

Avimetal-MT650

Laser Powder Bed Fusion Equipment

Large-Scale Integrated Printing

Full-Frame Precision & Stability

Industrial-Grade Custom
Manufacturing


High Cost Performance

High quality laser
High cost-effectiveness
of the entire machine


Innovative Powder Feeding Structure

Avoids malfunctions
Convenient powder
replacement and cleaning

ISO CE Ex FDA SIL



Multi Laser Premium Configuration

Greater increase in print
efficiency to meet the
demands of batch
production


Independent Airtight Powder Cleaning Bin

Independent air-tight
system - safe & reliable
High-efficiency circulating
feeder - efficient & convenient


Efficient Circulating Filtration System

Flexible configuration,
optional for long-term or
three-level filtering

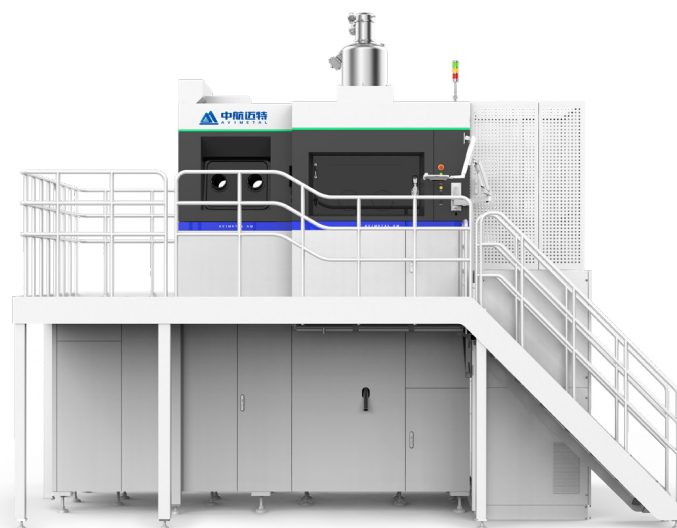

Real-time Monitoring

Real-time recording,
output, self-diagnosis


Open-source Parameters

Laser power, scanning
speed, etc. are open
and adjustable


Three Open Operating Spaces

Remove parts from the
outside of the cylinder
More convenient maintenance


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	650×650×800mm (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	5400×3920×4800mm (L×W×H)
Beam Diameter	70~120μm	Installation Dimensions	8400×6920×6000mm (L×W×H)
Maximum Scanning Speed	7m/s	Power Supply	AC380V
Layer Thickness	20~100μm	Power Consumption	≤30kW
Platform Preheating Temperature	RT+20℃~200℃	Equipment Weight	Approx.12000kg

^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



Exhaust Stack Support Journal (MT-IN718)



Casing (MT-Ti6Al4V)

Automatic Powder Supply Solution



MPC-Q100
Powder Cleaning Machine



MPS-JS100
Powder Collection Tank



MPS-BF100
Pump Powder Feeder



MSF-Z100
Powder Screening Machine



MPS-XH10
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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