R QIDI TECHNOLOGY AU-Q1Pro

QIDI Q1 Pro 3D Printer Instruction Manual

Model: AU-Q1Pro | Brand: R QIDI TECHNOLOGY

Introduction

This manual provides detailed instructions for the setup, operation, and maintenance of your QIDI Q1 Pro 3D Printer. Please read thoroughly before use to ensure optimal performance and safety.

Figure 1: QIDI Q1 Pro 3D Printer overview.

1. Setup

1.1 Unboxing and Initial Preparation

Upon unboxing, ensure all packing materials, including zip ties and protective screws, are removed from the printer. The printer is designed for quick setup, allowing you to start printing in approximately 10 minutes.

Figure 2: Interior view of the QIDI Q1 Pro 3D Printer after unboxing.

1.2 Filament Loading

Attach the filament spool holder to the rear of the printer. Guide the filament from the spool into the filament runout sensor and then into the extruder. The intelligent Hall filament runout sensor and tangle detection system will monitor the filament during printing.

Figure 3: Illustration of the filament runout and tangle detection system.

1.3 Calibration

The Q1 Pro features full-auto calibration. Ensure the build platform is clear of any objects before initiating calibration.

- **Auto Bed Leveling:** Automated dual sensors provide precise auto-leveling for a perfect first layer.
- **Input Shaping:** This process helps to reduce vibrations and improve print quality at high speeds.
- **Platform Calibration:** Ensures the print platform is correctly aligned.

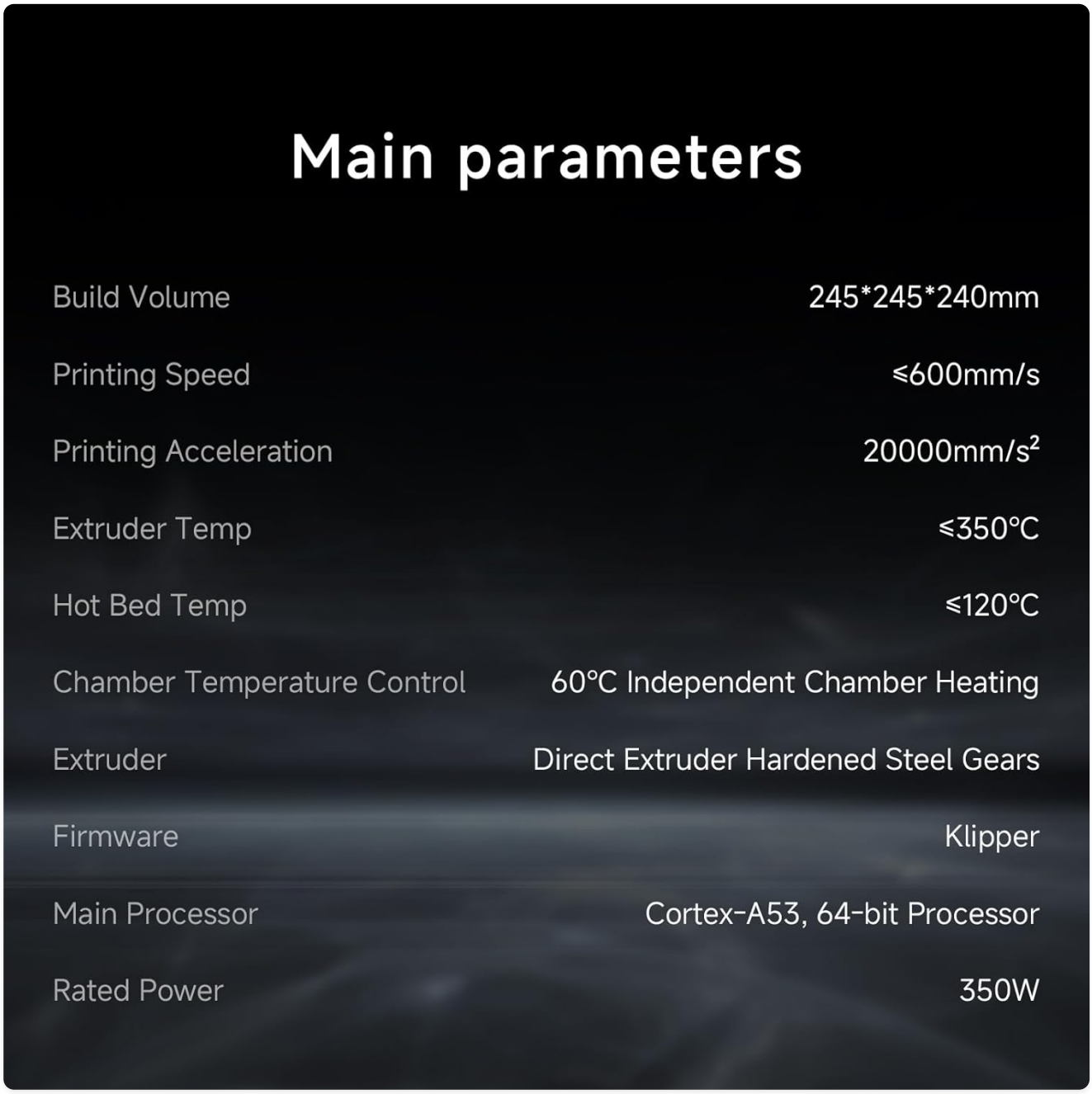

Figure 4: Dual sensor auto-leveling in action.

1.4 Network Setup

Connect your printer to your Wi-Fi network via the touchscreen interface. This enables remote control, monitoring, and file transfer through the Klipper-based system and the QIDI mobile application.

2. Operating Instructions

2.1 Control Panel Overview

The Q1 Pro features a vertical touchscreen display for intuitive control. It shows nozzle, bed, and chamber temperatures, and allows control of internal lighting and sound.

2.2 Printing Process

Load your desired G-code file from local storage or a USB drive. The printer supports various materials including

PLA, PETG, TPU, ABS, ASA, PA, PC, Carbon Fiber, and Glass Fiber filaments, with a bimetal nozzle supporting up to 350°C.

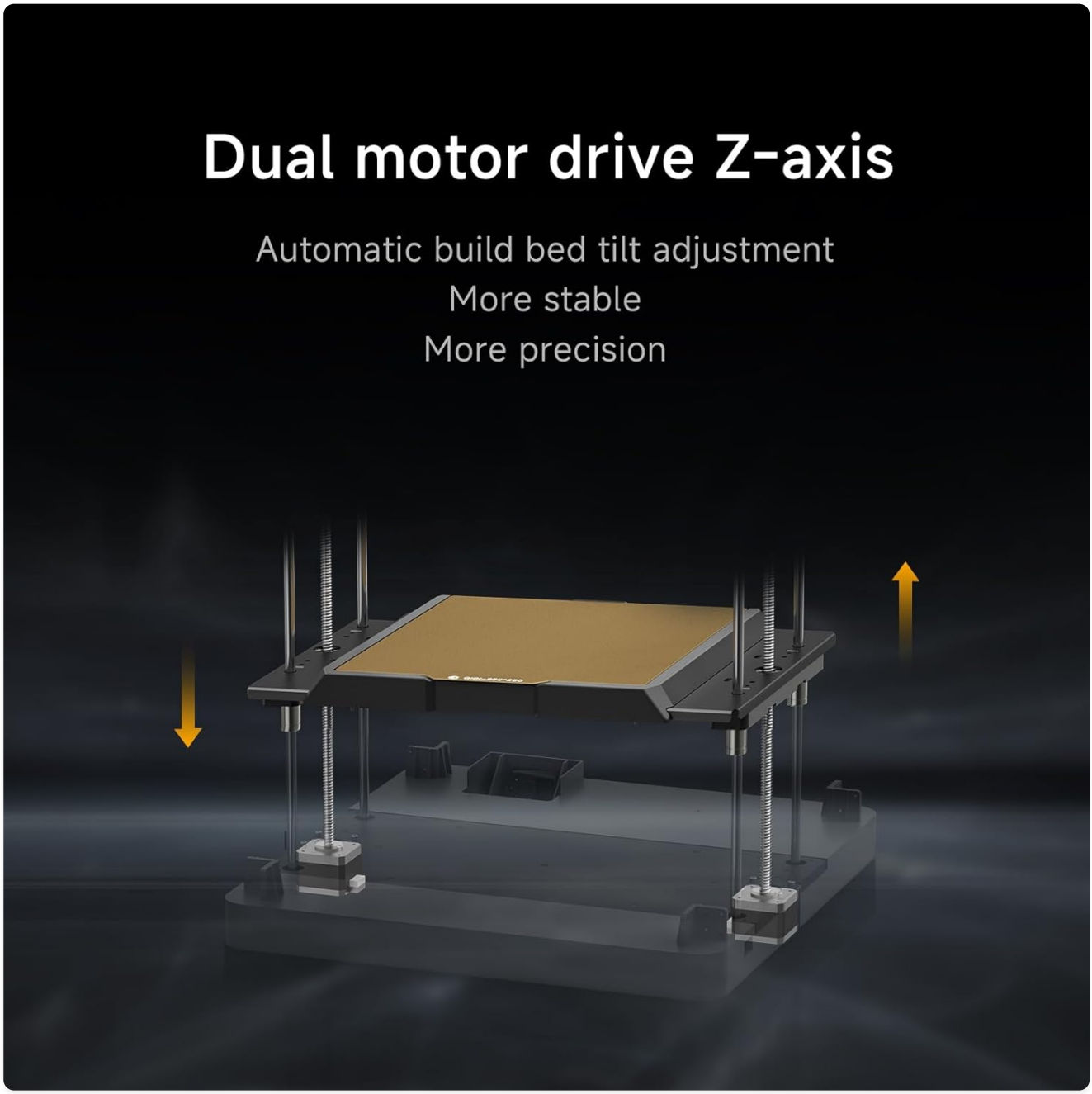

Figure 5: The bimetal nozzle supports high-temperature printing for various filaments.

2.3 Monitoring and Remote Control

The built-in 1080P HD camera allows real-time monitoring and time-lapse photography of your prints. Remote control is available via the mobile application, enabling you to manage prints from anywhere.

3. Maintenance

3.1 Nozzle Replacement

Regular nozzle inspection and replacement are crucial for consistent print quality. A nozzle cleaning tool is included with the printer.

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Video 1: Official guide on how to replace the nozzle on the QIDI Q1 Pro.

3.2 General Cleaning

Keep the build plate and interior clean to prevent debris from affecting print quality. Use a soft cloth and appropriate cleaning solutions.

3.3 Optional Activated Carbon Air Filter

An optional activated carbon air filter can be installed to reduce dust and fumes, especially when printing with materials that may emit fine particles. The design for the filter box can be downloaded from the official wiki.

4. Troubleshooting

4.1 Filament Issues

- **Filament Runout:** The intelligent Hall sensor will detect when filament runs out and pause the print. Replace the filament and resume.
- **Filament Tangle:** The tangle detection system will alert you if the filament is tangled, preventing print failures. Untangle the filament and ensure smooth feeding.
- **Clogging:** Ensure the filament is properly loaded and the nozzle is clean. If clogging persists, replace the nozzle.

4.2 Print Quality Issues

- **Warping/Poor Layer Adhesion:** The active heating chamber temperature control system (up to 60°C) significantly improves print quality and layer adhesion, especially for materials like ABS, PA, and PC. Ensure the chamber temperature is set appropriately for your filament.

Figure 6: Comparison of prints with and without active chamber heating, showing reduced warping and improved quality.

5. Specifications

Feature	Detail
Product Dimensions	18.39 x 18.78 x 19.25 inches
Item Weight	45 pounds
Model Number	AU-Q1Pro
Brand	R QIDI TECHNOLOGY
Material	ABS and metal

Max Print Speed	600mm/s
Max Nozzle Temp	350°C
Max Chamber Temp	60°C
Firmware	Klipper
Camera	1080P HD

What's in the Box:

- Q1 Pro 3D Printer
- Filament Spool Holder/Filament Extension Stand
- USB 2.0 Flash Drive, Nozzle Cleaning Tool, Spare Parts Kit
- Scraper, 7mm Spanner, Flat Head Screwdriver, Allen Key H1.5/2/2.5
- Power Cord, Quick Start Guide

6. Warranty and Support

QIDI TECH, founded in 2014, is committed to manufacturing high-quality FDM printers. All products have passed MET safety quality certification, CE, FCC, and ROHS certification. For any support inquiries, please refer to the official QIDI TECH website or contact their customer service. Information regarding protection plans may also be available through your retailer.