATION SYSTEM

- Ergonomics overall design for users.
- With "one-click printing" function, each process is ready to run, click the "print" button on the screen to start printing.
- The replacement of building plate and recoater can be completed within 10 min.



« SAFER

- Safety design, anti-misoperation, anti-electric shock, fire prevention, anti-waste, anti-pollution.
- Real-time monitoring and traceable of working environment and gas source status, safe and reliable.

EP-M150

PARAMETER

Machine Model	EP-M150
Build Volume (X x Y x Z) (height incl. build plate)	Φ 150 x 140 mm (Φ 5.91 x 5.51 in)
Optical System	Fiber Laser, 200 W / 500 W (single or dual-laser optional)
Spot Size	40 - 60 μm
Max Scan Speed	8 m/s
Theoretical Printspeed	Up to 35 cm ³ /h
Layer Thickness	200 W Laser : 20 - 50 μm 500 W Laser : 20 - 100 μm
Material	Titanium Alloy, Nickel Alloy, Maraging Steel, Stainless Steel, Cobalt Chrome, Copper Alloy, etc.
Power Supply	220 V, 3 KW, 14 A, 50 ~ 60 Hz (Dual Laser : 5.8 KW, 19 A)
Gas Supply	Ar / N ₂
Oxygen Content	≤100 ppm
Dimension (W x D x H)	1750 x 799 x 1828 mm
Weight	900 kg
Software	EPControl, EP Hatch
Input Data Format	STL or other Convertible File

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

EP-M150

Dental Metal 3D Printer

High Efficient & Reliable & Save cost



EP-M150

Eplus3D EP-M150 uses a fiber laser to directly melt elemental or alloy metal powders to form dental restorations, like crowns, bridges and partials. Featuring a short production time, low operation cost and high quality, EP-M150 is an ideal choice for dental clients worldwide.

HIGH EFFICIENCY

It only takes around 5.5 hrs to print a full plate of teeth (around 220 crowns) , around 8 hrs to print a full plate of partials (around 25 pcs.).

HIGH QUALITY & FINE DETAILS

Thanks to self-developed optical path system and professional high-precision correction method, EP-M150 guarantees high printing quality.

CONVENIENT OPERATION

- “One-click printing” makes sure people can operate EP-M150 very easily.
- Optimized structure design allows easier maintenance.

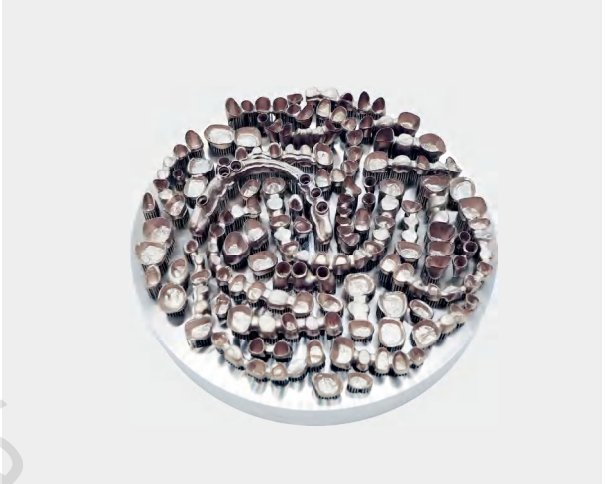
LOW OPERATION COST

- Improved powder feeding and sieving system enables a high material utilization rate : approx. 550 crowns printed only by 1 kg powder.
- Optimized chamber structure and excellent sealing proper ties minimize gas consumption: gas consumption <0.2 L/min (printing period).

HIGH SAFETY

- EP-M150 integrates more than 10 security technologies to enhance overall safety.
- Working environment and real-time gas monitoring helps to ensure high equipment safety.

APPLICATIONS



EP-M150

PARAMETER

Machine Model	EP-M150
Build Volume (X x Y x Z) (height incl. build plate)	Φ 150 x 100 mm (Φ 5.91 x 3.94 in)
Optical System	Fiber Laser, 200 W (single or dual-laser optional)
Spot Size	40 - 60 μm
Max Scan Speed	8 m/s
Theoretical Printspeed	Up to 35 cm ³ /h
Layer Thickness	20 - 50 μm
Material	Titanium Alloy, Cobalt Chrome.
Power Supply	220 V, 2.5 KW, 14 A, 50 ~ 60 Hz (Dual Laser : 3.5 KW, 19 A)
Gas Supply	Ar / N ₂
Oxygen Content	≤100 ppm
Dimension (W x D x H)	1750 x 810 x 2190 mm
Weight	900 kg
Software	EPControl, EP Hatch
Input Data Format	STL or other Convertible File

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EP-M150Pro

High Speed & High Precision
Metal Additive Manufacturing Equipment



EP-M150Pro

EP-M150Pro adopts metal powder bed selective melting MPBF™ (Metal Powder Bed Fusion) technology, single and dual-laser printing modes are optional, supporting 200 and 500 W laser, which can be perfectly used for the rapid production of high performance, high-precision parts. Compatible with most popular metal powder materials, including titanium alloy, aluminum alloy, nickel-based superalloy, maraging steel, stainless steel, cobalt, chromium alloy, ect. It has been applied in versatile applications such as industrial manufacturing, medical, education, dental, materials development, etc.



» HIGH PERFORMANCE

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- Volatility of mechanical properties < 5%.
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« HIGH PRECISION

- High laser beam quality.
- Tiny laser spot.
- High consistency and uniform laser beam quality from different positions in the building platform.

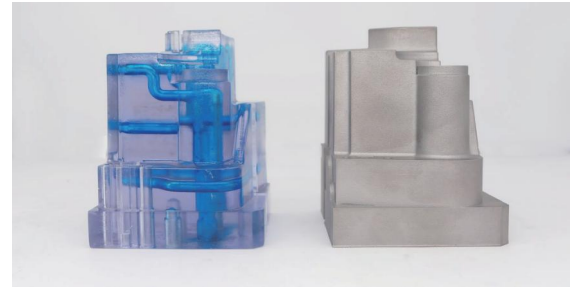


« HIGH EFFICIENCY

- The layer thickness can be up to 100 μm .
- With the latest upgraded technology combining dual-laser with large layer thickness mode, the productivity has been risen accordingly.

» OPENNESS

- High consistency, different machines could use the same set of process parameters.
- Machine compatible with multiple materials, the same machine can print multiple materials without adjusting the optical path.



2 minutes quick operation



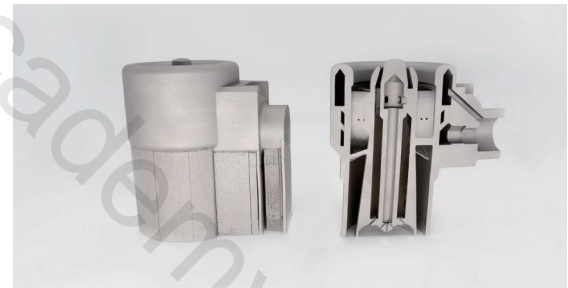
One-click printing

» AFFORDABLE OPERATION COST

- Air consumption during processing < 3 L/min.
- Powder supply is accurate, stable and controllable, and high utilization rate of powder.
- The existing material parameter packages are provided for free.

« USER FRIENDLY OPERATION SYSTEM

- Ergonomics overall design for users.
- With "one-click printing" function, each process is ready to run, click the "print" button on the screen to start printing.
- The replacement of building plate and recoater can be completed within 10 minutes.



Safety Design



Anti-electric Shock



Prevention of Misoperation



Fire Prevention



Anti-pollution



Working Environment Monitoring



Gas Source Status Monitoring



Anti-waste

« SAFER

- Safety design, anti-misoperation, anti-electric shock, fire prevention, anti-waste, anti-pollution.
- Real-time monitoring and traceable of working environment and gas source status, safe and reliable.

EP-M150Pro

PARAMETER

Machine Model	EP-M150 Pro
Build Volume (X x Y x Z) (height incl. build plate)	Φ 150 x 225 mm (Φ 5.91 x 8.86 in)
Optical System	Fiber Laser, 500 W (single or dual-laser optional)
Spot Size	70 μm
Max Scan Speed	8 m/s
Theoretical Printspeed	Up to 55 cm ³ /h
Layer Thickness	20 - 100 μm
Material	Titanium Alloy, Aluminum Alloy, Nickel Alloy, Maraging Steel, Stainless Steel, Cobalt Chrome, Copper Alloy, etc.
Power Supply	380 V, 3P / N / PE, 12 KW, 23 A, 50 ~ 60 Hz (Dual Laser : 13.5 KW, 28 A)
Gas Supply	Ar / N ₂
Oxygen Content	≤100 ppm
Dimension (W x D x H)	2120 x 980 x 2250 mm
Weight	1500 kg
Software	EPControl, EP Hatch
Input Data Format	STL or other Convertible File

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EP-M260

High Efficiency & Scale Production
Metal Powder Bed Fusion



EP-M260

EP-M260 is an industrial metal 3D printer that uses advanced metal powder bed fusion (MPBF) technology. It is capable of easily and quickly converting CAD data into high-performance, complex structure metal parts. The 3D printer is an ideal choice for medium sized parts and small batch production.



« CONSISTENT PERFORMANCE

- Innovative gas flow management and optimized filter system ensure a stable building environment.
- Outstanding sealing capability optimizes oxygen content.
- Precise laser beam quality control.



« HIGH PRODUCTIVITY

- Dual-Laser system equipped with build volume of 260 x 260 x 390 mm (height incl. build plate).
- Non-stop operation during filter change.
- Optimized recoating strategy shortens coating time.



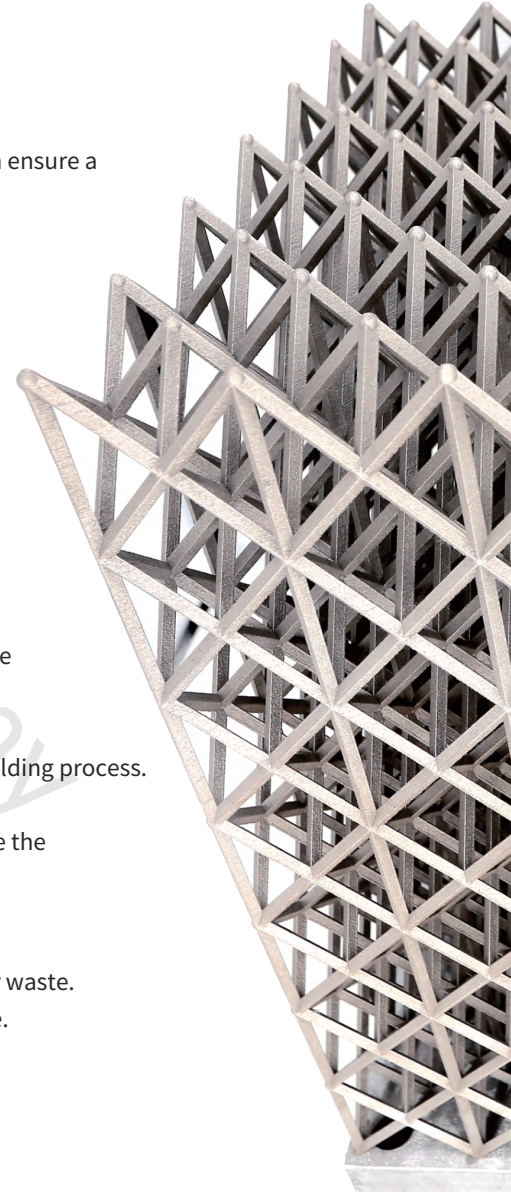
« RELIABLE AND EASY OPERATION

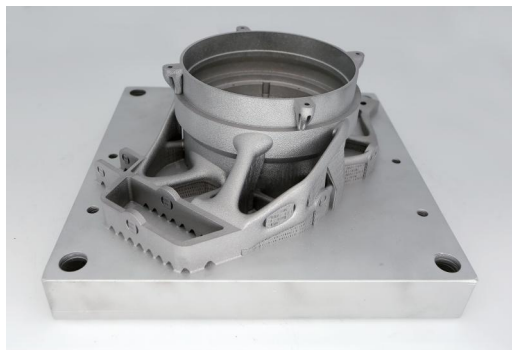
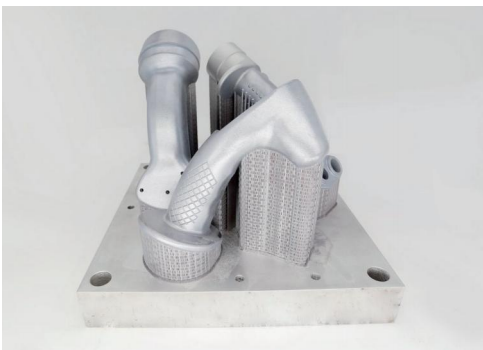
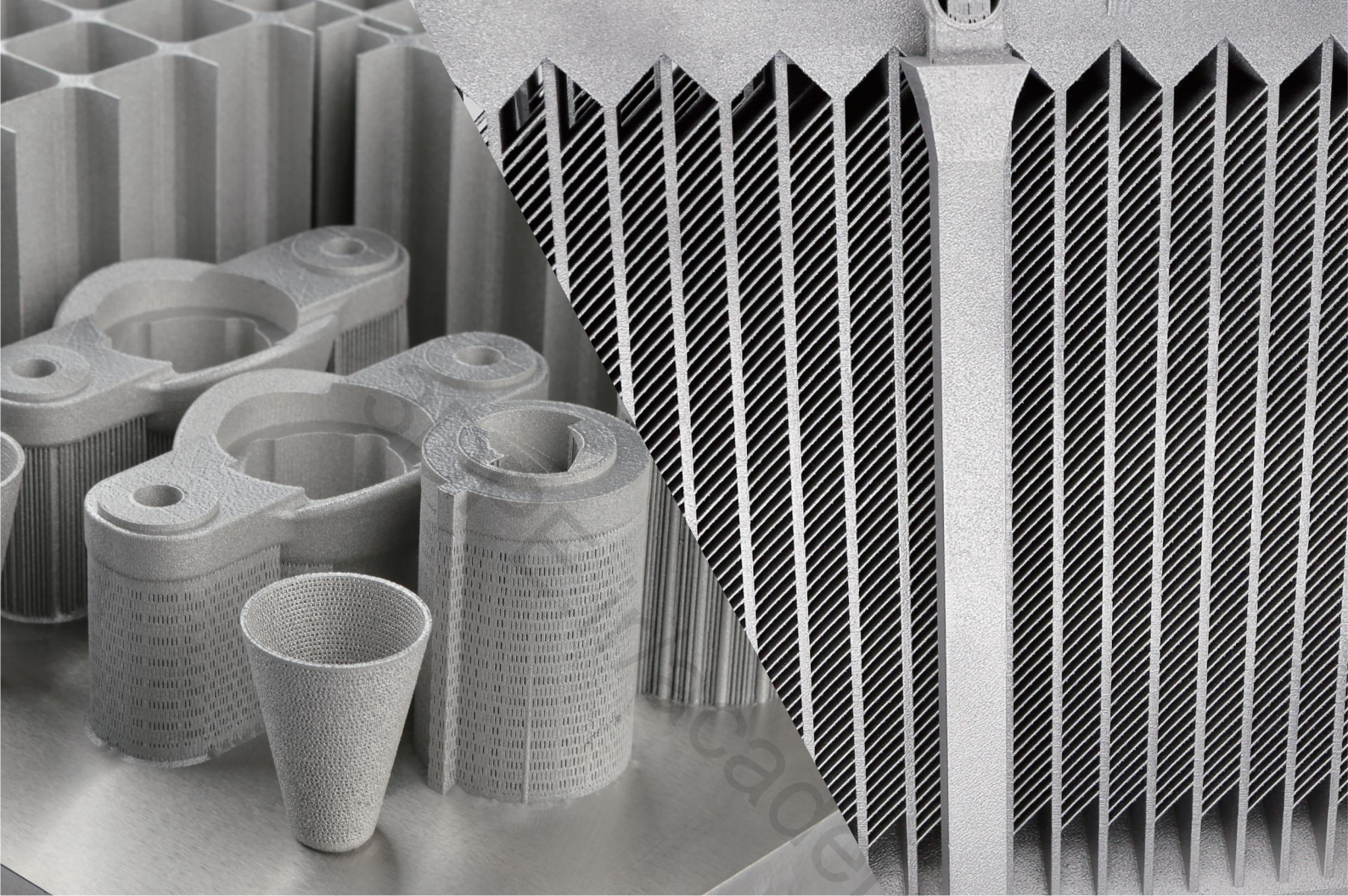
- Convenient powder recycling systems and glove box structure minimize powder contact.
- Intelligent software ensures less human intervention.
- Real-time monitoring of the production environment and building process.
- Double locking from mechanical lock to improve safety.
- Alarming when the access door is open abnormally, to ensure the safety of use.



« LOW OPERATION COST

- Quantitative powder feeding and coating ensure less powder waste.
- Advanced filtration system significant increases filter lifetime.
- Low inert gas consumption during purging and operation.





EP-M260

PARAMETER

Machine Model	EP-M260
Build Volume (X x Y x Z) (height incl. build plate)	260 x 260 x 390 mm (10.24 x 10.24 x 15.35 in)
Optical System	Fiber Laser, 500 W / 700 W (single or dual-laser optional)
Spot Size	70 - 100 μm
Max Scan Speed	8 m/s
Theoretical Printspeed	Up to 55 cm^3/h
Layer Thickness	20 - 120 μm
Material	Titanium Alloy, Aluminum Alloy, Nickel Alloy, Maraging Steel, Stainless Steel, Cobalt Chrome, Copper Alloy, etc.
Power Supply	380 V, 24 A, 50 / 60 Hz, 5 kW
Gas Supply	Ar / N ₂
Oxygen Content	≤ 100 ppm
Dimension (W x D x H)	2800 x 1300 x 2410 mm
Weight	2300 kg
Software	EPControl, EP Hatch
Input Data Format	STL or other Convertible File

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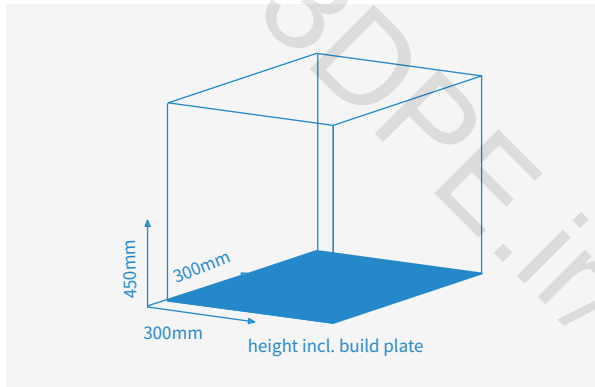
EP-M300

High Productivity Metal AM Machine
Metal Powder Bed Fusion



EP-M300

Eplus3D introduces EP-M300 to the successful line of MPBF™ metal AM solutions. The new EP-M300 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.

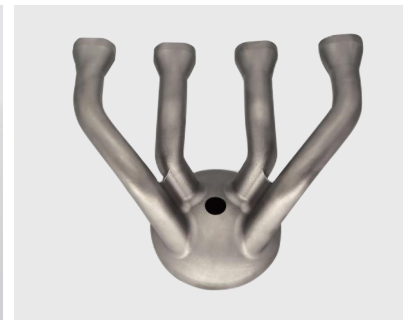


« OPTIMIZED MECHANICAL DESIGN

- Big building chamber , single or dual laser optional.
- User friendly, dual filter systems, high security.
- Various of performance recoating blades available.

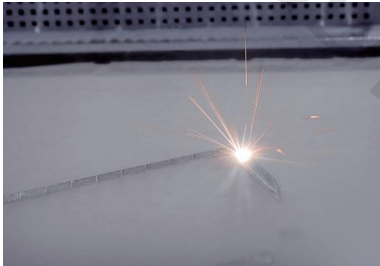
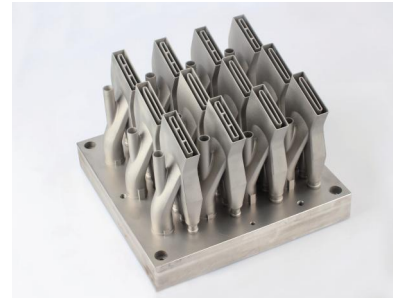
» OPEN SYSTEM

- Open parameters for editing laser power, scan speed, scan direction, up and down facing surfaces etc.
- Open system ensures free choice among a wide range of metal powders in the market.
- Various material parameter packages available.
- Process software supports SLC and CLI formats.



» HIGH QUALITY

- High density and less deviation of the printed parts.
- The optimized gas flow design ensures efficient removal of smoke and splatter as well as achievement of uniform and consistent full size printing.
- Dynamic software with ability to divide the model into different sections like upper and lower surfaces, core areas and small areas etc.



« RELIABLE & HIGH SAFETY

- Excellent core optic components from world-class suppliers and mature process control parameter algorithm provides highest part quality.
- High quality uniform part printing due to excellent control over building environment and components.
- Double locking from mechanical lock to improve safety.
- Alarming when the access door is open abnormally, to ensure the safety of use.
- Two-glove structure of the access door makes it possible to operate without opening the door.

» HIGH EFFICIENCY

- Build volume (X x Y x Z) is up to 300 x 300 x 450 mm (height incl. build plate).
- Printing with increased layer thickness can be realized to improve production capacity.
- With in-house developed processing software (EP-Hatch), optimized scanning strategies can be achieved yielding reduced print duration.



« COST-EFFECTIVE & EASY OPERATION

- Blowback enabled coarse and fine gas-filtration system with 1500 hours.
- Highly user friendly software interface and one-click printing technology makes printing super simplified.
- Reduced gas consumption during printing ≤ 6 L/min helps reducing operation cost.

EP-M300

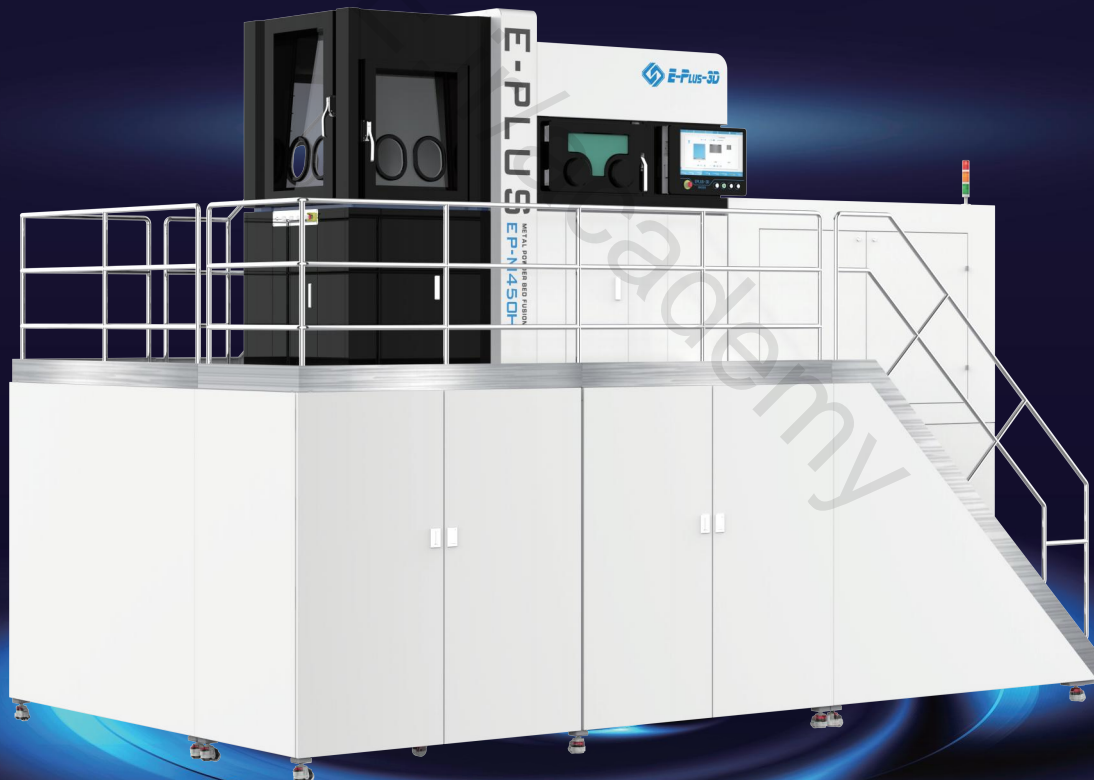
PARAMETER

Machine Model	EP-M300
Build Volume (X x Y x Z) (height incl. build plate)	300 x 300 x 450 mm (11.81 x 11.81 x 17.72 in)
Optical System	Fiber Laser, 500 W / 1000 W (single or dual-laser optional)
Spot Size	70 - 120 μ m
Max Scan Speed	8 m/s
Layer Thickness	20 - 120 μ m
Theoretical Printspeed	Up to 95 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, 7 kW
Gas Supply	Ar / N ₂
Oxygen Content	≤100 ppm
Dimension (W x D x H)	2990 x 1320 x 2590 mm
Weight	2900 kg
Software	EPControl, EPatch
Input Data Format	STL or other Convertible File

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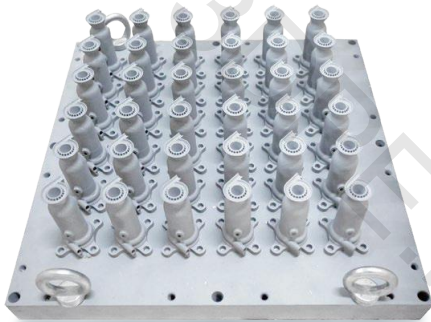
EP-M450H

Large Size & High Speed & Reliable Production
Metal Additive Manufacturing System



EP-M450H

Eplus3D Introduces EP-M450H to the successful line of MPBF™ 3D printers. EP-M450H 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.



Multi-oil pipeline assembly parts
IN718
420 X 420 X 110 mm



Engine turbine casing assembly
IN718
φ 410 X 240 mm



Engine leaf ring structure
316L
φ 400 X 60 mm



TC4 titanium alloy
φ 393 X 340 mm



« 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.
- Dynamic software with ability to divide the model into different sections like upper and lower surfaces, core areas and small areas etc. Different process parameters can be applied individually to these parts for high printed part quality.
- Repeatable positional accuracy along Z-axis of building direction $\leq \pm 5 \mu\text{m}$.
- Overlapping deviation with dual laser printing $\leq \pm 0.1 \text{ mm}$. Overall mechanical properties of the printed part remains same when compared to printing results with the single laser machine.



« HIGH EFFICIENCY

- Build volume (X x Y x Z): 450 x 450 x 1080 mm (height incl. build plate), build chamber volume > 200 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.
- Bi-directional powder re-coating method leads to reduced re-coating time.



« 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

- Two-stage filtration system with permanent filter can use blow back function to remove the fume.
- 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.
- Reduced gas consumption during printing ≤ 12 L/min helps reducing operation cost.
- 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-M450H

PARAMETER

Machine Model	EP-M450H
Build Volume (X x Y x Z) (height incl. build plate)	450 x 450 x 1080 mm (17.72 x 17.72 x 42.52 in)
Optical System	Fiber Laser 500 W / 2 x 500 W / 4 x 500 W (700 W and 1000 W are optional)
Spot Size	70 - 130 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, 35 A, 50 / 60 Hz, 23 kW
Gas Supply	Ar / N ₂
Oxygen Content	≤ 100 ppm
Dimension (W x D x H)	6410 x 3670 x 4850 mm
Weight	15000 kg
Software	EPControl, EP Hatch
Input Data Format	STL or other Convertible File

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EP-M450

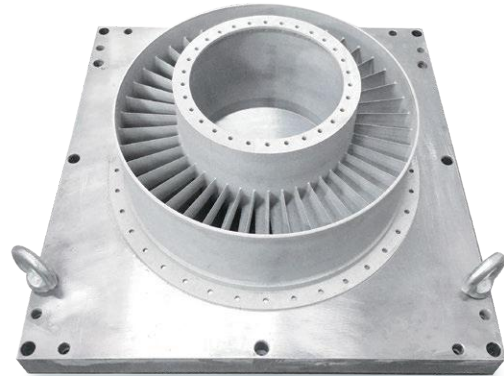
Large Size & High Speed & Reliable Production
Metal Additive Manufacturing System



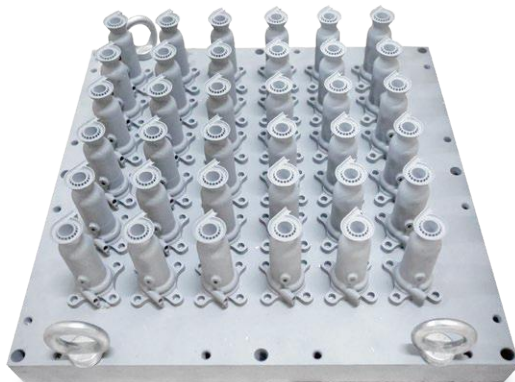
EP-M450

Eplus3D Introduces EP-M450 to the successful line of MPBF™ printers. EP-M450 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.

With its user friendly software interface, one click printing ability and optional single/dual/quad 500 Watt fiber lasers, EP-M450 takes digital additive manufacturing one step ahead in the field of large scale industrial applications.



Engine turbine casing assembly
IN718
 Φ 410 x 240 mm



Multi-oil pipeline assembly parts
IN718
420 x 420 x 110 mm



Mass production of intricate parts
achieved with single print

EP-M450 is a highly efficient large scale production oriented metal 3D printer which offers bi-directional powder re-coating and high part building speed up to 55 cm³/h. Eplus3D's complete open system makes EP-M450 a very powerful tool for large scale manufactures as they have complete freedom to choose their print strategies with different metal powders like stainless steel, titanium, aluminum and nickel alloys, etc, which prominently reduces the overall cost of ownership.

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-M450 makes sure its owners remain one step ahead in their field of engagement.



High quality large ejector cap with complex internal structures



Engine leaf ring structure

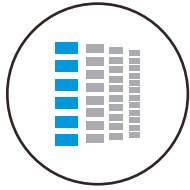
316L

Φ 400 x 60 mm



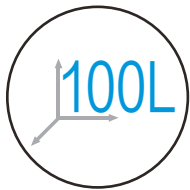
Ti6Al4V

Φ 394 x 341 mm



« 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.
- Dynamic software with ability to divide the model into different sections like upper and lower surfaces, core areas and small areas etc. Different process parameters can be applied individually to these parts for high printed part quality.
- Repeatable positional accuracy along Z-axis of building direction $\leq \pm 5 \mu\text{m}$.
- Overlapping deviation with dual laser printing $\leq \pm 0.1 \text{ mm}$. Overall mechanical properties of the printed part remains same when compared to printing results with the single laser machine.



« HIGH EFFICIENCY

- Build volume (X x Y x Z): 450 x 450 x 500 mm (height incl. build plate), build chamber volume > 100 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.
- Bi-directional powder re-coating method leads to reduced re-coating time.



« 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 $\leq 100 \text{ ppm}$ 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

- Blow back enabled coarse and fine filtration system ensures prolonged lifetime of filter over 1000 hrs.
- 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.
- Reduced gas consumption during printing ≤ 6 L/min helps reducing operation cost.
- 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-M450

PARAMETER

Machine Model	EP-M450
Build Volume (X x Y x Z) (height incl. build plate)	450 x 450 x 550 mm (17.72 x 17.72 x 21.65 in)
Optical System	Fiber Laser 500 W / 2 x 500 W / 4 x 500 W (700 W and 1000 W are optional)
Spot Size	70 - 130 μ m
Max Scan Speed	8 m/s
Layer Thickness	20 - 120 μ m
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	380V, 30 A, 50 / 60 Hz, 13.3 kW
Gas Supply	Ar / N ₂
Oxygen Content	\leq 100 ppm
Dimension (W x D x H)	5670 x 3700 x 3325 mm
Weight	10000 kg
Software	EPControl, EP Hatch
Input Data Format	STL or other Convertible File

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EP-M650

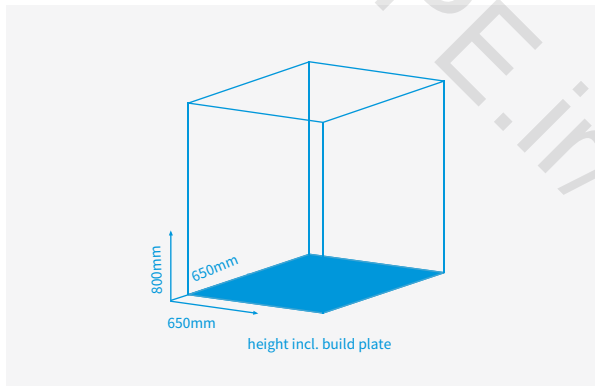
Quad Laser Large Size
Metal Additive Manufacturing System



EP-M650

Using MPBF (Metal Powder Bed Fusion) technology, EP-M650 is using a large building envelope and quad laser systems to ensure a high efficiency production. The precise positioning and innovative area splicing control technology offers uniformity and stability throughout the whole printing phase.

The system can operate with various metal powders such as titanium, aluminum and nickel-based alloys, maraging steel, stainless steel, chrome cobalt alloys and other materials. It is suitable for the direct manufacturing of large-size, high precision and high-performance parts in the aerospace, aviation, automotive and defense industry.



« HIGH EFFICIENCY & PRODUCTIVITY

- Printing of mass-individualized parts in the 340 Liter build chamber.
- Four lasers are printing simultaneously with speed up to 120 cm^3 , which increased efficiency of 3.5 times.
- Printing large layer thicknesses of more than 60 μm possible.

« STABLE QUALITY & GOOD CONSISTENCY

- Excellent high beam quality ($M2 \leq 1.1$).
- Accuracy deviation of lap area less than $\pm 0.1 \text{ mm}$.
- High parts accuracy in the overlap area of 0.1 mm.
- Optimized design of gas flow ensures the effective removal of dust and splatter.
- The strict calibration ensures the consistency between parts and batches.



» HUMANIZED DESIGN & HIGH AUTOMATION

- User-friendly interface with fully automatic one click printing function.
- The build job information is displayed in real time with traceable printing parameters report.
- The one-piece take out function ensures a high automation.



« REAL TIME MONITORING & HIGH SECURITY

- Safety design, prevent mis-operation, electric shock, fire, waste and pollution.
- Outstanding overall sealing performance, use and recovery of powder in a closed state.
- Environment and gas source state real-time monitoring, safe and reliable.

» PERFECT AFTER-SALE SERVICE

- We support our customers with technical consulting services, including data evaluation, application development.
- Assisting our customers in new material parameter development, existing parameter packages are provided free of charge.
- Free equipment installation and maintenance during warranty period, full set of technical training is provided.



Safe Design



Electricity-proof



Misoperating



Fire-proof



Anti-pollution



Environment
Real Time
Monitoring



Gas Real Time
Monitoring



Waste
Prevention

EP-M650

PARAMETER

Machine Model	EP-M650
Build Volume (X x Y x Z) (height incl. build plate)	650 x 650 x 800 mm (25.59 x 25.59 x 31.49 in)
Optical System	Fiber Laser 4 x 500 W / 4 x 700 W / 4 x 1000 W
Spot Size	70 - 120 μ m
Max Scan Speed	9 m/s
Layer Thickness	20 - 120 μ m
Theoretical Printspeed	Up to 190 cm ³ /h
Material	Titanium Alloy, Aluminum Alloy, Nickel Alloy, Maraging Steel, Stainless Steel, Cobalt Chrome, Copper Alloy, etc.
Substrate Heating	Substrate Heating Temperature 200 °C
Power Supply	380 V, 65 A, 50 / 60 Hz, 30 kW
Gas Supply	Ar / N ₂
Oxygen Content	≤100 ppm
Dimension (W x D x H)	6800 x 3945 x 3785 mm
Weight	15000 kg
Software	EPControl, EPatch
Input Data Format	STL or other Convertible File

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

EP-M1250

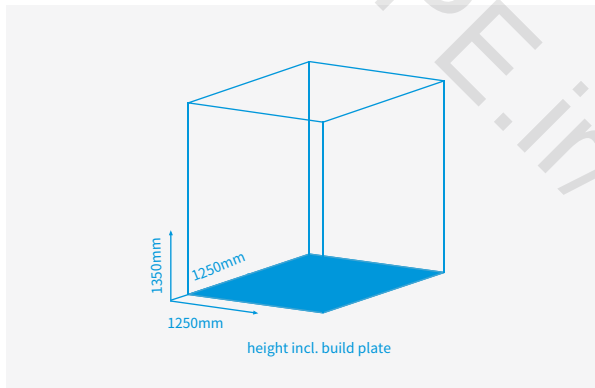
Nine Laser Large Format
Metal Additive Manufacturing System



EP-M1250

Using MPBF (Metal Powder Bed Fusion) technology, EP-M1250 is using a larger building envelope and nine-laser system to ensure a high efficiency production. The precise positioning and innovative area splicing control technology offers uniformity and stability throughout the whole printing phase.

The system can operate with various metal powders such as titanium, aluminum and nickel-based alloys, maraging steel, stainless steel, chrome cobalt alloys and other materials. It is suitable for the direct manufacturing of large size, high-precision and high-performance parts in the aerospace, aviation, automotive and machinery industry.

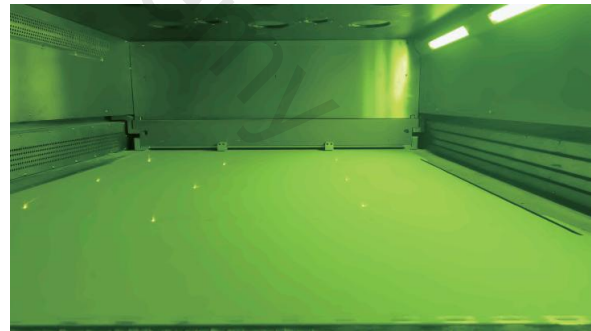


« RELIABLE & STABLE

- Tightly sealed build chamber maintains oxygen concentration ≤ 100 ppm and a stable pressure during printing.
- Environment and gas source state real-time monitoring, safe and reliable.

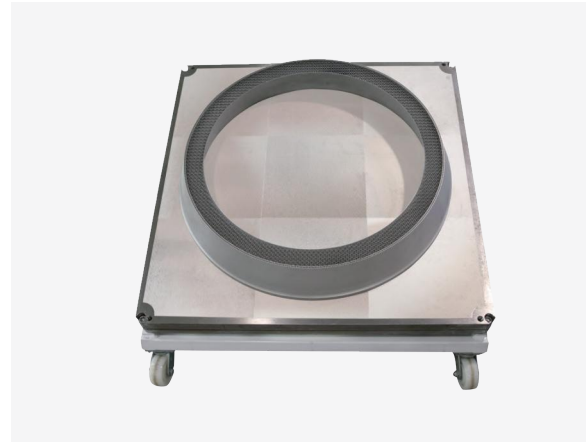
« HIGH EFFICIENCY & PRODUCTIVITY

- Printing of mass-individualized parts in the 2136 Liter build chamber.
- Each of the nine lasers covers its own area for maximum efficiency.
- Bi-directional powder re-coating method leads to reduced re-coating time.



» HIGH QUALITY

- Excellent high beam quality ($M2 \leq 1.1$).
- 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.
- The strict calibration ensures the consistency between parts and batches.



« EASY OPERATION

- Friendly user interface with fully automatic one click printing function.
- Two-stage filtration, which can use blow back function to remove the fume, equipped with permanent filter element.
- The build job information is displayed in real time with traceable printing parameters report.

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EP-M1250

PARAMETER

Machine Model	EP-M1250
Build Volume (X x Y x Z) (height incl. build plate)	1250 x 1250 x 1350 mm (49.21 x 49.21 x 53.15 in)
Optical System	Fiber Laser 9 x 500 W / 700 W / 1000 W
Spot Size	70 - 120 μ m
Max Scan Speed	8 m/s
Layer Thickness	20 - 120 μ m
Theoretical Printspeed	Up to 370 cm ³ /h
Material	Titanium Alloy, Aluminum Alloy, Nickel Alloy, Maraging Steel, Stainless Steel, Cobalt Chrome, Copper Alloy, etc.
Substrate Heating	Substrate Heating Temperature 200 °C
Power Supply	380 V, 100 A, 40 kW, 50 / 60 Hz
Gas Supply	Ar / N ₂
Oxygen Content	≤100 ppm
Dimension (W x D x H)	9000 x 4800 x 6300 mm
Weight	50000 kg
Software	EPControl, EP Hatch
Input Data Format	STL or other Convertible File

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