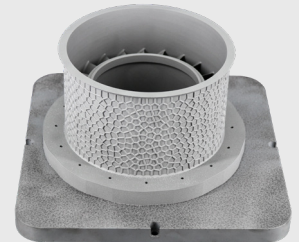


# M450PRO-S SERIES

## Kings Industrial SLM 3D Printers

Four-Laser System

Metal 3D Printing Equipment



# M450PRO-S SERIES

*Kings*

## ◆ Overview

The M450Pro-S Series 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

## ◆ 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

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## ◆ 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<br>(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,<br>Stainless Steel, High-Strength Steel, Mold Steel |



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