

Avimetal-MT450M

Laser Powder Bed Fusion Equipment

Industrial Metal 3D Printer

Compact & High-Efficiency

For 3C, Molds & More

ISO CE FDA SIL



Large-Format Compact Build

450×400×400mm
Compact footprint,
maximum space efficiency,
boosted productivity


Standard 6-Laser System

Ultra-high printing efficiency
Fully meets diverse
production requirements


60/80μm Selectable Spot Size

Switchable large/
small spots
Balances precision and
efficiency for high-quality,
high-speed printing


High-Efficiency Circulating Filtration

Permanent filter cartridge
High filtration efficiency,
low gas consumption,
worry-free long-term operation


Fully Open Core Parameters

Laser power, scanning
speed, etc.
Fully adjustable for flexible
process customization


Full-Process Real-Time Monitoring

Real-time recording, output and
self-diagnosis for end-to-end
forming process


Equipment Parameters

Build Material	Titanium Alloy, Superalloy, Aluminum Alloy, Cobalt-Chromium Alloy, Stainless Steel, Die Steel, Copper Alloy, High-Entropy Alloy, Refractory Metal, etc.		
Build Size ^①	450×400×400mm (X×Y×Z)	Recoating Mechanism	Uni/Bidirectional Variable-Speed Recoating
Laser System	500W×4 /×6	Gas Support	Ar/N ₂
Scanning System	High-Precision Scanning Galanometer	Working Oxygen Content	≤100ppm
Focusing System	F-theta Field Lens	Build Efficiency ^②	100cm ³ /h; 150cm ³ /h
Beam Quality	M ² ≤ 1.1	Host Dimensions	3450×1512×2337mm (L×W×H)
Beam Diameter	60 (or 80) ±3μm	Installation Dimensions	5550×3412×3200mm (L×W×H)
Maximum Scanning Speed	7m/s	Power Supply	AC380V
Layer Thickness	20~100μm	Power Consumption	18kW /19kW
Platform Preheating Temperature	RT+20℃~200℃	Equipment Weight	Approx.3600kg

^① Excluding the thickness of the build platform.

^② The building efficiency can vary due to differences in equipment configuration, process parameters, and the operating status of the laser.

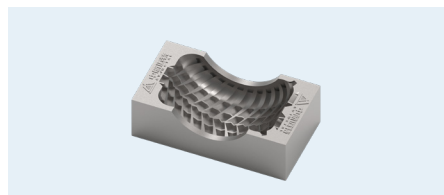
* The above data are obtained under AVIMETAL operating conditions. The final equipment parameters are subject to the actually sold products.



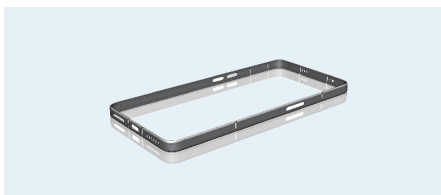
Application Areas

 Aerospace	 Automobile Manufacturing	 Industrial Mold	 Petrochemical Industry	 Nuclear Power
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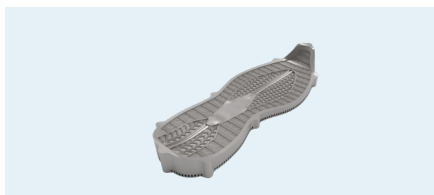
Application Cases



Tire Mold (MT-316L)



Mobile Phone Frame (MT-Ti6Al4V)



Shoe Mold (MT-316L)

Automatic Powder Supply Solution


MPC-Q30
Powder Cleaning Machine

MPS-JS30
Powder Collection Tank

MPS-BF30
Pump Powder Feeder

MSF-Z30
Powder Screening Machine

MPS-XH06
Integrated Circulating
Powder Path System

Parameter Smart Module

Standard Configuration: AVIMETAL-Pretreatment data preprocessing software, AVIMETAL-Control system (intelligent process diagnosis, real-time data tracking, real-time status monitoring), permanent dust removal.

Optional Configuration: 3D part reconstruction, powder spreading monitoring, automatic splicing, path planning, AVIMETAL-MES management system.

Consumables

Rubber scraper, metal build plate, passivant

Pre-Sales & After-Sales : Multi-location service support, 24x7 rapid response

 Customized Matching Specialized technical team supports deep customization	 Assembly & Debugging Standardized installation, rapid optical system calibration	 Personnel Training Comprehensive tiered training: operation, process handling, etc.
 Product Upgrades Equipment iteration services including supporting software	 Spare Parts Service Provides maintenance parts and consumables	 Operational Support On-site equipment inspection and maintenance by engineers

Materials

More than 200 alloy grade powder materials, including superalloys, titanium alloys, aluminum alloys, cobalt chromium alloys, stainless steels, die steels, high entropy alloys, refractory metals, and copper alloys, etc.

Process

Design Modeling → Structured Process → Forming Process → Process Control → Heat Treatment → Surface Treatment → Detection Analysis

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