R QIDI TECHNOLOGY AU-PLUS4

QIDI PLUS4 3D Printer User Manual

Model: AU-PLUS4 | Brand: R QIDI TECHNOLOGY

1. Introduction

The QIDI PLUS4 is an advanced 3D printer designed for both professionals and beginners, offering high-speed printing and a large build volume. It features a robust Core XY structure, an upgraded active chamber heating system, and a high-temperature direct extruder, making it compatible with a wide array of filaments, including engineering-grade materials.

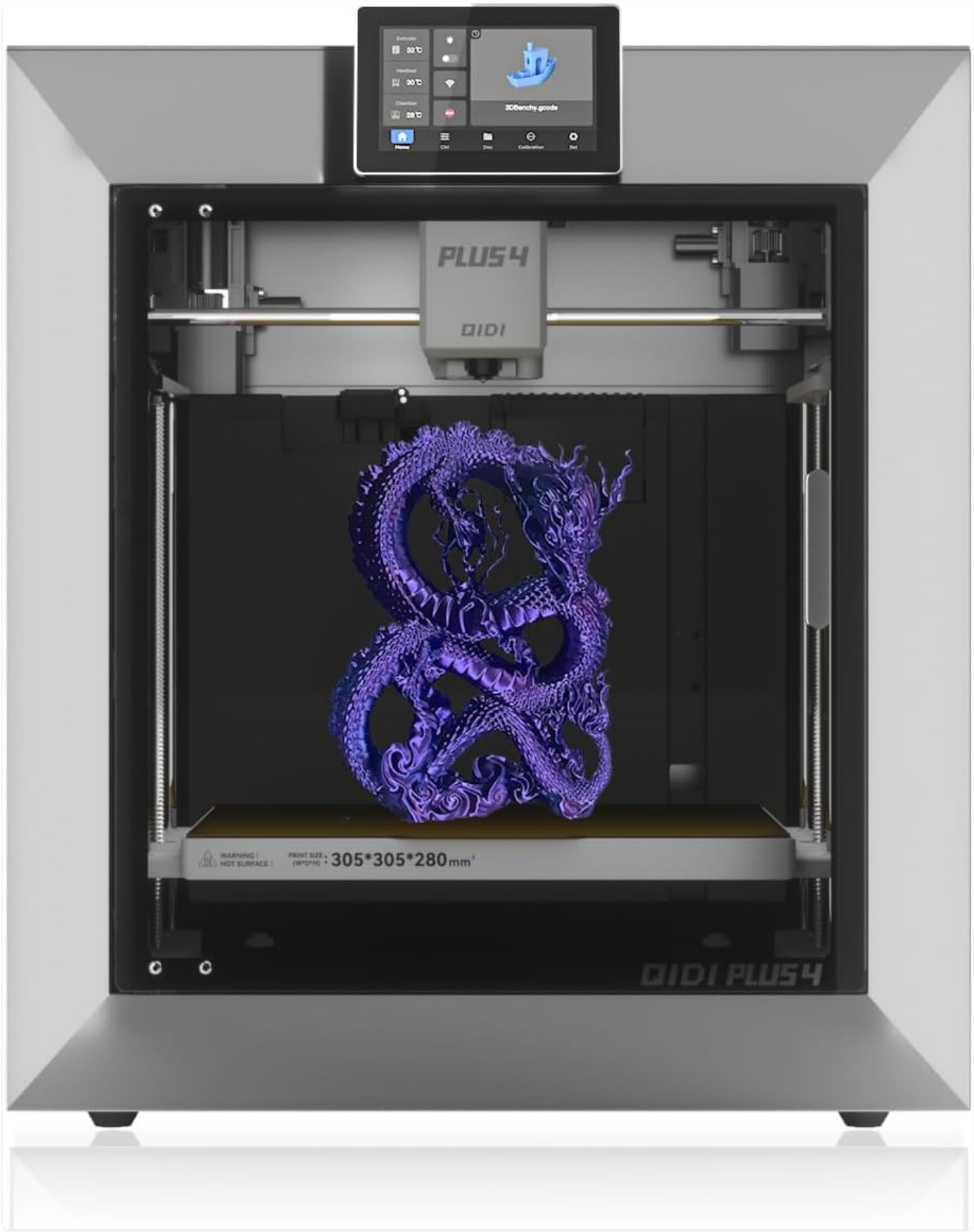


Figure 1.1: Front view of the QIDI PLUS4 3D Printer.

Key features include:

- Large print size of 12 x 12 x 11 inches (305 x 305 x 280mm) for increased efficiency.
- Max 600mm/s high-speed printing capability.
- Second-generation active chamber heating system with 400W power and dual-layer insulation to reduce warping.
- 370°C direct extruder with an integrated multi-metal nozzle for wide material compatibility, including PPS-CF.

- Fully automatic leveling system for consistent first layers.
- Integrated HD camera for remote monitoring and time-lapse photography.

2. Setup and Initial Use

The QIDI PLUS4 is designed for quick setup, allowing you to begin printing within approximately 10 minutes of unboxing.

2.1 Unboxing and Contents

Carefully remove all components from the packaging. Verify that all items listed below are present:

- X-PLUS4 3D Printer
- Camera
- USB2.0 Flash Drive
- Glue Stick
- Tool Kits
- Spare Parts Kits
- Holder Cover
- Filament Extension Bracket
- Extension Bracket Fixing Block
- Filament Spool Holder
- Quick Start Guide
- Power Cord
- Ethernet Cable

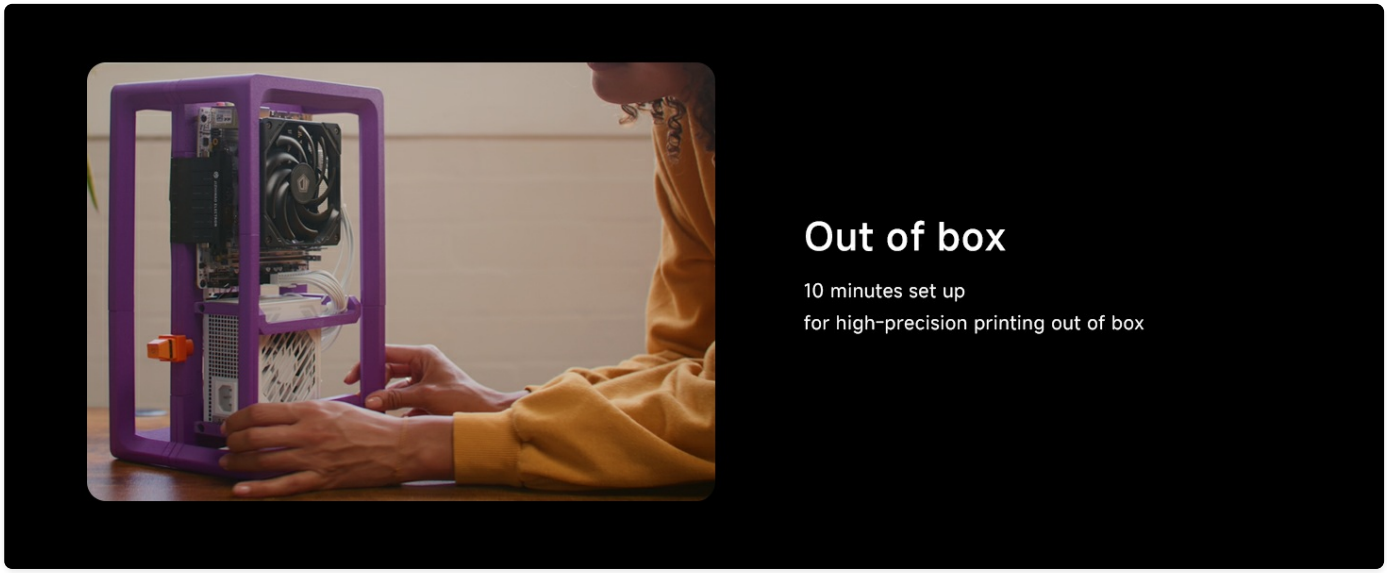


Figure 2.1: The QIDI PLUS4 is designed for a quick 10-minute setup.

2.2 Printer Placement and Connections

Place the printer on a stable, level surface. Connect the power cord and, if desired, the Ethernet cable for network connectivity. Ensure adequate ventilation around the printer.

2.3 Automatic Leveling

The PLUS4 features dual sensor auto-leveling, ensuring a perfect first layer without manual intervention. Follow the on-screen prompts for the initial calibration process.

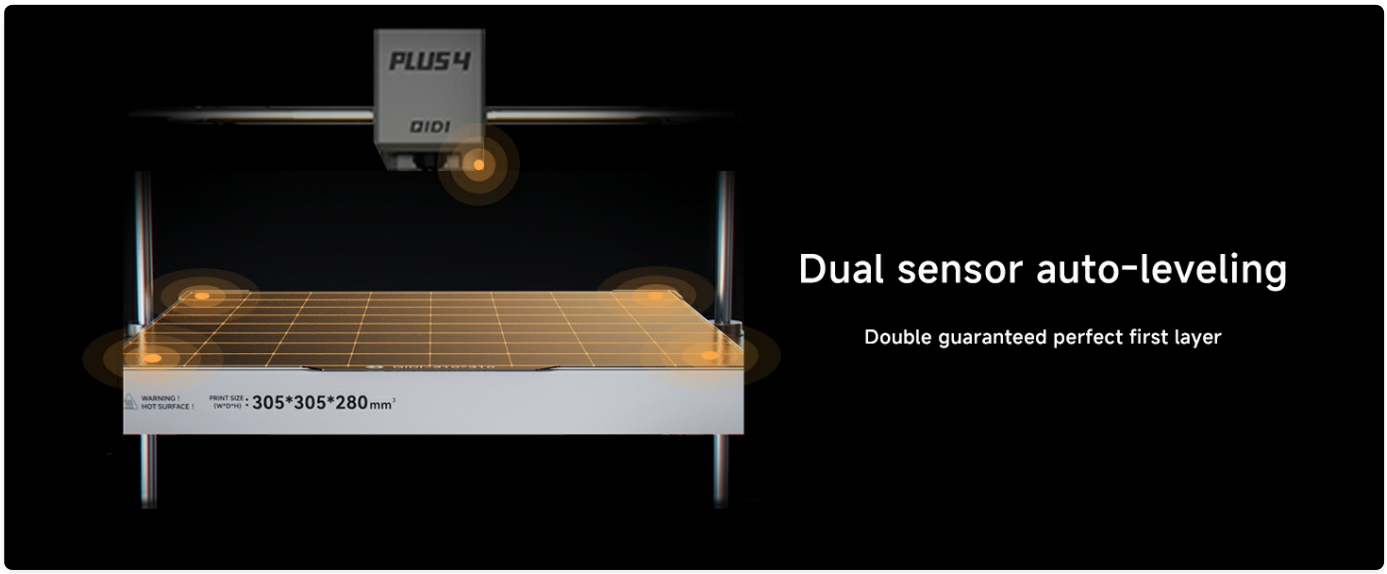


Figure 2.2: Dual sensor auto-leveling ensures precise bed calibration.

3. Operating the QIDI PLUS4

3.1 User Interface and Connectivity

The printer is equipped with an upgraded 5-inch HD touchscreen and a new UI for intuitive operation. Remote printing and real-time progress tracking are available via the QIDI mobile app or QIDI Studio slicer. The printer supports both Wi-Fi and Ethernet connectivity.



Figure 3.1: The upgraded 5-inch HD screen and new UI.

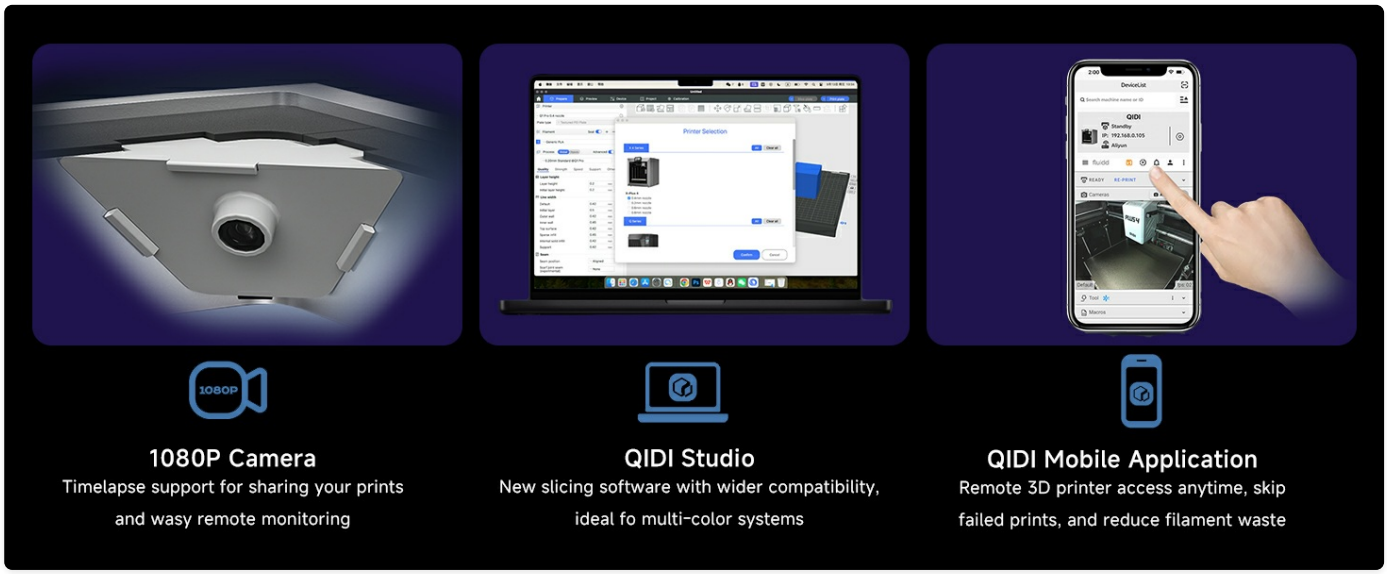


Figure 3.2: Remote monitoring and control features.

3.2 Filament Loading and Compatibility

The X-PLUS4 features an upgraded 80W high-temperature hotend and a multi-metal integrated throat nozzle, capable of reaching 370°C. This allows for compatibility with a wide range of filaments, including:

- PPS-CF
- PPA-CF/GF
- ABS
- ASA
- PC
- PA
- PET
- PLA

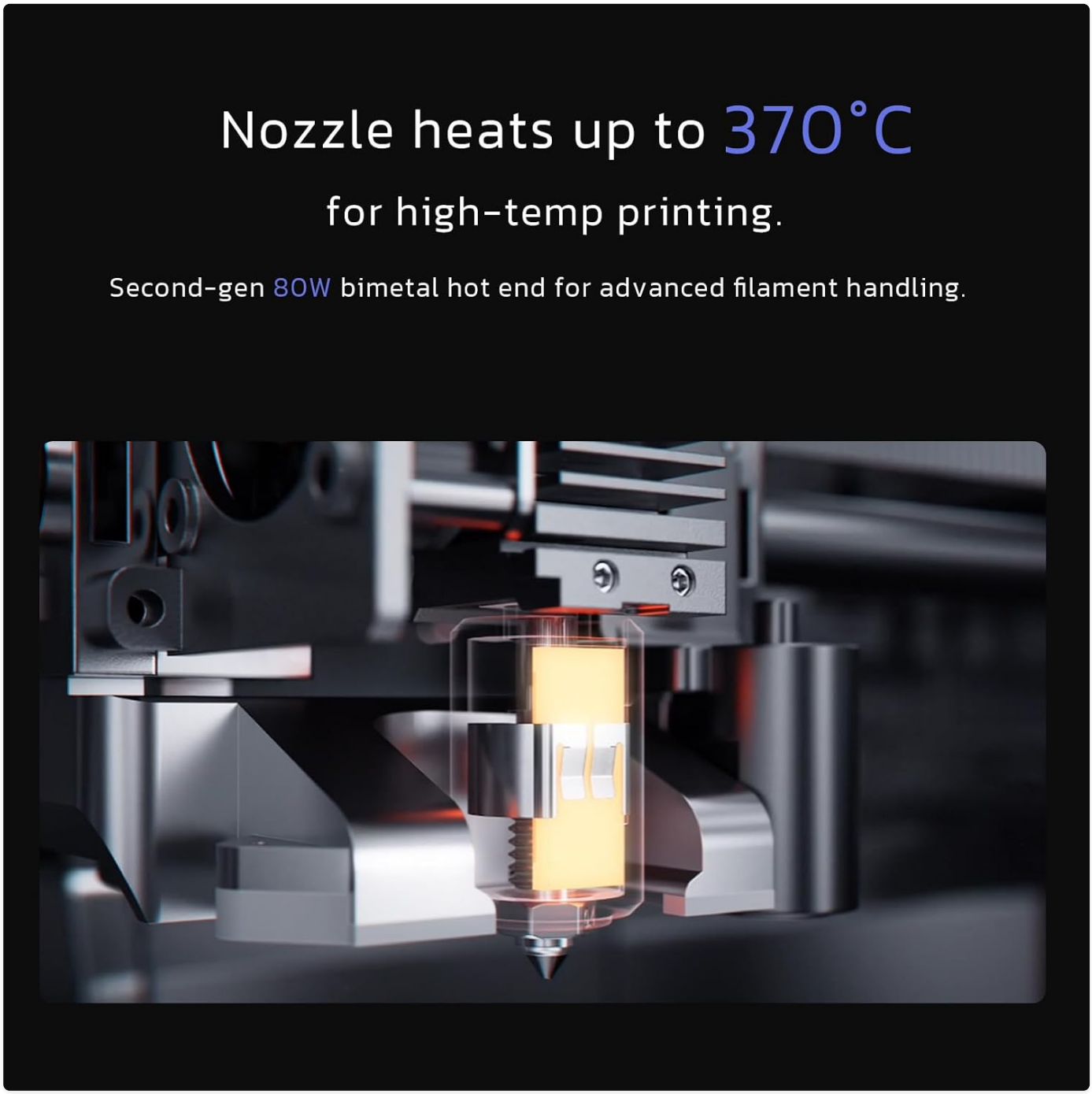


Figure 3.3: The hotend heats up to 370°C for high-temperature filaments.

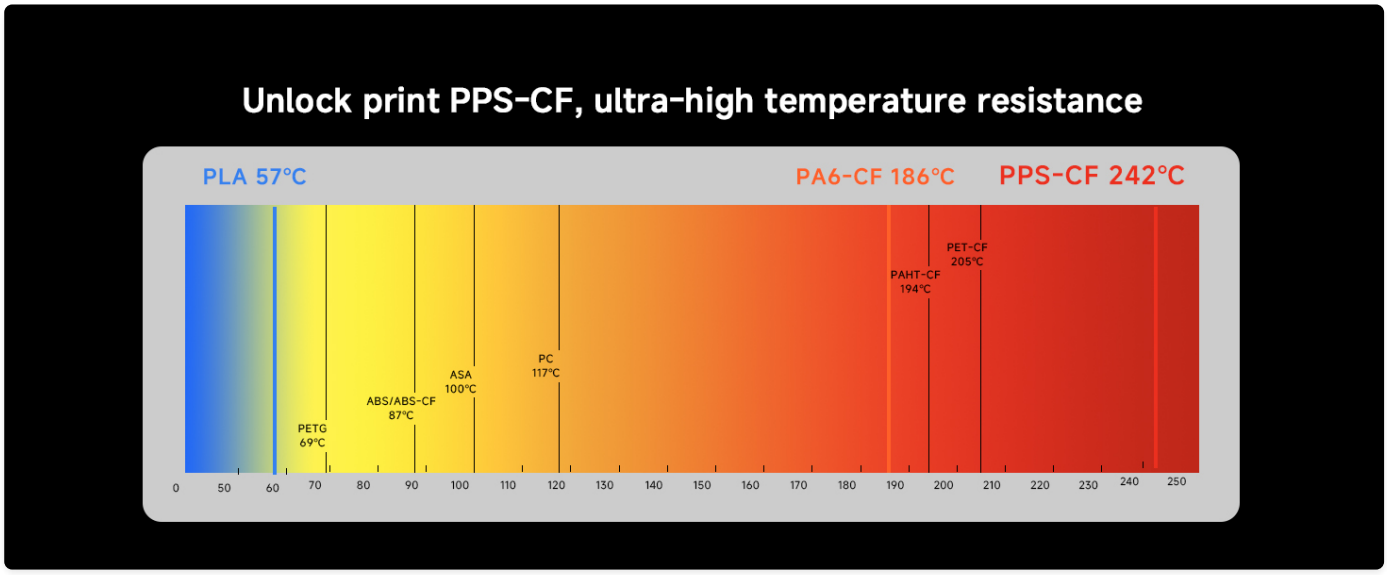


Figure 3.4: Filament compatibility and temperature ranges.

The printer also features comprehensive filament detection systems, including runout and tangle detection, to reduce filament waste.

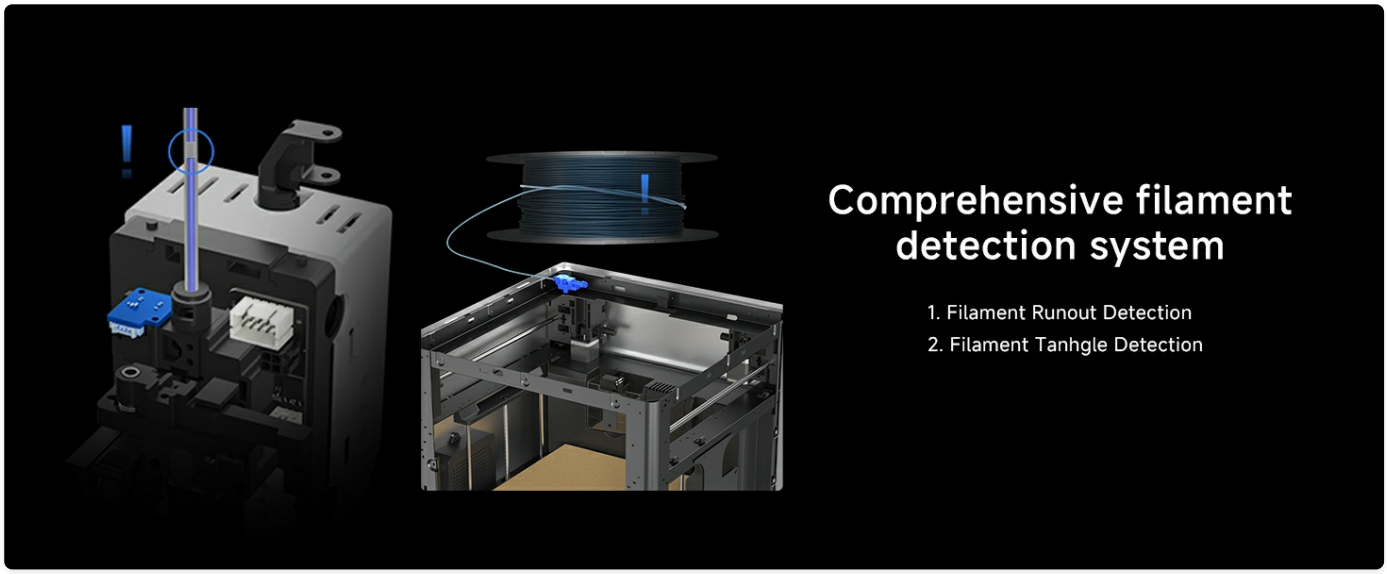


Figure 3.5: Filament detection system.

3.3 Active Chamber Heating

The second-generation active chamber heating system provides 400W of heating power, combined with air circulation and dual-layer insulation. This ensures a stable and uniform chamber temperature, effectively reducing warping and cracking when printing with high-temperature filaments like ABS and PC.

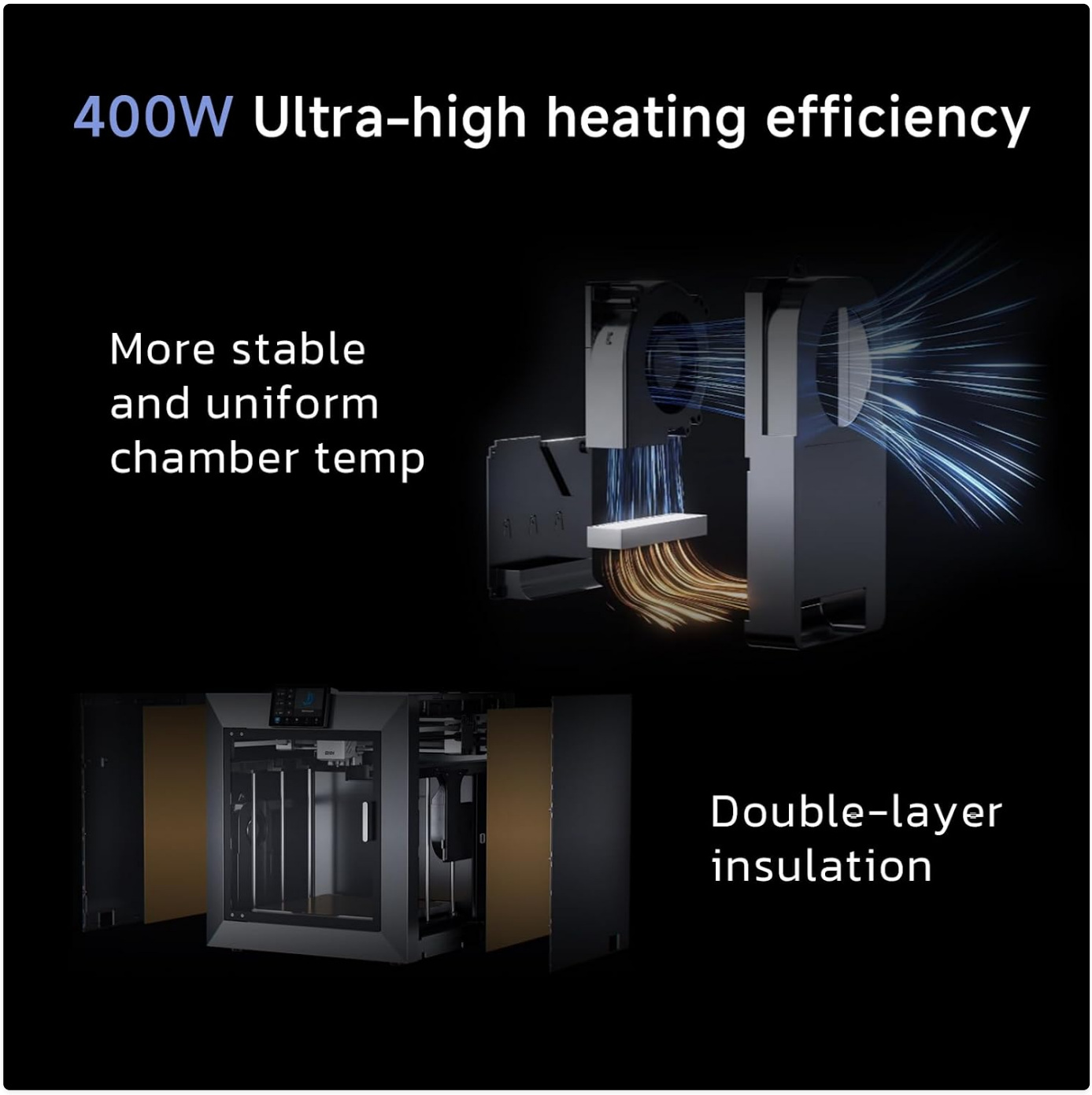


Figure 3.6: Active chamber heating system details.



Figure 3.7: Benefits of chamber heating for high-temperature filaments.

3.4 Advanced Features

- **Power-Loss Recovery:** The PLUS4 features power-loss recovery, allowing prints to resume after unexpected power outages.
- **Multi-Color Printing (Future):** The integrated filament cutter is compatible with the QIDI BOX (Multi-filaments automatic feeding box), which will be launched in Q1 2025, enabling multi-color printing.
- **Klipper Firmware:** Equipped with Klipper V0.12.0, offering open-source compatibility and expansion possibilities.

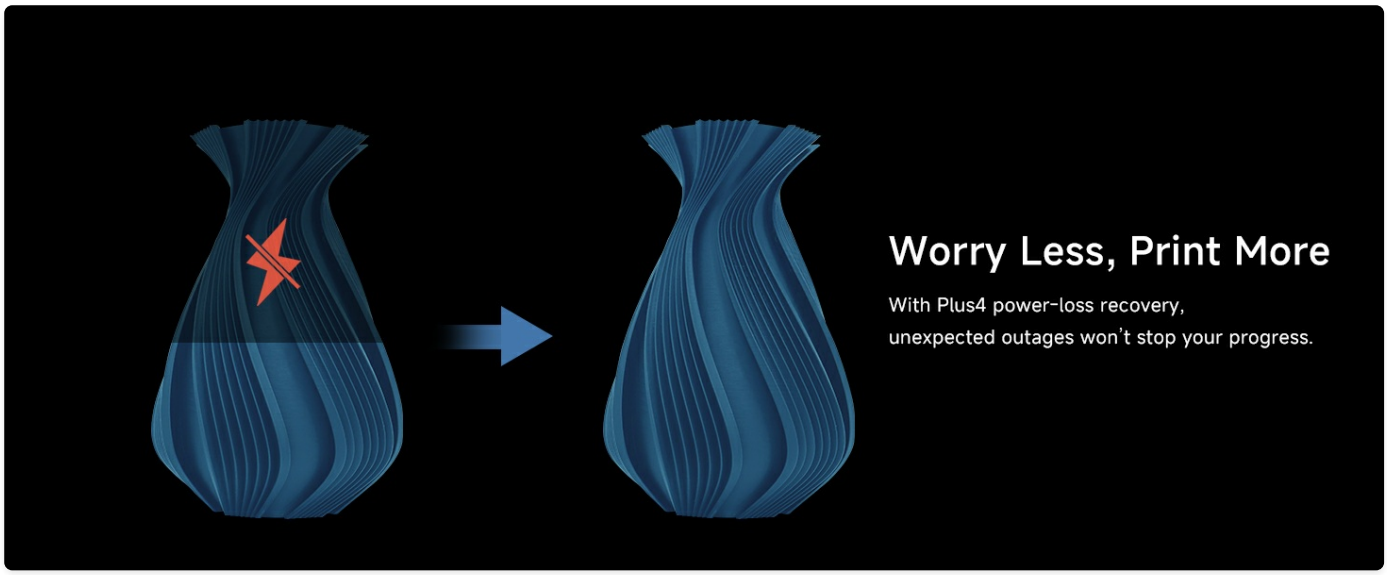


Figure 3.8: Power-loss recovery feature.



Figure 3.9: Compatibility with QIDI Box for multi-filament printing.

4. Maintenance

Regular maintenance ensures optimal performance and longevity of your QIDI PLUS4 3D Printer.

4.1 Nozzle and Hotend Care

The multi-metal integrated throat nozzle is designed for faster installation and removal, reducing clogging risks and offering exceptional wear resistance. Periodically inspect the nozzle for wear and clean any filament residue. The new toolhead cooling system features a larger, independent hotend fan and an innovative air duct design for efficient cooling.

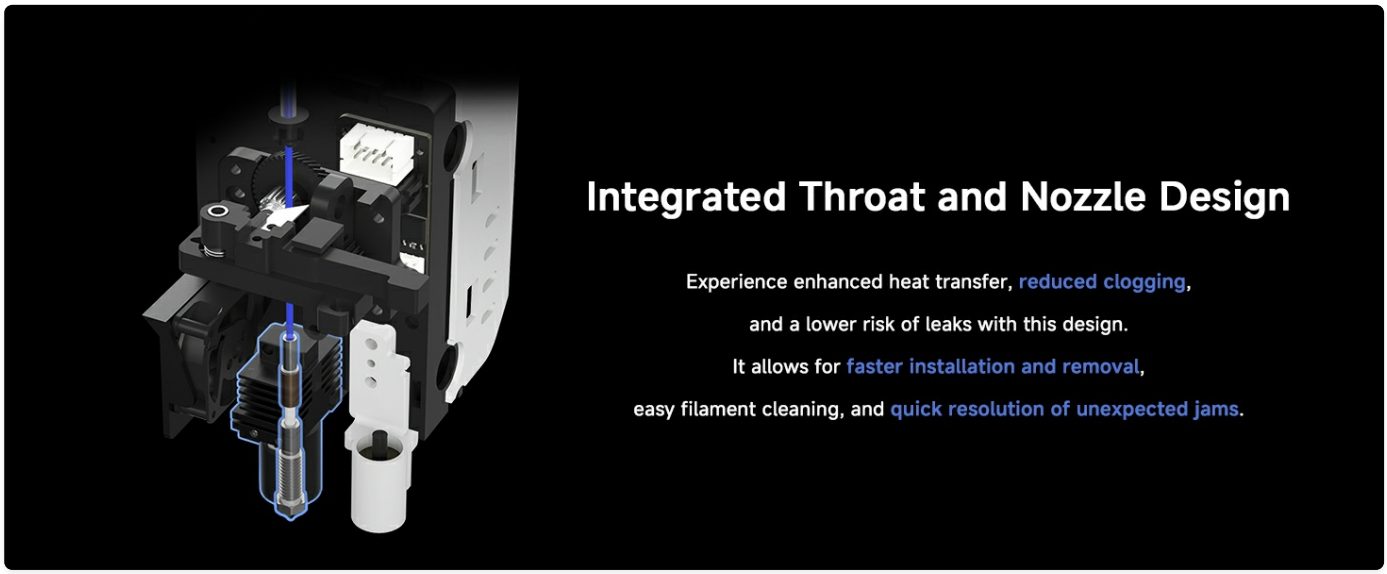


Figure 4.1: Integrated throat and nozzle design for reduced clogging and easy maintenance.



Figure 4.2: New toolhead cooling system.

4.2 Print Bed Maintenance

The 6mm thickened aluminum hot bed platform provides enhanced flatness. Keep the print surface clean from debris and adhesive residues. Refer to the quick start guide for specific cleaning instructions for the print surface.

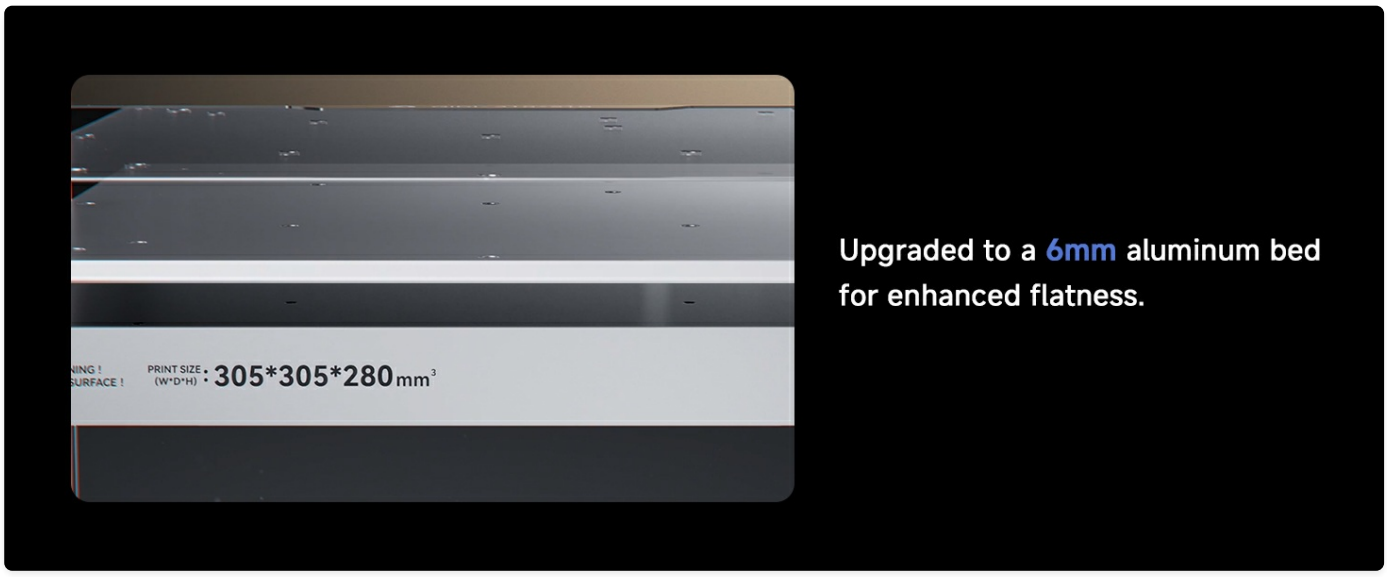


Figure 4.3: The 6mm aluminum print bed.

4.3 General Cleaning

Regularly wipe down the exterior of the printer and clear any dust or filament scraps from inside the chamber. Ensure all moving parts are free from obstructions.

5. Troubleshooting

This section provides solutions to common issues you might encounter.

5.1 Print Quality Issues

- **Warping/Cracking:** Ensure the active chamber heating is enabled and set to an appropriate temperature for the filament type. For high-temperature filaments like ABS or PC, maintaining a stable chamber temperature is crucial.
- **Layer Adhesion:** Verify that the print bed is clean and properly leveled. Adjust print temperatures and fan settings as per filament manufacturer recommendations.
- **Ghosting/Ringing:** The PLUS4 features an intelligent algorithm to avoid resonance, reducing ghosting and ringing. Ensure the printer is on a stable surface and check belt tension if issues persist.



Figure 5.1: Example of a perfect layer print quality.

5.2 Filament Feeding Problems

- **Filament Not Extruding:** Check for clogs in the nozzle. The integrated throat and nozzle design reduces clogging, but if it occurs, follow the quick resolution steps in the quick start guide. Ensure the filament is properly loaded and not tangled.
- **Filament Runout/Tangle Detection:** If the printer stops due to filament detection, replace the filament spool or untangle the filament.

5.3 Connectivity Issues

If experiencing issues with remote control or monitoring, verify your Wi-Fi or Ethernet connection. Ensure the QIDI mobile app and QIDI Studio slicer are updated to the latest versions.

6. Specifications

Feature	Specification
Model Number	AU-PLUS4
Product Dimensions (D x W x H)	19.29" x 20.07" x 22.24" (490 x 510 x 565 mm)
Item Weight	67.9 pounds (30.8 kg)
Build Volume (L x W x H)	12" x 12" x 11" (305 x 305 x 280mm)
Max Print Speed	600mm/s
Max Nozzle Temperature	370°C
Hotend Power	80W (Second-gen bimetal)
Chamber Heating Power	400W
Print Bed Material	6mm thickened aluminum
Z-axis Drive	Independent dual motor-driven, 10mm linear shafts & lead screws
Compatible Filaments	PPS-CF, PPA-CF/GF, ABS, ASA, PC, PA, PET, PLA, etc.
Supported File Formats	STL, OBJ, 3MF, STEP, STP
Connectivity	Wi-Fi, Ethernet
Manufacturer	Zhejiang QIDI TECHNOLOGY CO.,LTD
Country of Origin	China

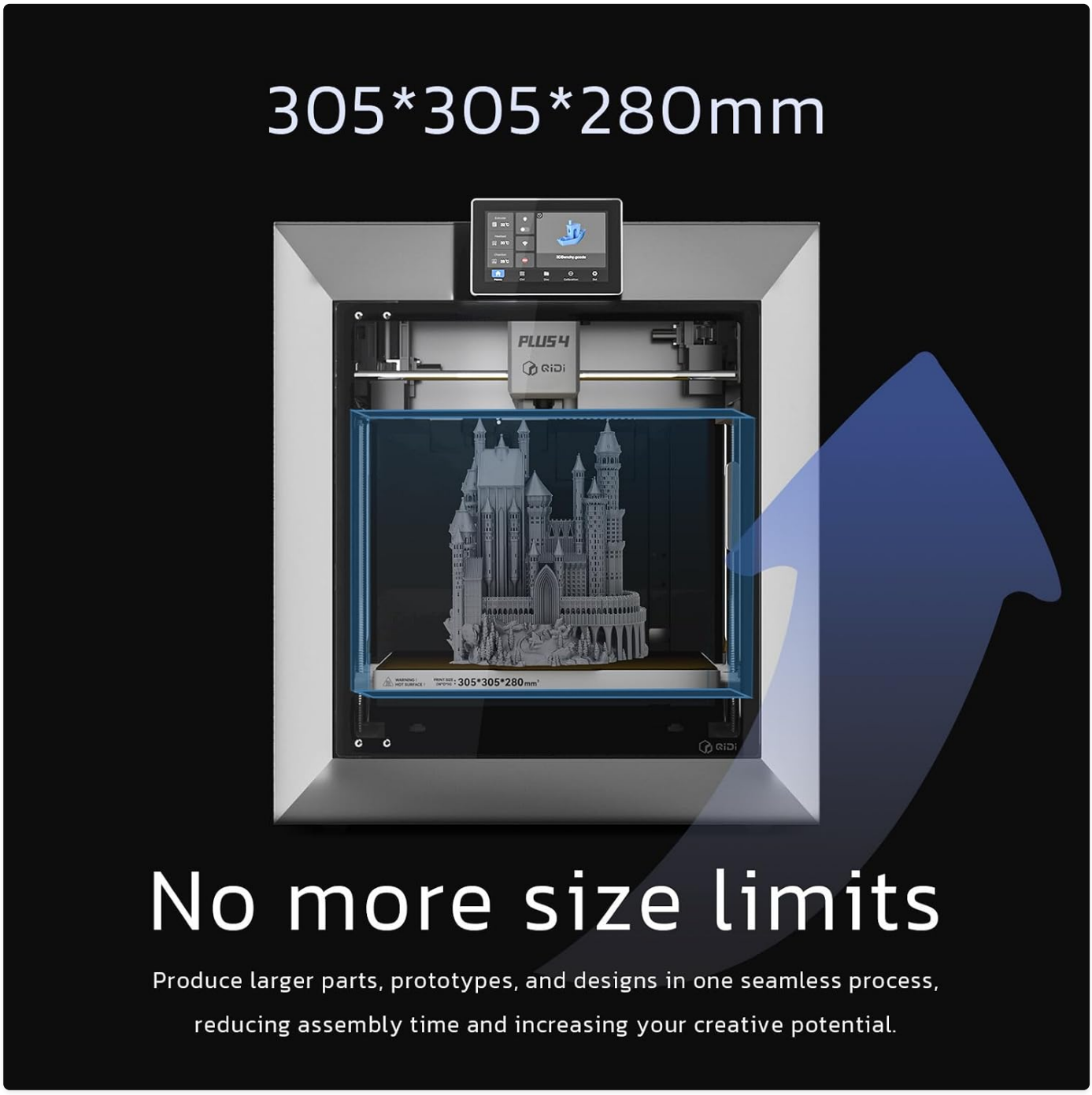


Figure 6.1: Large print volume of the QIDI PLUS4.



Figure 6.2: Mechanical drive system for enhanced precision.

7. Warranty and Support

R QIDI TECHNOLOGY is committed to providing high-quality products and customer satisfaction. All products have passed MET safety quality certification, CE, FCC, and ROHS certification.

7.1 Protection Plans

Optional protection plans are available for purchase to extend coverage beyond the standard warranty. Please refer to your purchase documentation for details on available plans (e.g., 3-Year Protection Plan, 4-Year Protection Plan).

7.2 Customer Support

For technical assistance, troubleshooting not covered in this manual, or warranty inquiries, please contact R QIDI TECHNOLOGY customer support. Contact information can typically be found on the official product website or through your purchase platform.

QIDI TECH maintains an active community, wiki, and GitHub presence where employees actively assist users with problem-solving.

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Example: How do I reset this device or fix this error?

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