SainSmart Ender 3 V3 KE

SainSmart Creality Ender 3 V3 KE 3D Printer Instruction Manual

Model: Ender 3 V3 KE

1. Introduction and Overview

The SainSmart Creality Ender 3 V3 KE is a high-speed FDM 3D printer designed for efficient and precise additive manufacturing. It features advanced technology to streamline the printing process and ensure high-quality results.

- **Swift Speed:** Achieves a maximum printing speed of 500 mm/s and an acceleration of 5000 mm/s², supported by an upgraded X-axis with linear guides for smoother, high-speed performance.
- **Advanced Extrusion:** Equipped with a "Sprite" Direct Extruder featuring a 60W ceramic heater and copper-titanium alloy hotend, allowing compatibility with various filament types including PLA, PETG, ABS, TPU, PC, and ASA.
- **Intuitive User Interface:** Features innovative global navigation buttons, one-click self-checks, automatic Z-axis compensation, and bed leveling for a simplified user experience. Real-time model previews and dynamic display of print parameters are also available.
- **Efficient Cooling:** Incorporates dual 4010 model cooling fans on each side of the nozzle assembly for powerful, uniform airflow, leading to significantly improved print quality.
- **Smart Connectivity:** Offers flexible printing methods including USB, built-in WiFi for local network, and Cloud printing. Remote printing and monitoring are possible via Creality Print software/APP on PC or mobile devices, with multi-printer management capabilities.

2. Setup and Assembly

The Ender 3 V3 KE is designed for quick and easy assembly. Follow these steps to get your printer ready for its first print.

2.1 Unboxing and Initial Inspection

Carefully unpack all components from the box. Ensure all parts listed in the quick installation guide are present and undamaged.

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Video: Unboxing and initial component overview of the Creality Ender-3 V3 series printer.

2.2 Gantry and Base Assembly

Attach the gantry frame to the printer base using the provided screws. Ensure all connections are secure.



Image: Fully assembled Creality Ender 3 V3 KE 3D Printer.

2.3 Power Supply Voltage Check

Before powering on, verify the power supply voltage switch is set correctly for your region (115V or 230V) to prevent damage to the device. This switch is typically located near the power input port.

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Video: Demonstrates checking and adjusting the power supply voltage switch on the printer base.

2.4 Connecting Components

Connect the display screen, filament run-out sensor, and all motor cables as indicated in the manual.

Ensure all connections are firm.



Image: Overview of Creality Print Slicer and Creality Cloud APP for managing prints.

3. Operating Instructions

The Ender 3 V3 KE is designed for ease of use, from initial setup to advanced printing. Its intuitive UI and smart features simplify operation.

3.1 User Interface and Auto-Leveling

The printer features an intuitive touchscreen UI with global navigation buttons. It supports one-click self-checks, automatic Z-axis compensation, and bed leveling (CR Touch) to ensure a perfect first layer without manual adjustments.

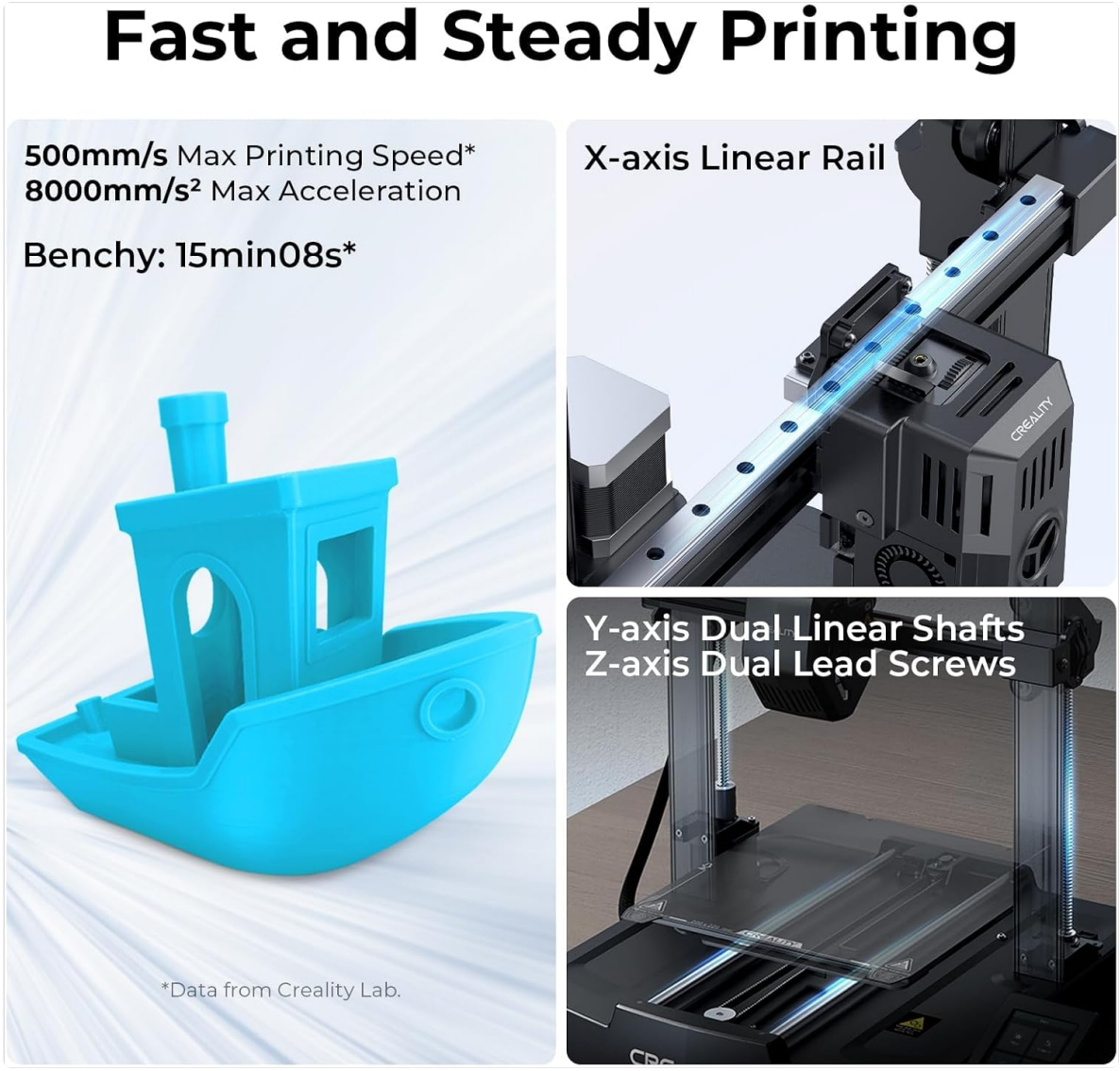


Image: Smart Creality OS touchscreen interface showing intuitive touch control and auto calibration features.

3.2 Printing Methods

Choose from multiple convenient printing options:

- **USB Printing:** Load print files directly via a USB drive.
- **WiFi/Cloud Printing:** Connect to your local network via built-in WiFi for remote printing and monitoring using Creality Print software on PC or the Creality Cloud APP on your phone.



Image: Visual representation of the three available printing methods: Cloud Printing with WiFi, Data-secure LAN Printing with WiFi, and direct printing via USB drive.

3.3 High-Speed Printing and Quality

Experience rapid printing with speeds up to 500 mm/s. The printer's stable structure, advanced extruder, and dual-side cooling contribute to excellent print quality even at high speeds.



Image: Highlights the fast and steady printing capabilities, featuring 500mm/s max speed and the X-axis linear rail for stability.

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Video: A speed comparison showing the Ender-3 V3 KE printing a model significantly faster than a standard Ender-3.

4. Maintenance

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

4.1 Lubrication of Rods

The printer's rods require regular lubrication to ensure smooth movement and prevent wear. Apply a small amount of grease (included in the accessory kit) to the rods every 10 uses or as needed.

4.2 Nozzle Cleaning

Use the provided nozzle cleaner to clear any clogs or debris from the hotend. This helps maintain

consistent filament flow and print quality.

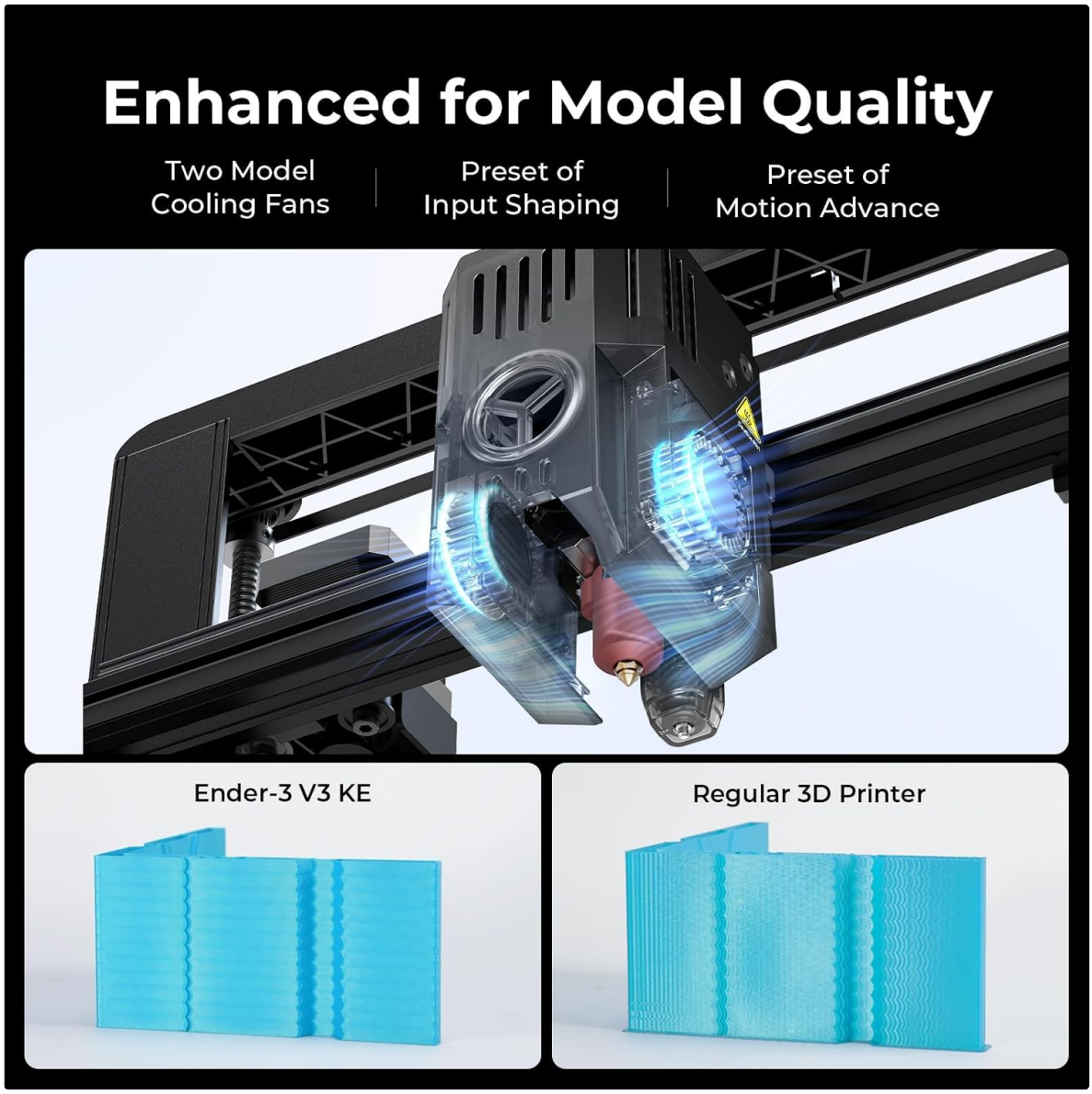


Image: Detailed view of the superior hotend, highlighting the bi-metal heatbreak for smooth feeding and the 60W ceramic heater for high flow rate.

5. Troubleshooting

Address common issues to ensure smooth printing operations.

5.1 Wobbly Print Bed

If your print bed feels wobbly, check the four screws located underneath the PEI sheet. Tighten these screws using the included Allen wrench to secure the bed. This can significantly improve print quality, especially for the first layers.

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Video: Demonstrates how to tighten the print bed screws to resolve wobbling issues, improving print quality.

5.2 Filament Feeding Issues

If filament is not feeding smoothly, ensure the filament path is clear and the extruder gears are clean. For some filaments, you may need to manually feed it past the initial gears if the automatic loading

struggles.

6. Specifications

Feature	Detail
Product Dimensions	17.04 x 14.4 x 26.37 inches
Item Weight	17.2 pounds
Item Model Number	Ender 3 V3 KE
Material	Metal
Color	Black
Max Printing Speed	500 mm/s
Acceleration	5000 mm/s²
Extruder Type	"Sprite" Direct Extruder
Hotend Features	60W ceramic heater, copper-titanium alloy hotend
Compatible Filaments	PLA, PETG, ABS, TPU, PC, ASA
Connectivity	USB, Built-in WiFi, Cloud Printing



Image: Creality Ender 3 V3 KE 3D Printer with key dimensions (height, width, depth) indicated.

7. What's in the Box

Your Creality Ender 3 V3 KE 3D Printer package includes the following components:

- Creality Ender 3 V3 KE 3D Printer (Base and Gantry Assembly)
- Touchscreen Display
- Spool Holder
- Power Cable

- Sample Filament (PLA)
- PTFE Tubing
- Tool Kit (Allen wrenches, flat head screwdriver, nozzle wrench)
- Nozzle Cleaner
- USB Thumb Drive
- Cutting Pliers
- Zip Ties
- Grease for Lubrication
- Quick Installation Guide

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Video: Detailed unboxing of the Creality Ender-3 V3 series, showing all included parts and accessories.

8. Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the official SainSmart website or contact their customer service directly. Keep your purchase receipt for warranty claims.

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