AVIMETAL ADDITIVE

Print the Future
Beauty the World

Avimetal-MT450

Laser Powder Bed Fusion Equipment

Performance & Value Leader | Broad Compatibility | Optimized for Medium-to-Large Batch Production

High Quality Components
High-quality
Long-term stable operation

Innovative Powder Feeding Structure
Avoide malfunctions
Convenient powder replacement and cleaning

Multi Laser Premium Configuration
Greater increase in print efficiency to meet the demands of batch production

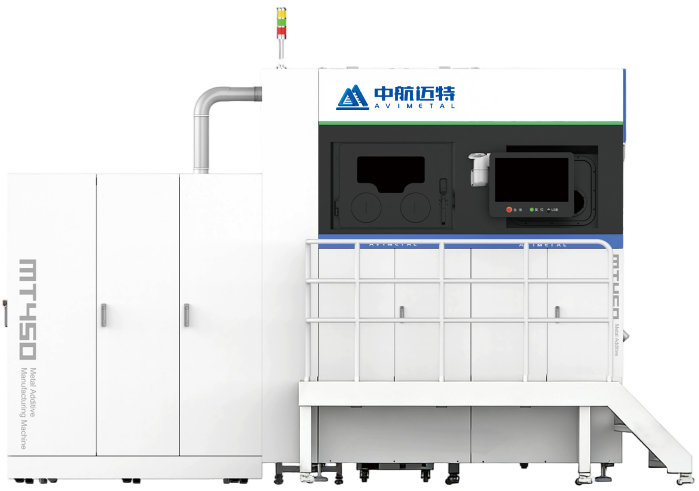
Built-in Independent Part Removal Chamber
One click translation to remove components
No contact for safe and efficient powder cleaning

Efficient Circulating Filtration System
Flexible configuration, optional for long-term or three-level filtering

Real-time Monitoring
Real-time recording, output, self-diagnosis

Open-source Parameters
Laser power, scanning speed, etc. are open and adjustable

HCI Friendly
Modular and compact design for easy use



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	450×450×500mm（X×Y×Z）
Laser System	500W×4
Scanning System	High-Precision Scanning Galanometer
Focusing System	F-theta Field Lens
Beam Quality	$M^2 \leqslant 1.1$
Beam Diameter	75~100μm
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	⩽500ppm
Build Efficiency ②	100cm^3/h
Host Dimensions	2585×1350×2930mm（L×W×H）
Installation Dimensions	5400×4000×3970mm（L×W×H）
Power Supply	AC380V
Power Consumption	18kW
Equipment Weight	Approx.4400kg

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.

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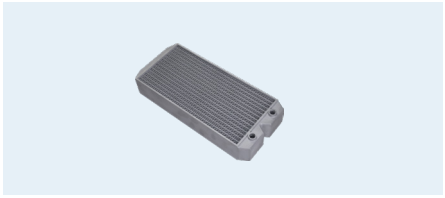
Application Areas

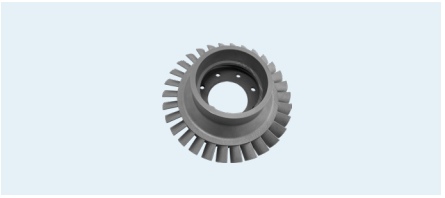
Aerospace | Automobile Manufacturing | Industrial Mold | Petrochemical Industry | Nuclear Power

Application Cases



Heat Exchanger(MT-316L)

Exhaust Nozzle(MT-IN718)



Engine Rotor(MT-Haynes 230)

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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