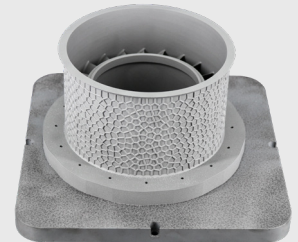


# M450F

## Kings Industrial SLM 3D Printers






Four-Laser System  
Metal 3D Printing Equipment



## ◆ Overview

The M450F is a mid-sized industrial metal 3D printer with a 450 × 370 × 400mm (Excluding 50mm Base Thickness) build volume. Designed for aerospace, defense, nuclear, automotive, and tooling sectors, it features a four-laser system for fast, precise production of large, complex parts. With closed-loop powder handling, intelligent recoating, and real-time monitoring, it ensures stable 24/7 operation and high-quality output.

## ◆ Features

-  **Four-Laser System**  
High productivity and precision for complex components
-  **Intelligent Dual Recoating**  
Single/dual blade dynamic bidirectional powder spreading
-  **Closed-Loop Powder Handling**  
Continuous inert powder supply and recovery without downtime
-  **Real-Time Monitoring**  
Tracks powder spreading, quality, and system status
-  **Permanent Filtration**  
Long service life without filter replacement

## ◆ Advantages

- Large Build Volume - Produces oversized parts in one print
- Reduced Assembly Time - Cuts production time and costs
- Stable 24/7 Operation - Ensures continuous, reliable output
- Broad Material Support - Compatible with titanium, high-temp alloys, and stainless steel

## ◆ Technical Data

Build Size	450mm × 370mm × 400mm
External Dimensions	4200mm × 2350mm × 2520mm
Layer Thickness	30 ~ 100μm
Fiber Laser Power	500W*4 (IPG Optional)
Fiber Laser Beam Quality	M <sup>2</sup> < 1.1
Layer Thickness	0.02~0.1mm
Software	Self-Developed Control Software and BP Slicing Software Options (Self-Developed, VoxelDance or Materialise)
Optical Structure	F-theta Lens (2-4 galvanometers)
Scanning Speed	Max 7m/s
Recoating System	Single Scraper Bidirectional Powder Recoating
Maximum Preheating Temperature	RT+20°C ~ 200°C
Minimum Oxygen Concentration	≤100ppm
Inert Gas	Ar/N <sub>2</sub>
Power Consumption	15kW
Data Format	STL Files or Other Convertible Formats
Powder Supply	Top Powder Supply & Bidirectional Intelligent Dynamic Powder Feeding
Supply Voltage	380VAC 3ph/N/PE
Environmental Requirements	Temperature +17°C~+28°C, No Condensation
Equipment Weight	4600kg
Forming Materials	Titanium Alloys, Aluminum Alloys, High-Temperature Alloys, Cobalt-Chrome Alloys, Stainless Steel, High-Strength Steel, Mold Steel

