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Comgrow Ender 3

Creality Ender 3 3D Printer User Manual

Brand: Comgrow
Model: Ender 3

1. Introduction

This manual provides essential information for the safe and effective use of your Creality Ender 3 3D Printer. The Ender 3 is an open-source FDM (Fused Deposition Modeling) 3D printer known for its reliability and user-friendly design, featuring a build volume of 8.66 x 8.66 x 9.84 inches (220 x 220 x 250 mm) and a resume printing function.

2. Safety Information

WARNING: This product may expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

- Always operate the printer in a well-ventilated area.
- Do not touch the nozzle or heated bed during operation or immediately after, as they reach high temperatures. Allow components to cool before handling.
- Keep hands and loose clothing away from moving parts during operation.
- Ensure the printer is placed on a stable, level surface.
- Never leave the printer unattended while in operation.
- Use only the power supply provided with the printer.

3. Product Overview

The Creality Ender 3 is designed for ease of use and reliable performance. Below are key components and their functions.



Figure 3.1: Fully assembled Creality Ender 3 3D Printer, showcasing its compact design and open-frame structure.



Figure 3.2: All components included with the Creality Ender 3 3D Printer, laid out for assembly.

Key Features:

- **Resume Printing Function:** The printer can resume printing from where it left off after a power outage or interruption, preventing print failures.
- **Advanced Extruder Technology:** The upgraded extruder design significantly reduces the risk of clogging and ensures smooth filament extrusion.
- **V-shape with POM Wheels:** This design ensures noiseless, smooth, and durable movement of the print head.
- **Quick Heating Hot Bed:** The hot bed can reach 100°C in approximately 5 minutes, allowing for faster print initiation.

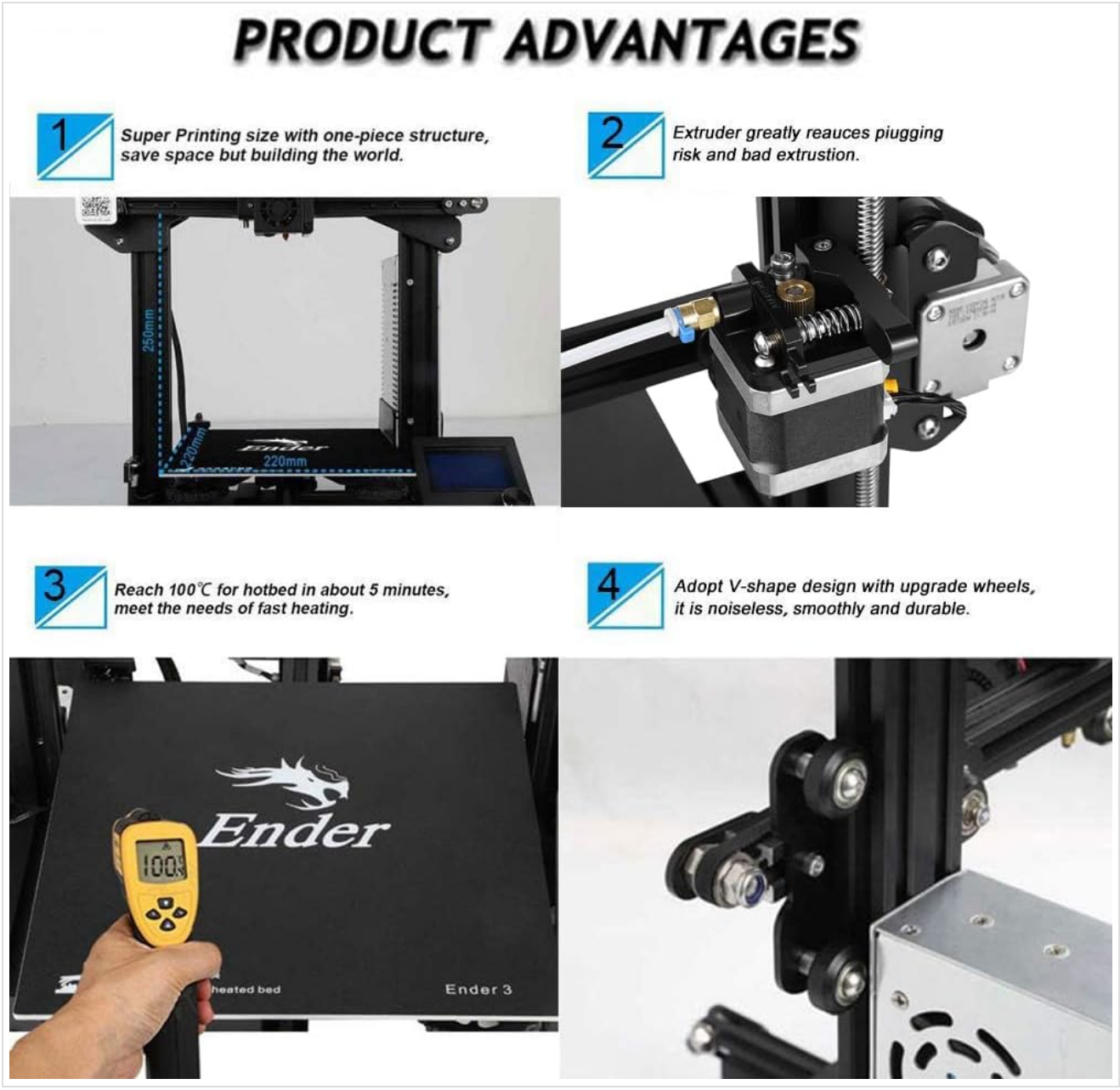


Figure 3.3: Visual representation of key product advantages including super printing size, improved extruder, fast heating, and V-shape wheels.

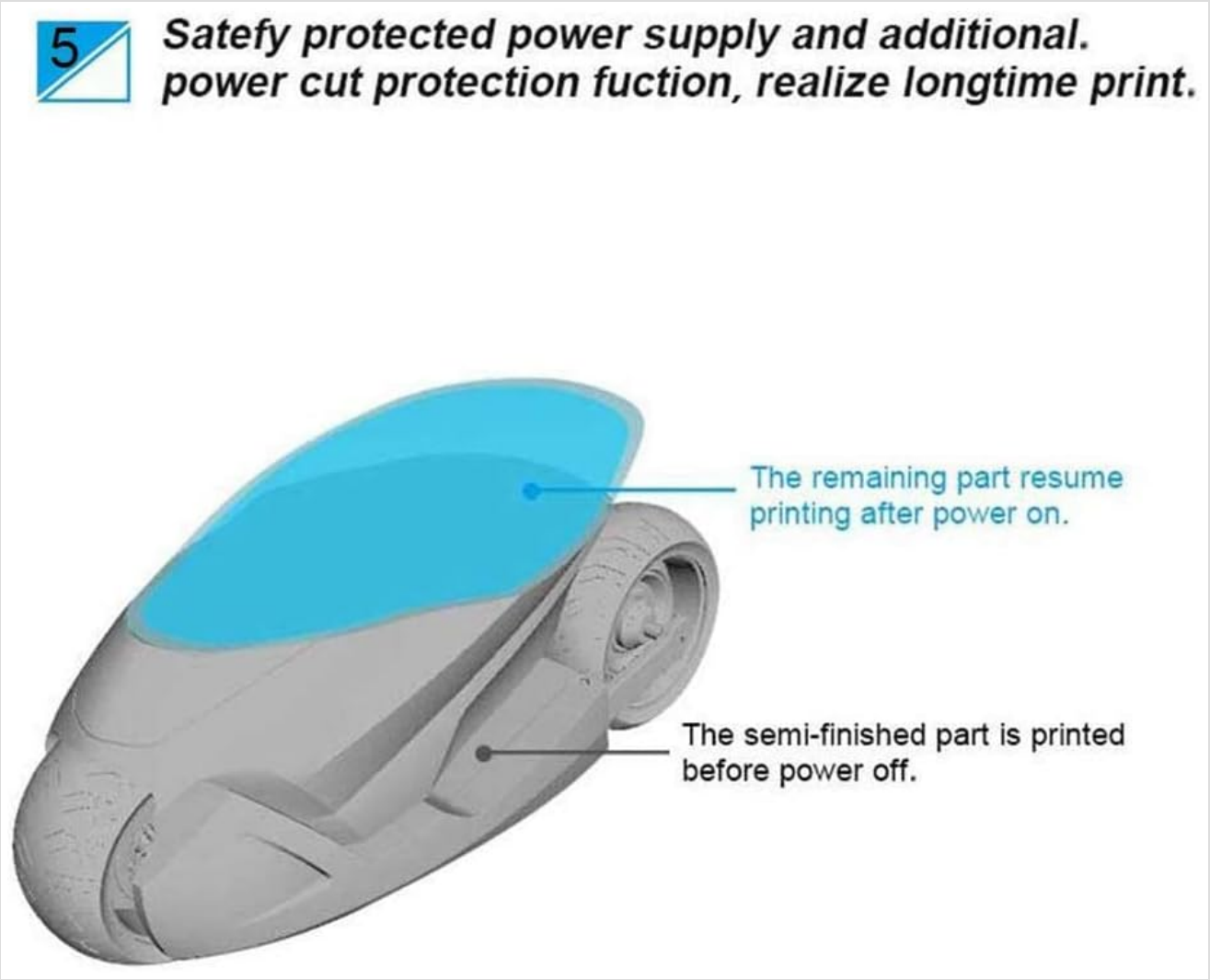


Figure 3.4: Diagram illustrating the resume printing function, showing how a print can continue from the point of interruption.

4. Setup and Assembly

The Creality Ender 3 comes partially assembled and requires approximately 2 hours for full setup. Detailed assembly instructions are provided in the included Installation Manual (PDF) and numerous online video guides. Pay close attention to the following critical step before powering on your printer:

4.1 Power Supply Voltage Selection

Before connecting the printer to power, ensure the power supply voltage switch is set correctly for your region. The switch is located on the side of the power supply unit. Verify it is set to **115V** for North America or **230V** for regions with 220-240V mains voltage. Incorrect voltage selection can damage the unit.



Figure 4.1: The power supply voltage switch, showing the default 230V setting and the correct 115V setting for applicable regions.



Figure 4.2: The power supply unit on the right side of the printer, indicating the location of the voltage selection switch.

5. Operation

5.1 Loading Filament

1. Heat the nozzle to the appropriate temperature for your filament (e.g., 200°C for PLA).
2. Insert the filament into the extruder's intake hole.
3. Gently push the filament until it exits the nozzle, indicating it is loaded correctly.

5.2 Bed Leveling

Accurate bed leveling is crucial for successful prints. The Ender 3 uses large hand-twist nuts for manual bed leveling.

1. Move the nozzle to each of the four corners of the print bed.
2. Adjust the leveling nuts under each corner until a piece of standard paper can slide with slight friction between

the nozzle and the print bed.

3. Repeat this process several times for all corners to ensure consistent spacing.



Figure 5.1: The large hand-twist nuts located under the print bed, designed for easier manual bed leveling.

5.3 Starting a Print

The Ender 3 supports printing via SD card or by connecting to a computer. It does not support printing directly from a phone.

1. Prepare your 3D model using slicing software (e.g., Cura) to generate a G-code file.
2. Save the G-code file to the provided MicroSD card.
3. Insert the MicroSD card into the printer's card slot.
4. Navigate the printer's menu to select and start your desired print file.

6. Maintenance

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

- **Clean the Print Bed:** After each print, allow the bed to cool and carefully remove any residual filament. A clean print surface improves adhesion for subsequent prints.
- **Inspect the Nozzle:** Periodically check the nozzle for clogs or wear. A worn nozzle can affect print quality.
- **Check Belts and Wheels:** Ensure all belts are properly tensioned and the V-shape POM wheels move smoothly along the aluminum extrusions. Adjust if necessary to prevent wobbling or excessive friction.
- **Lubricate Moving Parts:** Apply a small amount of lubricant to the Z-axis lead screw and smooth rods as needed to ensure smooth vertical movement.

7. Troubleshooting

Here are solutions to common issues you might encounter:

Problem	Possible Cause	Solution
Print not sticking to bed	Improper bed leveling, dirty bed, incorrect bed temperature	Re-level the bed, clean the print surface, adjust bed temperature in slicing software.
Filament not extruding	Clogged nozzle, tangled filament, extruder issue	Clear nozzle clog, untangle filament, check extruder gear and tension.
Layer shifting	Loose belts, motor issues, print head hitting print	Check and tighten belts, ensure smooth movement of axes, reduce print speed.
Poor print quality (stringing, blobs)	Incorrect retraction settings, wrong temperature, wet filament	Adjust retraction distance/speed, optimize print temperature, dry filament.

For more in-depth troubleshooting and community support, refer to online forums and video tutorials dedicated to the Creality Ender 3.

8. Specifications

Feature	Detail
Product Dimensions	16.14 x 16.54 x 18.31 inches (410 x 420 x 465 mm)
Item Weight	15.43 pounds (7 kg)
Build Volume	8.66 x 8.66 x 9.84 inches (220 x 220 x 250 mm)
Printing Technology	FDM (Fused Deposition Modeling)

Feature	Detail
Filament Compatibility	PLA, PETG, TPU, etc. (1.75mm)
Nozzle Temperature	Up to 255°C
Heated Bed Temperature	Up to 100°C
Connectivity	SD Card, USB (PC connection)
Frame Material	Aluminum
Color	Black
Manufacturer	Creality 3D

9. Warranty and Support

Comgrow performs strict testing on key components before delivery to ensure product quality. For any support inquiries, technical assistance, or warranty claims, please contact Comgrow customer service directly. Refer to your purchase documentation for specific warranty terms and contact information.

Online Resources:

- Official Creality Website: www.creality.com
- Comgrow Store on Amazon: Comgrow Store

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