Kings 3D Printing

FFF 500

Kings Industrial FFF 3D Printers

23 Innovative Technologies, High Speed FFF 3D Printing
Efficient and Cost-Effective Prototyping
Bring Your Idea into Reality











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◆ Overview

The Kings FFF 500 is a high-speed industrial FFF 3D printer featuring a 500 × 500 × 500 mm build volume and printing speeds of up to 600 mm/s. Designed for rapid prototyping, functional parts, engineering validation, and small-batch production, it combines a dual closed-loop motor system, CoreXY motion architecture, and high-precision linear guides for fast, accurate, and stable printing.

Featuring Kings-exclusive modular motion components, a rigid precision-profile frame, and piezoelectric contact-based auto-leveling, the FFF 500 delivers consistent first-layer quality, reliable operation, and excellent structural stability. Compatible with materials such as PLA, ABS, and PETG, it provides a versatile solution for industrial design, product development, and functional testing.

◆ Advantages

→ High-Speed Printing up to 600 mm/s

- Faster Prototyping and Production
- Reduced Printing Time

→ Stable Dual Closed-Loop CoreXY Motion System

- Reduced Missed-Step Risk
- Fast, Precise Printhead Movement

→ Kings-Exclusive Modular Motion System

- 4 Linear Guides on X/Y Axes and Four-Screw Z-Axis
- Enhanced Stability and Easier Maintenance

→ Precise Piezoelectric Contact Auto-Leveling

- Drift-Free Contact Sensing
- Consistent First-Layer Adhesion

→ Power-Loss Recovery

- Automatic Print Resumption After Power Interruptions
- Reduced Material Waste and Downtime

→ High-Precision Profile Frame

- Rigid, Dimensionally Stable Structure
- Consistent Printing Accuracy

◆ Features

- 500×500×500mm Large Build Area
- Klipper High-Speed Printing System
- Fully Enclosed Printing Chamber
- Automatic Bed Leveling System
- Filament Runout Detection
- Power Loss Recovery Function
- High-Temperature Heated Build Plate
- High-Precision Linear Guide Rails
- Large Touchscreen Interface

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◆ Applications

- Jigs & Fixtures, Tooling & Molds, Automotive Piping Applications, Vacuum Forming, Lost Foam Casting Patterns, Industrial Prototypes, R&D Components, Sculptures, Figurines & Models, Customized Non-Standard Parts, Mold Manufacturing, Lighting Components, Small-Batch Production Applications.

◆ Technical Data

	Printing
Printing Technology	Fused Deposition Modeling
Build Size	500×500×500mm
Layer Thickness	0.05~0.6mm
Filament Diameter	1.75mm
Nozzle Diameter	0.4/0.6/0.8mm (Optional)
Filament Compatibility	PLA / ABS / TPU / Carbon Fiber / Wood-Filled / Metal-Filled / Marble-Filled and other materials

	Temperature
Nozzle Temperature	30~350℃
Heated Bed Temperature	30~110℃
Recommended Operating Temperature	0~40℃
Storage Temperature	0~32℃

	Speed
Max Printing Speed	600mm/s

	Software
Software	Compatible with Multiple Slicing Software
File Formats	STL, GCODE, OBJ, and etc.
Operating System	RT-Linux

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◆ Technical Data

Electrical	
Power Supply	AC100V~AC240V / 15A 50Hz/60Hz
Display	4.3-inch Touch Color Screen
Lauguage	Multiple Languages
Rated Power	1~2kW
Max Power	3kW
Input Voltage	220V
Connectivity	USB, Local Area Network (Wi-Fi)

Features	
Filament Runout Dectetion	Supported
Power-off Resume	Supported
Control System	Kings Self-developed Industrial Control System
Bed Leveling	Piezoelectric Contact Leveling

Mechanical	
Moding Drive	XY Axis Closed-Loop Motor System by Leadshine
Extruder	1.75mm Extruder
Motion Structure	Core XY Synchronous Belt Linear Guide System, 4-Z-Axis Integrated Synchronous Lead Screw Structure
Z-axis Motion	Four-Axis Synchronized Drive

Dimensions	
Machine Size	680×640×820mm
Packing Size	790×740×870mm

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