

Avimetal-MT1550

Laser Powder Bed Fusion Equipment



Extra-Large Build Volume
1500×1500×1500mm
Ultra-large forming range



High-Quality Multi-Optical System
Premium optics,
high beam quality
Full-frame consistency ≤5%



Circulating Filtration System
Filtration efficiency
≥ 99.99%
Service life ≥ 50000h
High safety



Independent & Controllable
Independent R&D
of hardware & software
Fully self-controlled



Safe & Reliable
Multi-level safety
interlock mechanism
Real-time monitoring
of multiple technical
parameters



Worry-Free Production
Closed-loop powder
feeding, recovery
and sieving ensure stable,
continuous equipment
operation



Equipment Parameters

Build Material	Titanium Alloy, Aluminum Alloy, Superalloy, Cobalt-Chromium Alloy, Stainless Steel, Die Steel, Copper Alloy, etc.		
Build Size ^①	1500×1500×1500mm (X×Y×Z)	Recoating Mechanism	Uni/Bidirectional Variable-Speed Recoating
Laser System	500W×16 /x24	Gas Support	Ar/N ₂
Scanning System	High-Precision Scanning Galanometer	Working Oxygen Content	≤100ppm
Focusing System	F-theta Field Lens	Build Efficiency ^②	320cm ³ /h; 870cm ³ /h
Beam Quality	M ² ≤1.1	Host Dimensions	10000×6000×8500mm (L×W×H)
Beam Diameter	60~120μm	Installation Dimensions	12000×8000×12000mm (L×W×H)
Maximum Scanning Speed	14m/s	Power Supply	AC380V
Layer Thickness	20~100μm	Power Consumption	≤80kW
Platform Preheating Temperature	RT+20℃~200℃	Equipment Weight	Approx.40000kg

^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		Nuclear Power		Automobile Manufacturing
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Automatic Powder Supply Solution

	MPC-Q230 Powder Cleaning Machine		MPS-JS230 Powder Collection Tank		
	MPS-BF230 Pump Powder Feeder		MSF-Z230 Powder Screening Machine		MPS-XH16 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

Service : Multi branch service support and fast response

	Customized Matching Professional technical team provides maximum support for customization.		Assembly and Debuggin Standardized installation, quick completion of optical system debugging and calibration.		Personnel Training Comprehensive and systematic graded training, such as usage, operation and processing, etc.
	Product Upgrade Provide device update services, including software support services.		Spare Parts Service Provide equipment maintenance related accessories and consumables to customers.		Operations Support Engineers regularly inspect and maintain equipment.

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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