AVIMETAL ADDITIVE

Print the Future
Beauty the World

Avimetal-MT450M

Laser Powder Bed Fusion Equipment

Industrial Metal 3D Printer | Compact & High-Efficiency | For 3C, Molds & More

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）
Laser System	500W×4 /×6
Scanning System	High-Precision Scanning Galanometer
Focusing System	F-theta Field Lens
Beam Quality	$M^2 \leq 1.1$
Beam Diameter	60 (or 80) ±3μm
Maximum Scanning Speed	7m/s
Layer Thickness	20~100μm
Platfom Preheating Temperature	RT+20℃~200℃

Recoating Mechanism	Uni/Bidirectional Variable-Speed Recoating
Gas Support	Ar/N_2
Working Oxygen Content	≤100ppm
Build Efficiency ②	100cm³/h; 150cm³/h
Host Dimensions	3450×1512×2337mm（L×W×H）
Installation Dimensions	5550×3412×3200mm（L×W×H）
Power Supply	AC380V
Power Consumption	18kW /19kW
Equipment Weight	Approx.3600kg

① Excluding the thickness of the build platform.
② The building eficiency can vary due to dilferences in equipment coniguration, 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.

Address: No.10 Kechuang 3rd Street, BDA, Beijing, China
Tel: +86 199 6194 0085 Email: contact@avimetalam.com Website: www.avimetalam.com/en/

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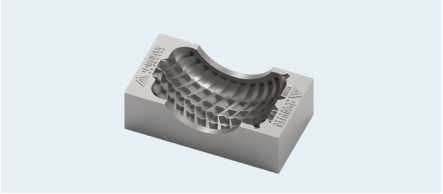
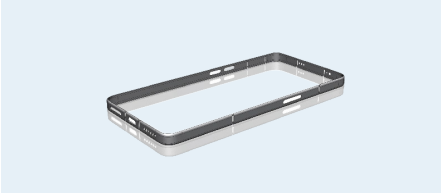
Application Areas

Aerospace	Automobile Manufacturing	Industrial Mold	Petrochemical Industry	Nuclear Power

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, 24×7 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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