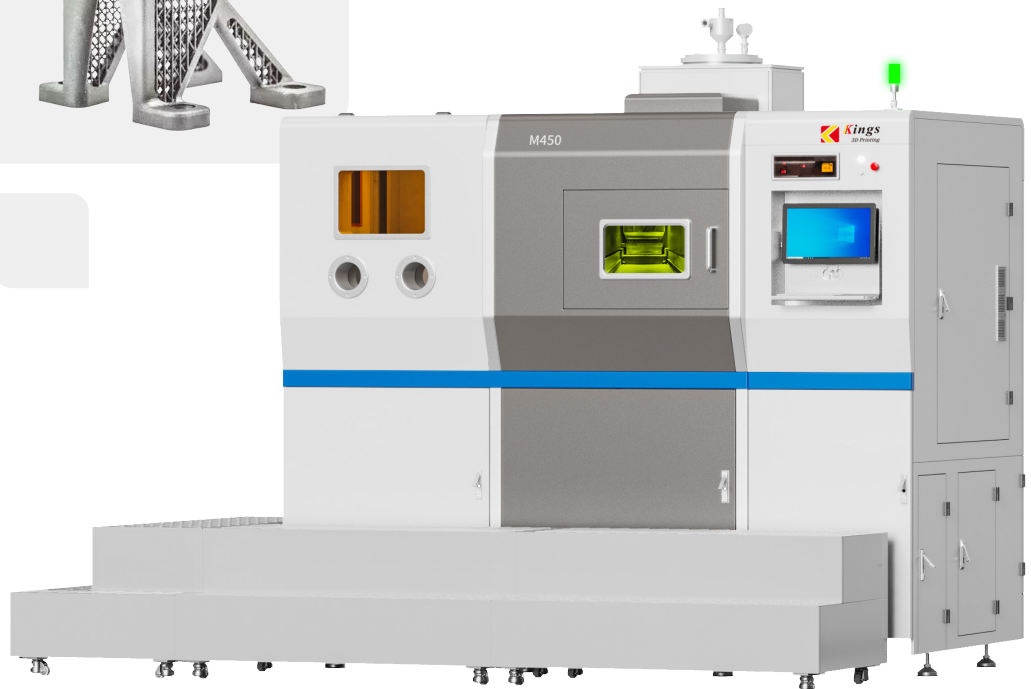


KINGS M450

Kings Industrial SLM 3D Printers

2 Laser 2 galvanometer Large Size Metal 3D Printing
Equipment on the Same Radial Surface







KINGS M450

Kings

◆ Overview

Kings M450 is a high-efficiency solution launched by KINGS 3D for large-scale metal 3D printing applications. Multi-laser and multi-galvanometer systems are combined on the same platform, improving printing efficiency by more than 80%. For the first time, an entirely closed-loop powder handling system is adopted to reduce the harm of dust to human health.

◆ Advantage

-  **Large-size multi-laser high-efficiency forming on the same platform:**
The multi-laser and multi-galvanometer work together on the same platform synchronously, which can improve the printing efficiency by more than 80% and enable efficient printing of large-sized parts.
-  **Intelligent operation design:**
Unattended automatic printing operation, automatic/manual control with seamless switching, self-diagnosis function, safety protection, and automatic fault alarms.
-  **Dual circulation wind site protection system:**
Dual-circulation wind system for site protection, extending the lifespan of optical components.
-  **All closed looped powder handling system:**
Closed powder internal processing system, isolates the printing system from the external environment, and reduces the harm of powder to the human body.

◆ Ideal Applications

- Widely used in mold, automobile, aerospace, nuclear power military, orthopedic, etc.

◆ Technical Data

Build Size	425mm*425mm*450mm (Net Build Size)
External Dimensions	3950mm*2380mm*3130mm
Forming Materials	Stainless Steel, Cobalt-Chromium Alloy, Titanium Alloy, Tool Steel, Aluminum Alloy, High-Temperature Alloy
Powder Supply Method	Top Powder Supply & Two-Way Powder Feeding
Printing Accuracy	±0.1(L≤100 mm); ±0.1%*L(L>100 mm)
Layer Thickness	0.02-0.2mm
Protection System	Efficient Protective Gas Circulation System (Nitrogen, Argon)
Supporting Consumables	Stainless Steel Powder 316L, no less than 100kg, with various material process parameter packages
Laser Type	IPG 500W×2 (1064nm)
Scanning System	SCANLAB*2 (Equipped with F-theta Field Lens)
Laser Speed	Scanning:1.0~4.0m/s (Recommended); Jumping: 6~7m/s(Recommended); Up to 11m/s
Data Processing Software	Voxeldance Additive (STL file)
Equipment Control Software	Independently Developed by Kings
Operating System	Windows 7 and above
Data Format	STL/SLC/JOB
Power Supply	380V 50/60 Hz
Rated Power Consumption	20kW, Three-phase Electricity
Preheat Temperature	RT+20°C~80°C
Industrial Control Computer Configuration	10th Gen i7, 16GB RAM
Forming Efficiency	20~50cm ³ /h
Relative Humidity	Below 40%, Frost-free
Ambient Temperature	15-30 °C
Equipment Weight	4000kg

