

M650 SERIES

Kings Industrial SLM 3D Printers

4-Laser 4-galvanometer Large-Sized
Metal 3D Printing Equipment



M650 SERIES

Kings

◆ Overview

Kings M650 Series is the largest laser selective melting equipment launched by Kings 3D, with a printing size of 625mmx625mmx650mm. It is the representative work of KINGS 3D's many years of technology accumulation, and it is also a rare large-size laser selection melting equipment in the market. Its expansive build envelope opens new possibilities for large-scale metal production that couldn't be built before in industries such as aerospace, mold industry, automobile industry, etc and many others.

◆ Advantage



Large-size quad-laser high-efficiency printing on the same platform:

625mmx625mmx650mm large forming size, opens new possibilities for large-scale metal production that couldn't be built before in industries.



Intelligent operation design:

Unattended automatic printing operation, automatic/manual control with seamless switching, self-diagnosis function, safety protection, and automatic fault alarms.



Double circulation wind site protection system:

Dual-circulation wind system for site protection, extending the lifespan of optical components.



All closed looped powder handling system:

The oxygen content is as low as 100PPM to ensure that the metal is not oxidized.



Forming efficiency:

Up to 100cm³/h

◆ Ideal Applications

- Aerospace, mold industry, automotive industry and other industries that have a wide range of applications for large-sized parts.

◆ Technical Data

Build Size	650mm × 650mm × 650mm
External Dimensions	5500mm × 4750mm × 5490mm
Forming Materials	Stainless Steel, Titanium Alloy, Mold Steel, Aluminum Alloy, High-temperature Alloy, High-strength steel, etc
Powder Supply Method	Top Powder Feeding & Two-Way Powder Feeding
Printing Accuracy	±0.1(L≤100 mm); ±0.1%*L(L>100 mm)
Layer Thickness	0.02~0.1mm
Protection System	Efficient Protective Gas Circulation System (Nitrogen, Argon)
Laser Type	IPG 500W×4 (1064nm)
Scanning System	SCANLAB*4 (Equipped with F-theta Field Lens)
Laser Speed	Scanning:1.0~4.0m/s (Recommended); Jumping: 5~7m/s(Recommended); Up to 15m/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 50Hz 21kW
Preheat Temperature	RT+20°C~100°C
Industrial Control Computer Configuration	Gen i7, 16GB RAM
Forming Efficiency	50~100cm ³ /h
Relative Humidity	Below 40%, Frost-free
Ambient Temperature	15~30 °C
Equipment Weight	18000kg

