EPLUS3D Additive Solution

Power to Additive Industry

Version: 2021.03

About EPLUS 3D

- Founded in 2014, 150+ people in Beijing and Hangzhou, 45% are R&D staff.
- Laser Based AM technology: MPBF, SLS, SLA.
- Core R&D team has been dedicating to 3D technology for over 25 years.

EPLUS3D Products Line Up

EP-C3650

EP-C5050

EP-C7250

SLS printers (wax/sand)

EP-M250

SLM printer

EP-M150

SLM printer

EP-M450

SLM printer

1993

2015.3

2015.5

2015.12

2016.2

2017.5

2018.11

2018.12

2019.6

2020.6

First SLS machine in China

EP-A450

EP-A650

SLA printers

EP-P3850

SLS printer（Nylon）

EP-M100T

SLM printer

EP-M250Pro

SLM printer

EP-M650

SLM printer

E-Plus-3D®

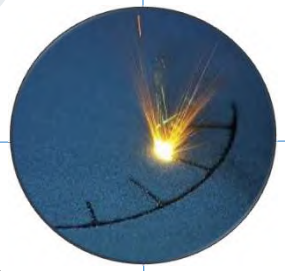
EPLUS AM Technologies

SLM

Metal Powders + fiber laser

SLS Pattern

Sand + CO_2 laser



SLS Polymer

Polymer + CO2 laser

SLA

resin + UV laser

MPBF

Metal Powder Bed Fusion

Products Portfolio

M150

M260

M450

M150Pro

M250Pro

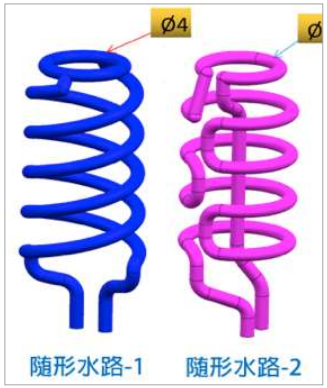
M650

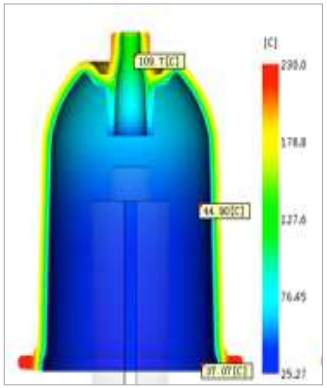
Typical Application-Tooling Mold

A cupping manufacturer used EPLULS 3D EP-M250 SLM 3D printer to produce injection molds with conformal cooling channels. 3D printed metal molds with conformal cooling channels cannot only meet the requirements of injection molding process but only have more performance advantages over traditional molds, improving the injection efficiency as well as the quality of the final injection molding products.

Technology: Metal 3D Printing **Material**: MS1

Device: EP-M250, EP-M150PRO, EP-M250PRO

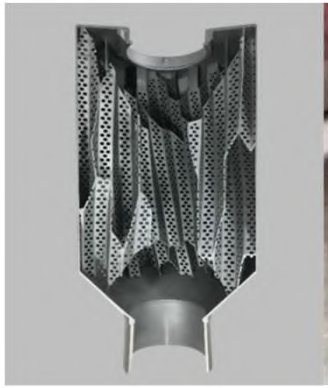




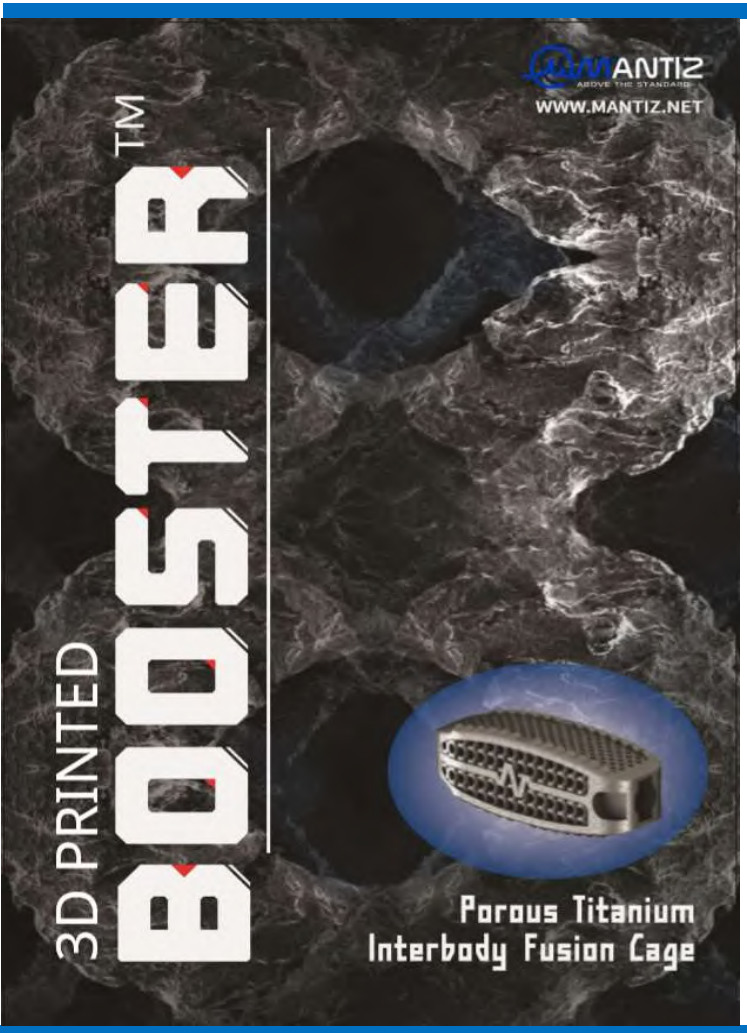
Typical Application-Automotive

A company has successfully customized an auto exhaust pipe printed by EPLUS 3D EP-M250 metal 3D printer and the exhaust pipe has been used in a Ford Mustang car for assembly trial. The exhaust pipe consists of three parts, the connecting rod, gas heave and exhause. Eplus3D provides the entire solution across from design to final production.

Technology: Metal 3D Printing
Material: Stainless steel
Device: EP-M250 metal 3D printer



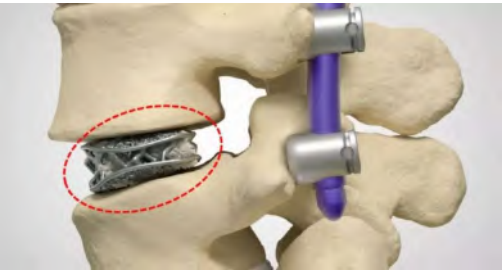
Typical Application-Medical



MANTIZ is using the EP-M250 metal 3D printer to manufacture the Titanium 3D printed cages and use them in the implant surgery. MANTIZ started the development of their 3D Printed Cage implants in 2018 with the approval and funding of their government. In May of 2019, they launched PANTHER 3D printed cage system for PLIF (posterior lumbar interbody fusion) /TLIF / OLIF / ALIF surgery. This process would use their 3D printed cage implants without the need of outsourcing the production process to a 3rd party. This in turn saves the clients time, money, and the reduces the chances of mistakes in production.

Technology: Metal 3D Printing **Material**: Titanium

Device: EP-M250 , EP-M150, EP-M150PRO



Typical Application-Dental

Dentistry is a mature industry for metal 3D printing, Eplus3D has helped over hundreds of dental lab to save production time and cost with metal 3D printing technology. Our machine is able to deliver a stable and quality machine performance to our customer with economical dental solutions. Our applications are including dental restorations, partial frameworks, dental crown, etc.

Technology: Metal 3D Printing **Material**: CoCr. TC4

Device: EP-M150T, EP-M250

Typical Applications in Aerospace

Fuel supply Device

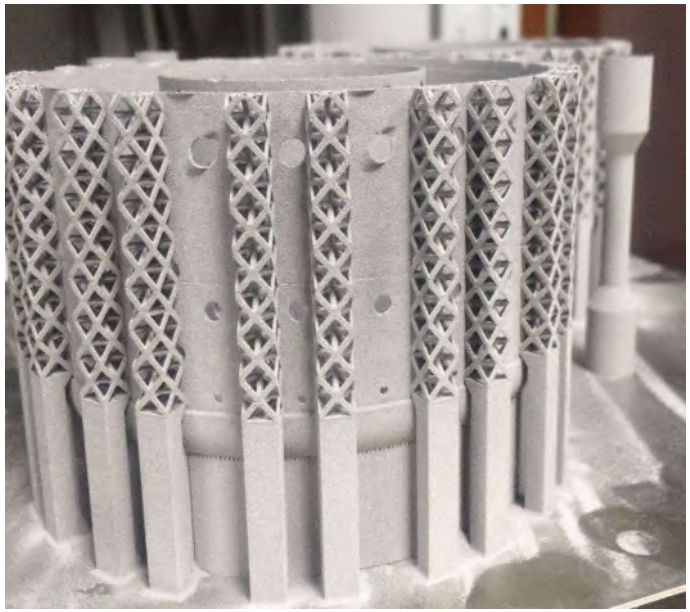
The bottom of part has 1mm pipelines evenly distributed, which is difficult to shape using the traditional way. Fuel gushes out through the bottom and becomes atomization. By this way it improves the combustion efficiency of nearly 7%.

Technology: Metal 3D Printing **Material**: 316L

Device: EP-M250, EP-M250Pro, EP-M260

Typical Applications in Aerospace

Eplus3D working with various aerospace companies, who using EP-M machines to produce different components.



Combustion cylinder shell

Technology: Metal 3D Printing **Material:** IN625

Device: EP-M250, EP-M250Pro, EP-M260, EP-M450

Engine component

Technology: Metal 3D Printing **Material:** IN625

Device: EP-M250, EP-M250Pro, EP-M260, EP-M450, EP-M650

PPBF

Polymer Powder Bed Fusion

Products Portfolio

SLS For Polymer

P3850

P420

SLS For Casting

C5050

C7250

Typical Application-Function Prototypes

Electric tool

Size：203 x 155 x 198mm

Process：SLS

Material：PA12

Process time：15h

Material consumption：2kg

Solution：Nylon production by SLS process , with higher strength than Traditional craft. Which can be used as functional test.

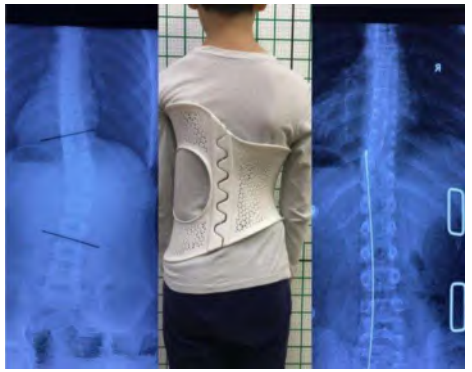
Typical Application-Rehabilitation

Scoliosis orthosis

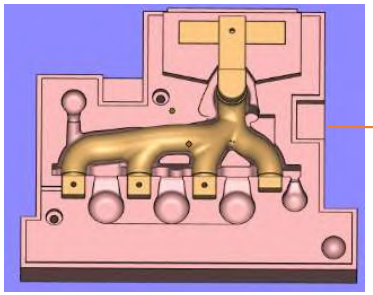
Material: TPT

Process: Selective Laser Sintering

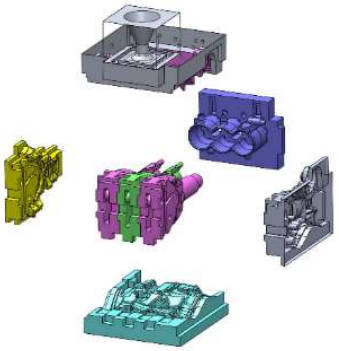
Introduction: Used to relieve local pain in spine and protect from further damage, support paralysis muscles and prevent and correct deformities.



Typical Application-Rapid Sand Casting Process



CAD Design **Rapid prototyping –sand die** **casting part**



Typical Application-Rapid Sand Casting Process

3D printing+ Casting

3D printed sand mold

Sand casting QT exhaust pipe

- **Delivery time 7~10 days**
- **Significant cost saving on mold**
- **Cost-Effective method for complex and thin-wall parts.**

SLA

Stereolithography

Products Portfolio

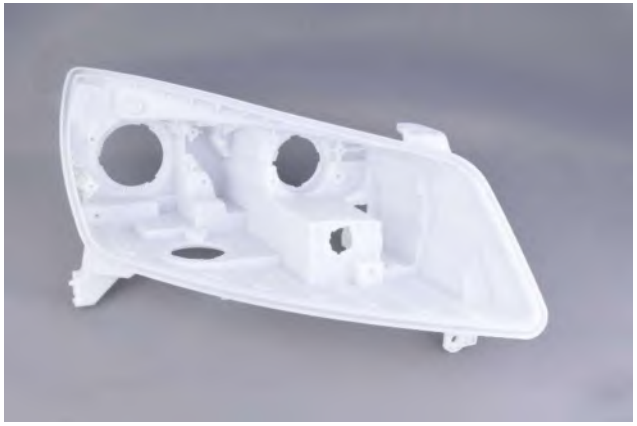
A350

A450

A650

A800

Typical Application-Rapid Prototypes

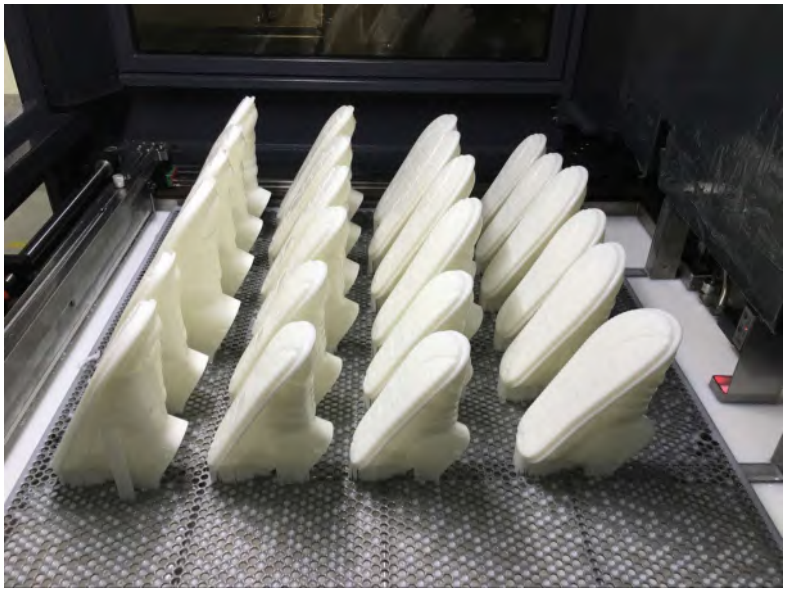


Prototype of car headlight

Typical Application-Shoe Mold

CNC Shoe Mold
7-8 hrs per pair

3D Printed Shoe Mold
Half the time



Shoe Mold Batch
50 hrs

Typical Application-Tooling

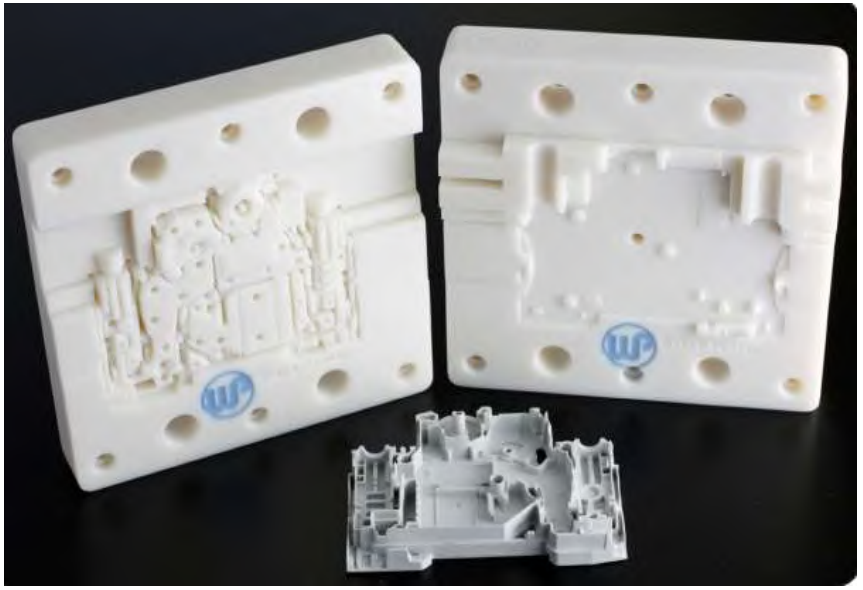
Injection Low Run Molds

Printing Material: somos preform

Temperature: Up to 300 ℃

Injection Material: ABS　PP　PE

Can inject up to 50 pieces, for small batch production or mold testing.

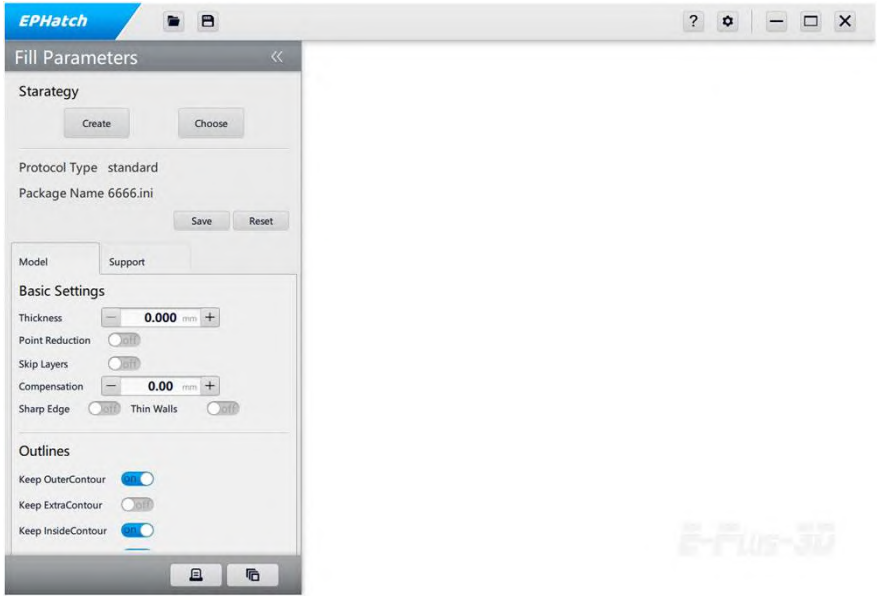


Material: PA6　　270℃　　50 Pieces

Intelligent Software

Data Preparation Software-EPHATCH

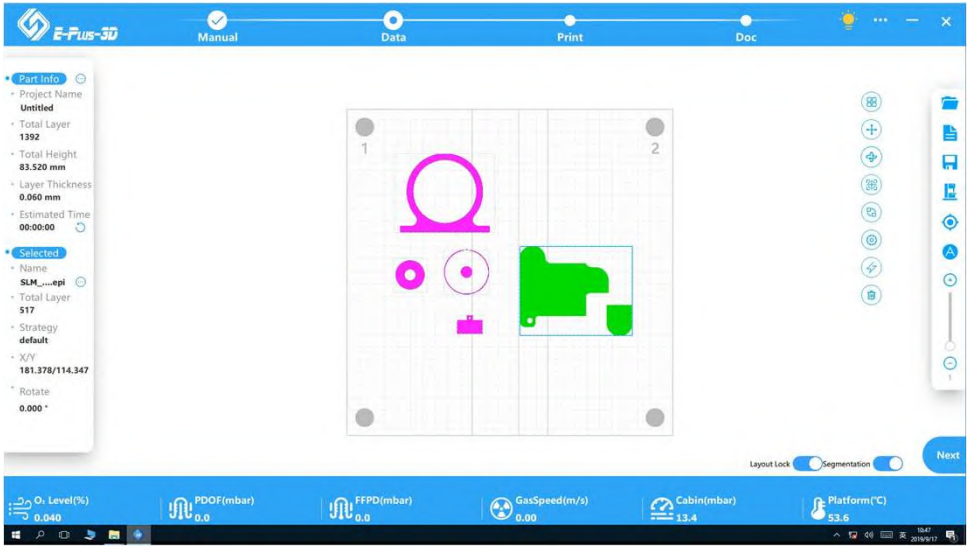
- ✓ **A Self-Developed Data Preparation Software before printing**
- ✓ **Optimize the printing path**
- ✓ **Saving the cost around 14,000USD (Simliar to Magics BP module)**



- Various scanning methods
- Independent parameter setting for partitioned area
- Internal scanning path analog display
- Open parameter setting on laser and galvanometer
- Print with different layer thickness on one part
- Interlayer printing on support
- Automatic point reduction for outline optimization.

Machine Control Software-EP Control

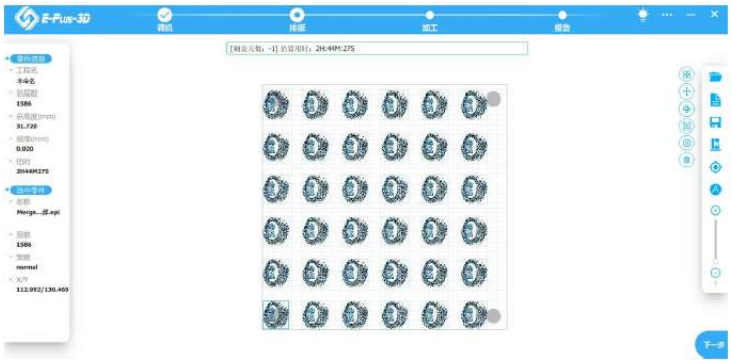
- ✓ **A smart and intuitive machine operation software**
- ✓ **New UI design with a touchable screen**
- ✓ **Easy operation**



- ➢ Import, save and copy of processing file
- ➢ Change part position
- ➢ Preview of part slicing on each layer
- ➢ Traceable report for documentation
- ➢ Real-time adjustment on printing parameter
- ➢ Alarm alert
- ➢ Real-time printing process display and processing time estimate

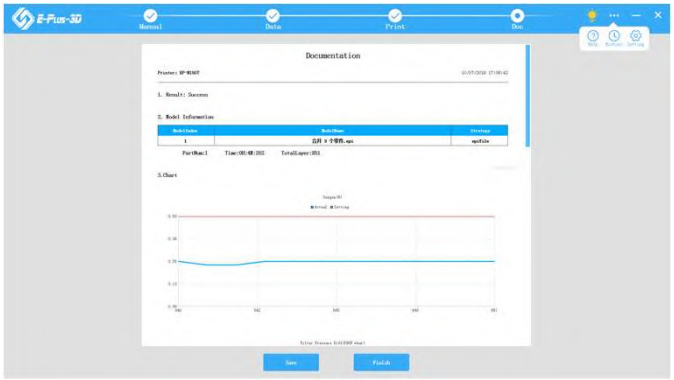
Software WorkFlow

1. Manual-Machine Preparation



2. Data-Open data

3.Print- One click print



4. Doc.- Print record

Software Partnership

EPLUS 3D Software Partners

Software Solution
For **Additive Manufacturing**

SIEMENS
Ingenuity for life

Siemens NX For
3D **Additive**
Manufacturing

materialise

Materialise
Magics

VOXEL DANCE

Voxel Dance
Additive

IOT Program

Direct Manufacturing for the future

IoT Interface for Industry 4.0

Create values for cusotmers

Industrial Manufacturing

Medical

Education

Consumption

Aviation

...

Power To Additive Industry

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