FLASHFORGE CP2

FLASHFORGE Creator Pro 2 3D Printer User Manual

Model: CP2

The FLASHFORGE Creator Pro 2 3D Printer, featuring independent dual extruders and a robust design.

1. Introduction

This manual provides comprehensive instructions for the safe and efficient operation of your FLASHFORGE Creator Pro 2 3D Printer. The Creator Pro 2 is designed for precision and versatility, featuring an Independent Dual Extruder System (IDEX) that allows for advanced printing modes such as Mirror, Duplicate, Dual Filament, and Dual Color printing. Please read this manual thoroughly before operating the printer to ensure optimal performance and longevity.

2. Safety Instructions

Always adhere to the following safety guidelines to prevent injury or damage to the printer:

- **Electrical Safety:** Ensure the printer is connected to a grounded power outlet with the correct voltage. Do not operate with damaged power cords.
- **Hot Surfaces:** The extruder nozzle and build plate reach high temperatures during operation. Avoid direct contact to prevent burns. Allow components to cool before handling.
- **Moving Parts:** Keep hands, hair, and loose clothing clear of moving parts during operation.
- **Ventilation:** Operate the printer in a well-ventilated area, especially when printing with materials that may emit fumes.
- **Filament Handling:** Use caution when loading and unloading filament, as the extruder can be hot.
- **Supervision:** Do not leave the printer unattended during long print jobs.
- **Children and Pets:** Keep the printer out of reach of children and pets.

3. Product Overview and Features

The FLASHFORGE Creator Pro 2 is engineered for reliability and advanced 3D printing capabilities. Key features include:

3.1 Independent Dual Extruder System (IDEX)

The IDEX system allows the two extruders to operate independently, enabling advanced printing modes and increasing efficiency. This system is crucial for multi-material or multi-color prints, as well as for producing two identical or mirrored objects simultaneously.

Visual representation of the Creator Pro 2's Independent Dual Extruder System and its capabilities, including Mirror Mode, Copy Mode, and support for multiple filaments.

3.2 Advanced Printing Modes

Leverage the IDEX system with four distinct printing modes:

- **Mirror Mode:** Prints two symmetrical models simultaneously, saving time for paired objects.
- **Duplicate Mode:** Prints two identical models simultaneously, doubling production efficiency.
- **Dual Filament Printing Mode:** Allows printing with two different types of filament, useful for support structures or combining material properties.
- **Dual Color Printing Mode:** Creates models with two distinct colors, enhancing aesthetic appeal.

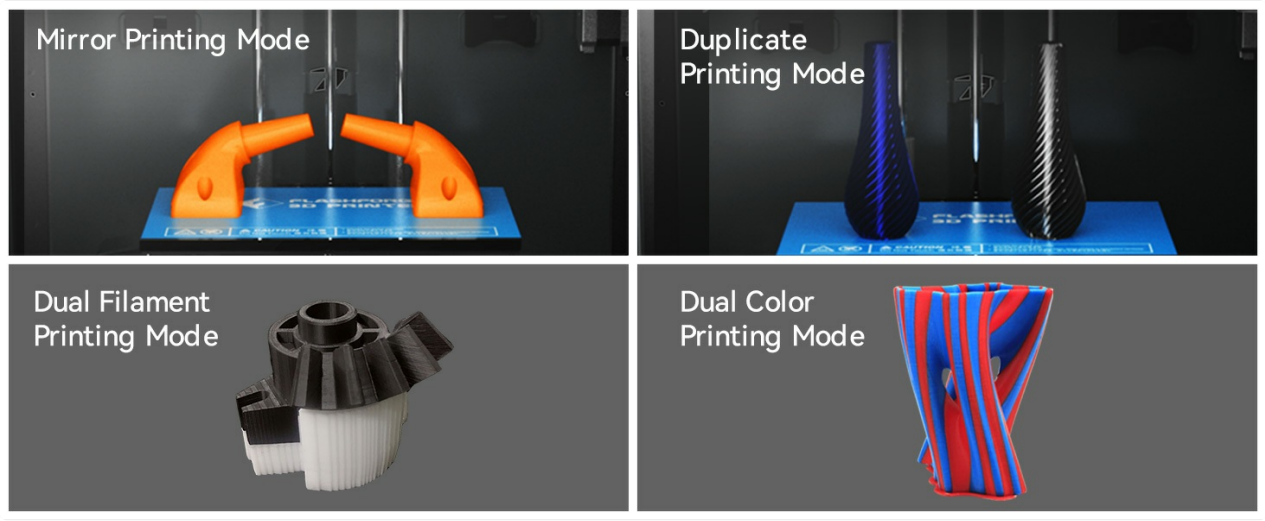


Illustration of Mirror Printing Mode, Duplicate Printing Mode, Dual Filament Printing Mode, and Dual Color Printing Mode.

3.3 Anti-Scrape Design

The extruder features an anti-scrape design that automatically scrapes off filament residuals when extruding. This mechanism helps prevent unwanted material deposits on your prints, ensuring cleaner and more precise dual-color or dual-material outputs.

Close-up view of the extruder with the residue scraping mechanism highlighted.

3.4 Optimized Build Environment

The Creator Pro 2 offers flexibility for different filament types:

- For PLA printing, open the front door and remove the top cover to allow air circulation, which aids in cooling the print.
- For ABS printing, close the front door and the top cover to create a closed chamber. This helps maintain a stable temperature, reducing warping and improving print quality for ABS.

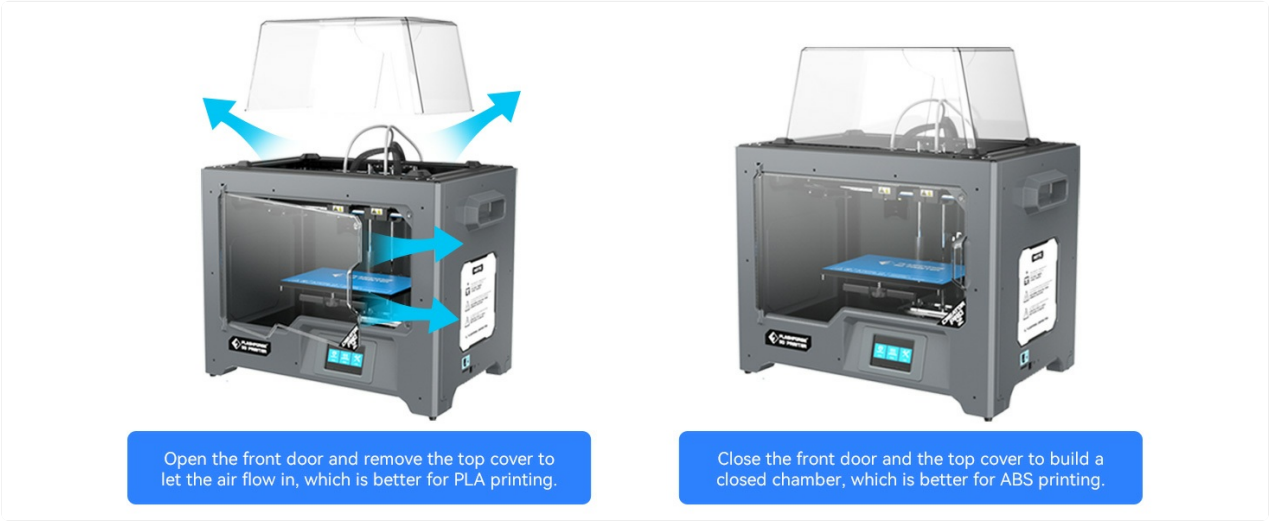


Diagram showing how to configure the printer for PLA (open) and ABS (closed) printing environments.

3.5 User Interface and Connectivity

- **HD IPS Full-Color Touch Screen:** Provides intuitive control and monitoring of print jobs.
- **SD Card Printing:** Easily transfer print files to the printer via an SD card for standalone operation.
- **Rear Filament Spool Holders:** Conveniently supports two spools of filament at the back of the printer, ensuring smooth feeding.
- **Integrated Handle:** Designed for easy and safe handling and moving of the machine.

Detailed views of the touchscreen interface, SD card slot, integrated handle, and rear filament spool holders.

4. Setup Guide

4.1 Unboxing and Placement

Carefully remove the printer from its packaging. Retain all packaging materials for future transport or storage. Place the printer on a stable, level surface in a well-ventilated area, away from direct sunlight, heat sources, or excessive dust.

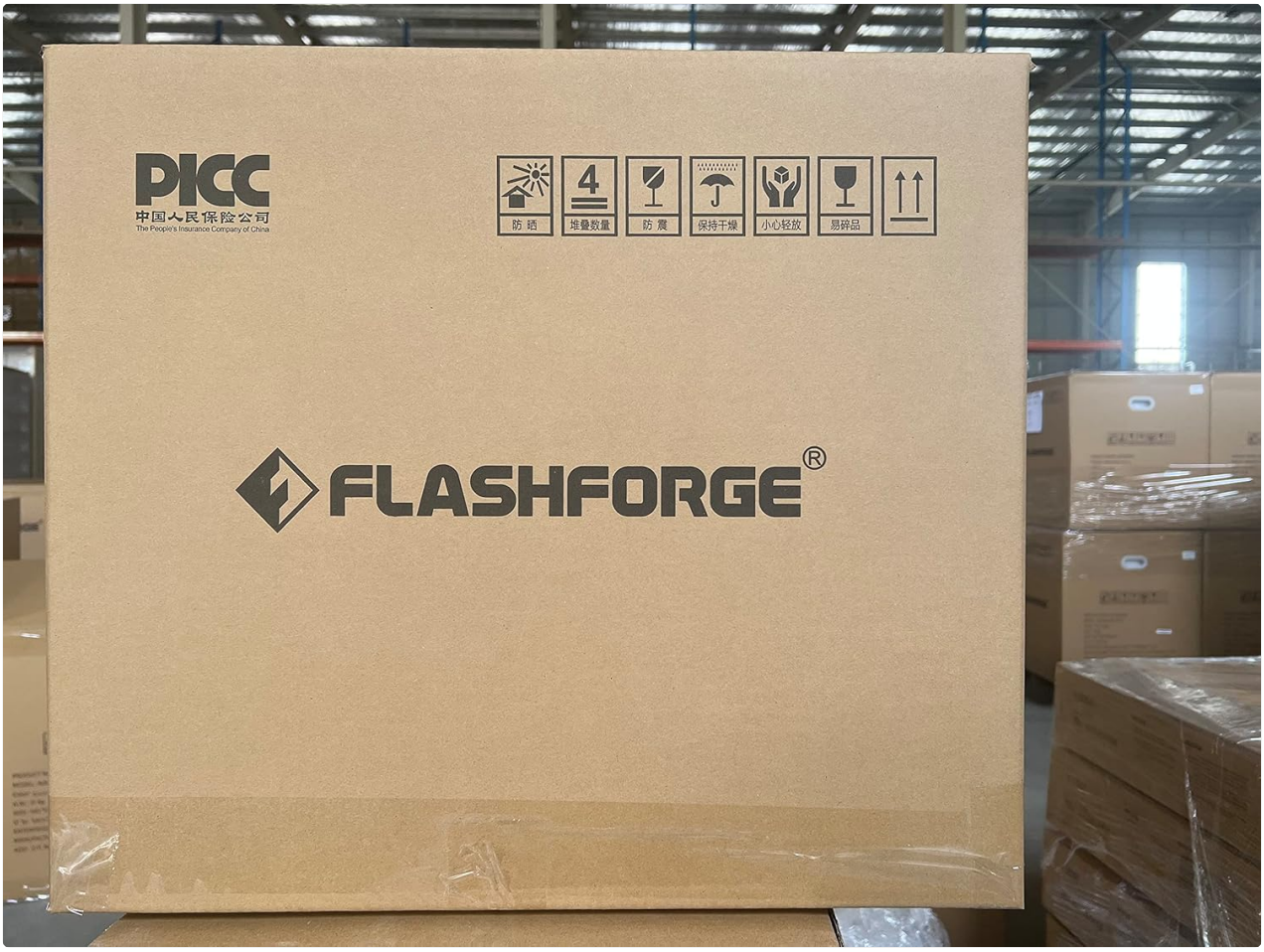


Image of the FLASHFORGE Creator Pro 2 packaging box, indicating careful handling during unboxing.

4.2 Power Connection

Connect the provided power cable to the printer's power input and then to a grounded electrical outlet. Ensure the power switch is in the OFF position before connecting.

4.3 Filament Loading

1. Mount the filament spool(s) onto the holders at the back of the printer.
2. Preheat the desired extruder(s) via the touchscreen menu.
3. Feed the filament into the extruder's intake hole until it is gripped by the gears.
4. Continue feeding until molten filament extrudes from the nozzle, indicating it is properly loaded and primed.

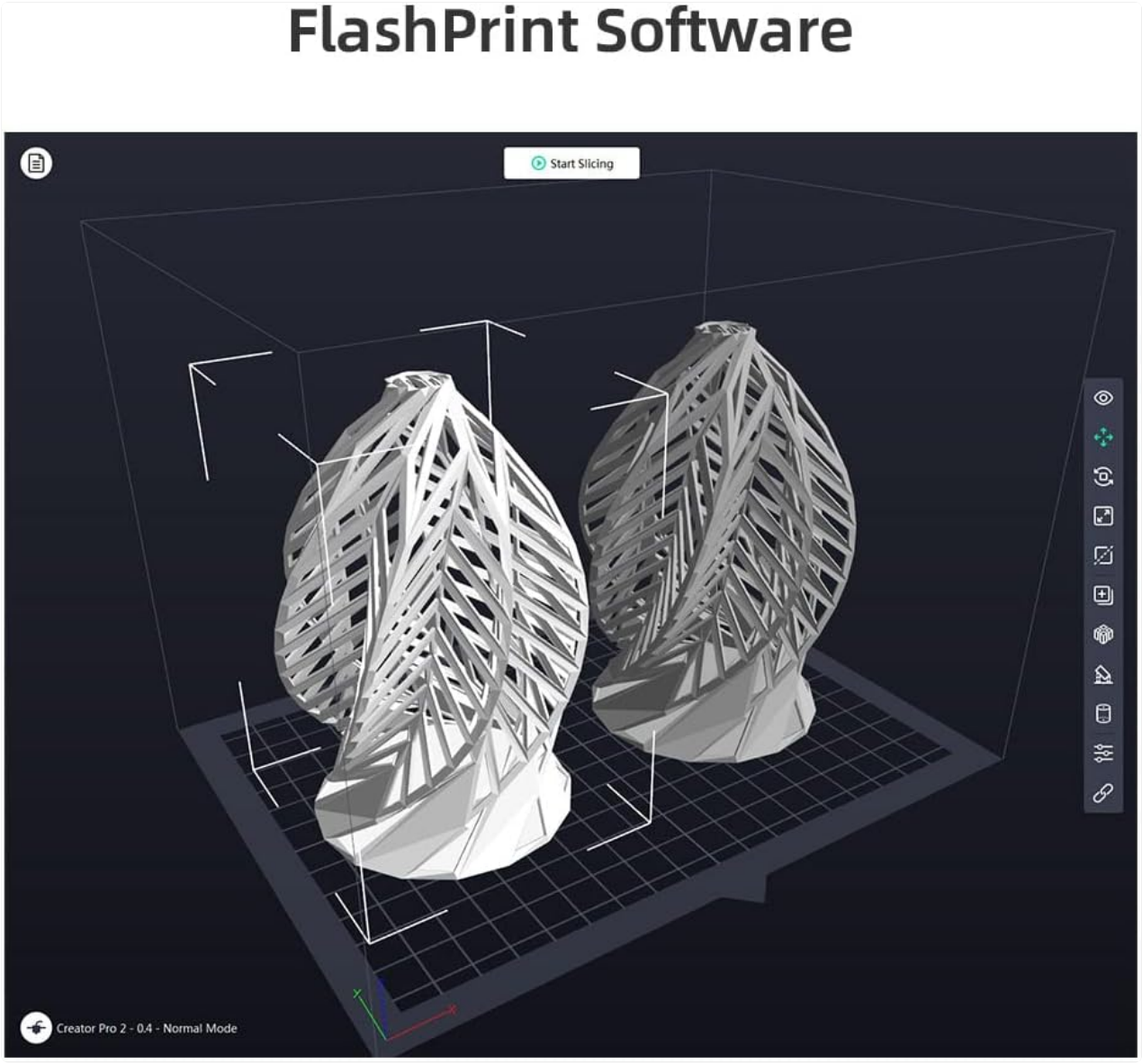
4.4 Build Plate Preparation and Leveling

Ensure the build plate is clean and free of debris. For optimal adhesion, apply a thin layer of adhesive (e.g., glue stick or hairspray) if necessary, depending on the filament type. Perform bed leveling as instructed by the printer's on-screen prompts or the FlashPrint software to ensure the correct distance between the nozzle and the build plate.

5. Operating Instructions

5.1 Software: FlashPrint

The FLASHFORGE Creator Pro 2 utilizes FlashPrint software for preparing 3D models for printing (slicing). Install FlashPrint on your computer and import your 3D models (.STL, .OBJ, etc.). Within FlashPrint, you can configure print settings such as layer height, infill density, print speed, and select the desired printing mode (Mirror, Duplicate, Dual Filament, Dual Color).



Screenshot of the FlashPrint software interface, showing a 3D model prepared for slicing.

5.2 Preparing and Starting a Print

1. After configuring your model in FlashPrint, slice the model and save the generated G-code file to an SD card.
2. Insert the SD card into the printer's SD card slot.
3. On the printer's touchscreen, navigate to the "Print" menu.
4. Select your desired G-code file from the list.
5. Confirm the print settings and initiate the print. The printer will begin heating the nozzle(s) and build plate to the set temperatures before starting the print.

5.3 Monitoring and Removing Prints

Monitor the first few layers of your print to ensure proper adhesion and extrusion. The touchscreen provides

real-time status updates. Once the print is complete and the build plate has cooled, carefully remove the printed object. The flexible steel plate design allows for easy removal by bending the plate, eliminating the need for scraping tools.

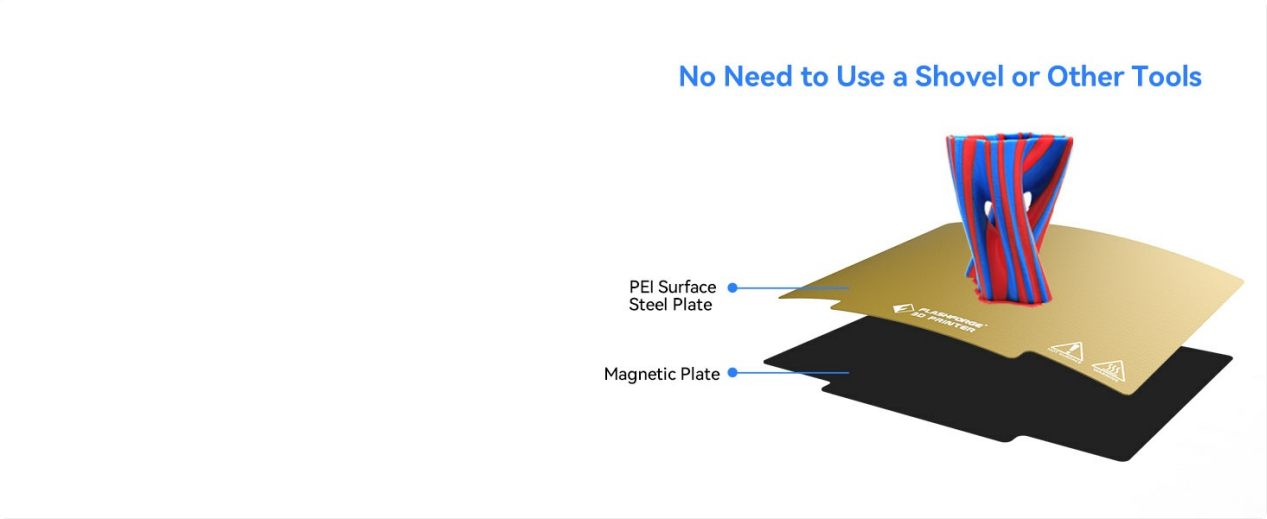


Illustration demonstrating the ease of print removal from the flexible PEI surface steel plate without tools.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your 3D printer.

- **Nozzle Cleaning:** Periodically clean the extruder nozzles to prevent clogs. Use a brass brush or needle while the nozzle is hot (but be careful not to burn yourself).
- **Build Plate Cleaning:** Clean the build plate after each print with isopropyl alcohol to remove any residue and ensure good adhesion for subsequent prints.
- **Lubrication:** Apply a small amount of lithium grease or similar lubricant to the smooth rods and lead screws every few months to ensure smooth movement of the print head and build plate.
- **General Cleaning:** Keep the printer free of dust and filament debris. Use compressed air to clean hard-to-reach areas.
- **Firmware Updates:** Check the FLASHFORGE official website periodically for firmware updates. Updating firmware can improve performance and add new features.

7. Troubleshooting

This section addresses common issues you might encounter and provides basic solutions.

7.1 Common Print Quality Issues

- **Poor Bed Adhesion:**
  - Ensure the build plate is clean.

- Re-level the build plate to ensure correct nozzle distance.
- Increase build plate temperature slightly.
- Apply an adhesive (glue stick, hairspray).

- **Filament Not Extruding / Clogged Nozzle:**
  - Check if the filament is properly loaded and not tangled.
  - Increase extruder temperature slightly.
  - Perform a cold pull or use a nozzle cleaning needle to clear the clog.
  - Ensure the extruder gears are not slipping.
- **Layer Shifting:**
  - Check belt tension; they should be snug but not overly tight.
  - Ensure the printer is on a stable surface and not subject to vibrations.
  - Reduce print speed, especially for complex geometries.
- **Warping:**
  - For ABS, ensure the printing chamber is closed to maintain temperature.
  - Increase bed temperature.
  - Use a brim or raft in your slicing software.

7.2 General Malfunctions

- **Printer Not Powering On:**
  - Check power cable connections.
  - Verify the power outlet is functional.
  - Check the printer's power switch.
- **Touchscreen Unresponsive:**
  - Restart the printer.
  - Ensure no foreign objects are pressing against the screen.

If issues persist, refer to the official FLASHFORGE support resources or contact customer service.

8. Specifications

Detailed technical specifications for the FLASHFORGE Creator Pro 2 3D Printer:

Machine Parameters

Extruder number	1
Extruder diameter	0.4mm
Highest set temperature of extruder	240℃
Maximum Set Temp. of Platform	120℃
Print Speed	10-100 mm/s
Support Filament	PLA , ABS, TPU 95A, PETG
Print Volume	280*250*300 mm
Layer Resolution	0.1-0.4 mm
Print Resolution	±0.2 mm
Device Size	550*490*570(755) mm
Screen	5-inch Touch Screen
Net Weight	30 kg
Gross Weight	38 kg
Input	100-240 VAC, 47-63Hz
Output	24 V, 20.8 A
Power	500 W
Internal Storage	8 G
Data Transmission	USB cable, SD card, Wi-Fi, Ethernet FlashCloud, PolarCloud
Software	FlashPrint

Official machine parameters as provided by FLASHFORGE.

Parameter	Value
Brand	FLASHFORGE
Model Number	CP2
Product Dimensions	21.6 x 15.7 x 18.8 inches (54.86 x 39.88 x 47.75 cm)
Item Weight	33 pounds (15 Kilograms)
Extruder Number	2 (Independent Dual Extruder)
Extruder Diameter	0.4mm
Highest Set Temperature of Extruder	240°C
Maximum Set Temp. of Platform	120°C
Print Speed	10-100 mm/s

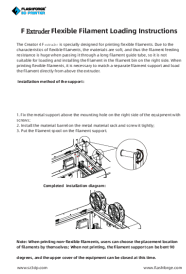
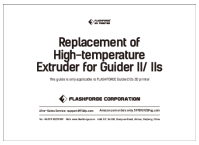
Parameter	Value
Support Filament	PLA, ABS, TPU 95A, PETG (and others)
Print Volume	200*148*150 mm (Mirror mode: 80*148*150mm)
Layer Resolution	0.1-0.4 mm
Print Resolution	±0.2 mm
Screen	5-inch Touch Screen
Input Power	100-240 VAC, 47-63Hz
Output Power	24 V, 20.8 A
Rated Power	500 W
Internal Storage	8 GB
Data Transmission	USB cable, SD card, Wi-Fi, Ethernet FlashCloud, PolarCloud
Software	FlashPrint
Manufacturer	Zhejiang Flashforge 3D Technology Co., Ltd.
Date First Available	October 15, 2020

9. Warranty and Support

FLASHFORGE provides a standard warranty for the Creator Pro 2 3D Printer. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official FLASHFORGE website.
For technical support, troubleshooting assistance beyond this manual, or warranty claims, please contact FLASHFORGE customer service through their official website or the contact information provided in your product documentation. When contacting support, please have your printer's model number (CP2) and serial number ready.

Official Website: www.flashforge.com

Related Documents - CP2

	[FlashForge Creator 4 F Extruder Flexible Filament Loading Instructions] Instructions for loading flexible filament using the FlashForge F Extruder on the Creator 4 3D printer, detailing the installation of the filament support system for optimal printing.
	[Flashforge Guider II/IIs High-Temperature Extruder Replacement Guide] Step-by-step instructions for replacing the high-temperature extruder assembly on Flashforge Guider II and Guider IIs 3D printers. Includes kit contents and detailed assembly procedures.
	[FlashForge Creator Pro 2 User Guide] Comprehensive user guide for the FlashForge Creator Pro 2 3D printer, covering setup, operation, slicing software, maintenance, and support.
	[Flashforge Creator Pro Quick Start Guide] This quick start guide provides essential information for setting up and operating the Flashforge Creator Pro 3D printer (Model SZ10-ZN/EN-A06). It covers unboxing, hardware assembly, filament installation, bed leveling, loading/unloading filament, and performing your first print.
	[Flashforge Adventurer 5M 3D Printer Quick Start Guide] A concise guide to setting up and starting your Flashforge Adventurer 5M 3D printer, covering unboxing, component identification, installation, and first print.
	[Flashforge Adventurer 5M High-Speed 3D Printer User Guide] This user guide provides comprehensive instructions for the Flashforge Adventurer 5M high-speed FDM 3D printer, covering setup, operation, software, maintenance, and troubleshooting. Learn to maximize your printing experience with detailed guidance on its features and capabilities.