

# KINGS M100 SERIES

# **Kings Industrial SLM 3D Printers**

High power and high efficiency forming Fully pop-up piston system











### Overview

Kings M100 Series are cutting-edge 3D printers tailored for dental labs. Equipped with an ultra-precision filtration system and a fresh air protection system, they provide dual protection, effectively minimizing forming defects and ensuring the quality of the parts produced. With its refined design and upgraded build cylinder, it delivers exceptional precision and efficiency, specializing in processing materials like Titanium (Ti), Cobalt-Chrome (Co-Cr), Stainless Steel (SS), and more. It is used in small-batch moldless production, customization of mold manufacturing, industrial precision components, education, medical and dental applications, scientific research, and more.

## Advantage



#### High precision & high quality:

Supports 20µm laser spot size. Precisely print out every structural details. Adopting a concentrated laser, the energy greatly enhances the density and strength of the printed part



#### Customizable configuration:

The configuration can be customized according to the customer's application requirements, making the use flexible



#### Dual-circulation wind site protection system:

. To extend the lifespan of the optical components



#### Fully pop-up piston system:

Equipped with a fully pop-up piston system, it is more convenient and quicker to replace metal powder, and 100% eliminates cross powder contamination when replacing powder

## Ideal Applications

- R&D and production of small precision parts for dentistry, orthopedics, jewelry, etc.;
- · Research education, etc.

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# **♦ Technical Data**

| Build Size                                | 100mm*100mm*100mm   |
|---|---|
| External Dimensions                       | 735mm*920mm*1780mm  |
| Forming Materials                         | Stainless steel, cobalt chromium alloy, titanium alloy, tool steel, etc                     |
| Powder Supply Method                      | Double Cylinder One-Way Powder Feeding  |
| Printing Accuracy                         | ±0.1(L≦100 mm); ±0.1%*L(L>100 mm)   |
| Layer Thickness                           | 0.02-0.2 mm   |
| Protection System                         | Efficient Protective Gas Circulation System (Nitrogen, Argon)                               |
| Supporting Consumables                    | Stainless Steel Powder, no less than 20kg, with various material process parameter packages |
| Laser Type                                | IPG 500W×1 (1064nm)   |
| Scanning System                           | SCANLAB (Equipped with F-theta Field Lens)  |
| Laser Speed                               | Scanning:1.0~4.0m/s (Recommended); Jumping: 5~7m/s(Recommended); Up to 7.8m/s               |
| Data Processing Software                  | Voxeldance Additive / Magics (SLC file)   |
| Equipment Control Software                | Independently Developed by Kings  |
| Operating System                          | Windows 10  |
| Data Format                               | STL/SLC/JOB   |
| Power Supply                              | 220V 50 Hz  |
| Rated Power Consumption                   | 3kW, Three-phase Electricity  |
| Preheat Temperature                       | No Substrate Preheating   |
| Industrial Control Computer Configuration | 10th Gen i7, 16GB RAM   |
| Forming Efficiency                        | 20~50cm³/h  |
| Relative Humidity                         | Below 40%, Frost-free   |
| Ambient Temperature                       | 15-30 ℃   |
| Equipment Weight                          | 300kg   |
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