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Voxelab Aquila S3

Voxelab Aquila S3 3D Printer Instruction Manual

Comprehensive guide for setup, operation, and maintenance of your Voxelab Aquila S3 3D Printer.

1. Setup

This section guides you through the initial setup of your Voxelab Aquila S3 3D printer, ensuring it is ready for its first print.

1.1 Unpacking and Initial Inspection

Carefully remove all components from the packaging. Inspect for any visible damage during transit. Ensure all parts listed in the packing list are present.

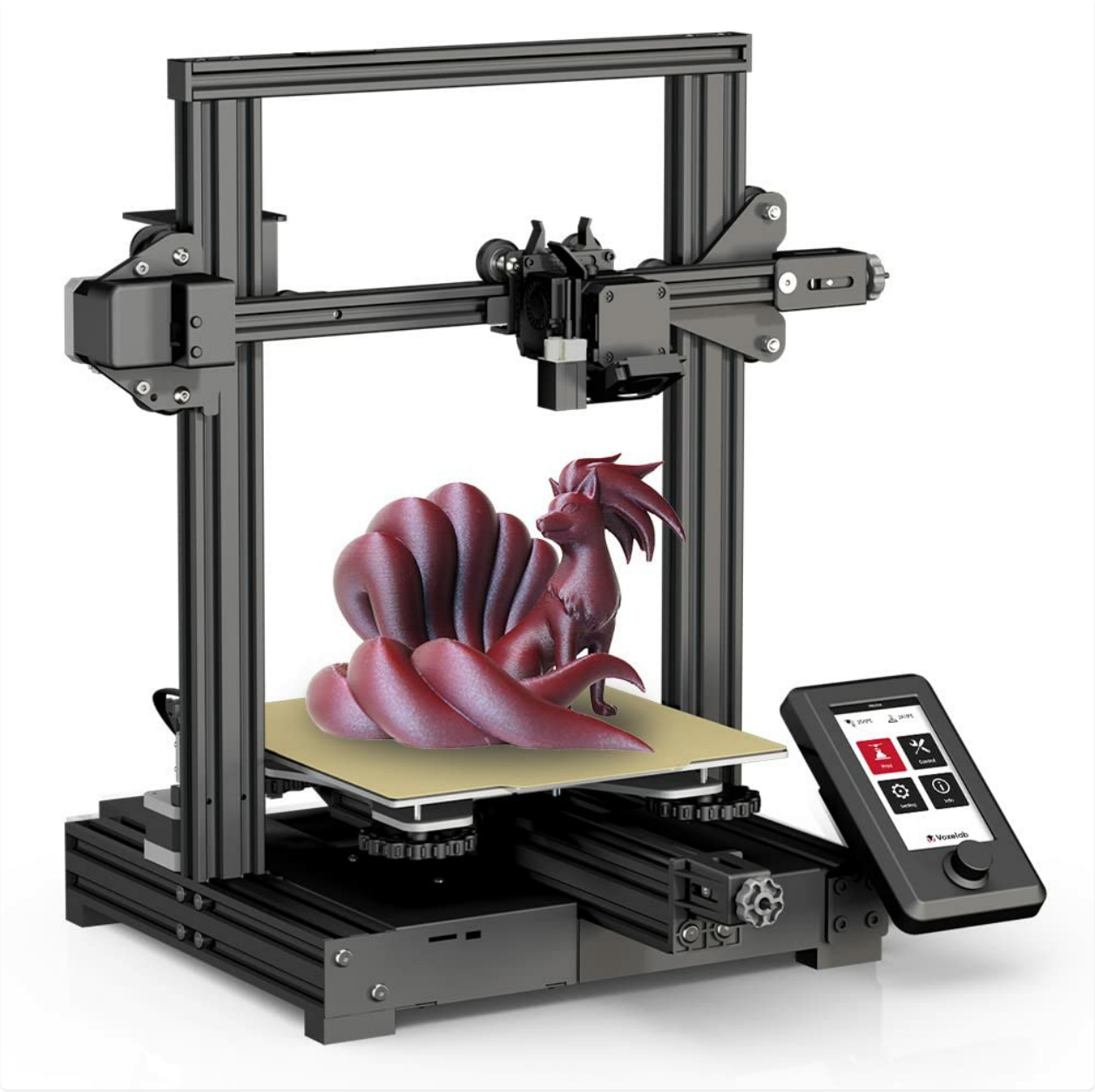


Figure 1: The Voxelab Aquila S3 3D Printer, fully assembled.

1.2 Power Connection and Voltage Selection

Locate the power input and the voltage selection switch at the rear of the printer. **Before connecting to power**, ensure the voltage switch is set to match your local power supply (115V or 230V) to prevent damage to the unit. Connect the power cable securely.

1.3 Lead Screw Lubrication

For optimal performance and smooth vertical movement, it is recommended to apply a small amount of general-purpose white grease to the Z-axis lead screw. Distribute the grease evenly along the screw by manually moving the print head up and down.

1.4 Build Plate Installation and Leveling

The Aquila S3 features a PEI spring steel platform for excellent adhesion and easy print removal. Secure the build plate using the provided clips. The printer is equipped with a 25-point intelligent auto-leveling system. Perform the auto-leveling procedure as instructed on the display to ensure proper first layer adhesion.

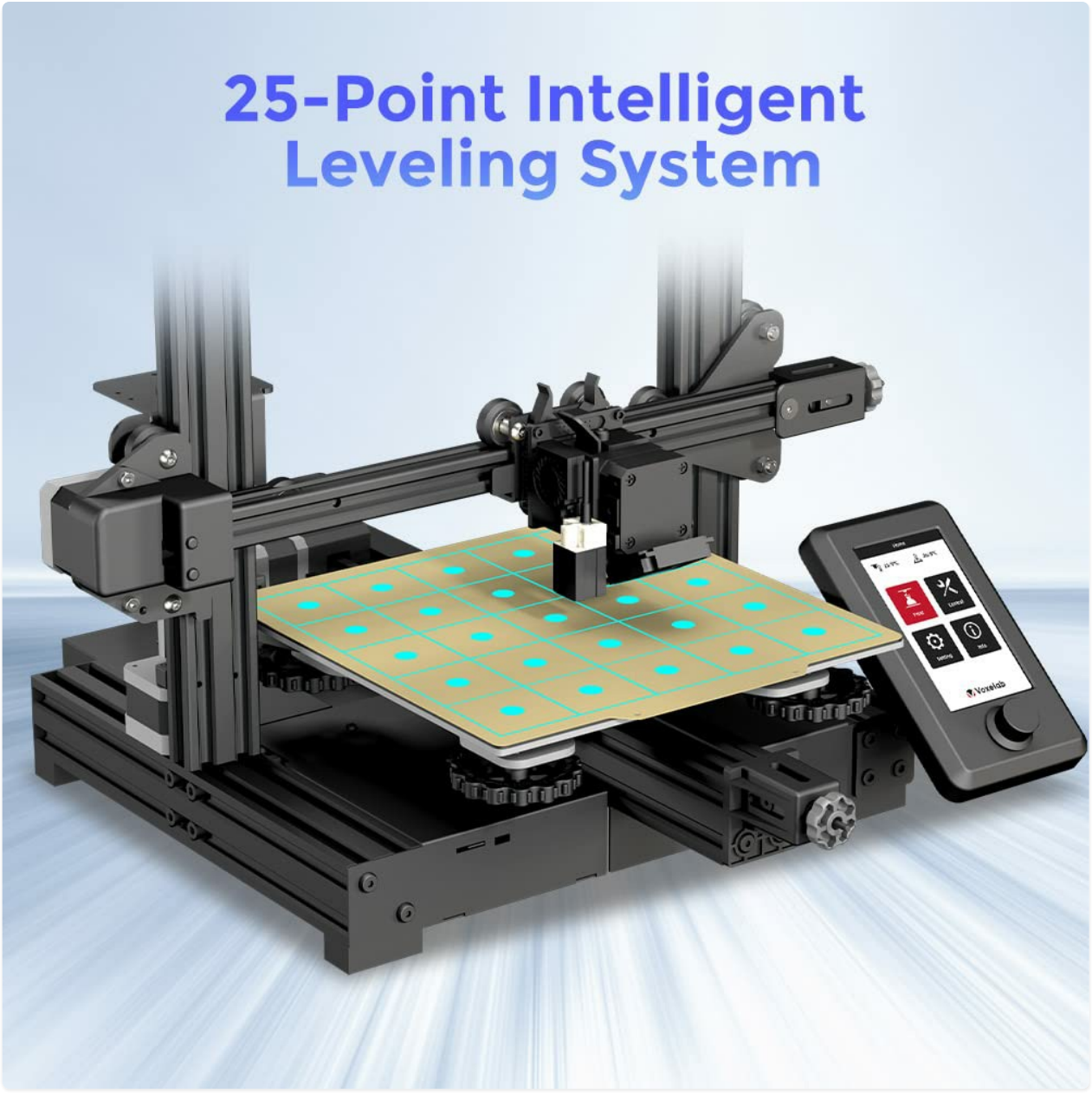


Figure 2: The 25-point intelligent leveling system ensures precise bed calibration.

2. Operating Your Aquila S3

This section covers the basic operation of your Voxelab Aquila S3, from powering on to starting your first print.

2.1 Powering On and Display Interface

Once the voltage is correctly set and the power cable is connected, press the power button. The horizontal display will boot up, showing the Voxelab logo and then the main menu. The display is vibrant and navigation is primarily done via the rotary knob.

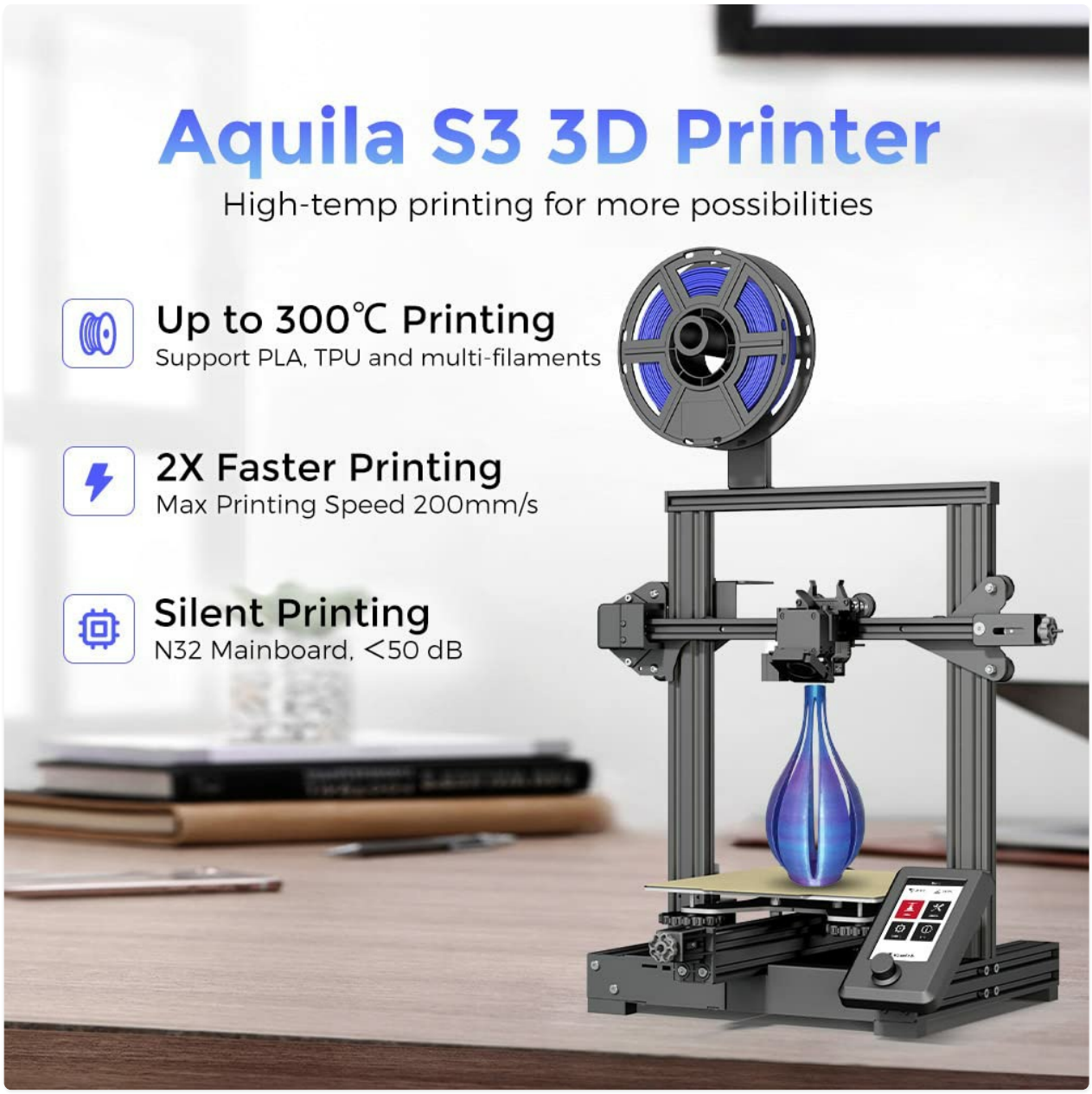


Figure 3: Key features of the Aquila S3, including high-temperature printing capabilities.

2.2 Loading Filament

Place your filament spool on the top-mounted spool holder. Guide the filament through the filament sensor (if equipped) and into the direct drive extruder. The all-metal dual-gear direct drive extruder provides a strong 70N extrusion force, ensuring smooth feeding, especially for flexible filaments like TPU.

Figure 4: The full-metal dual-gear direct extruder for reliable filament feeding.

2.3 Compatible Filaments and Nozzle

The Aquila S3 is equipped with an upgraded hardened nozzle capable of withstanding temperatures up to 300°C. This allows for printing with a wider variety of filaments, including ABS, PETG, PA, PLA, TPU, and wood. Ensure the correct temperature settings are selected for your chosen filament type.

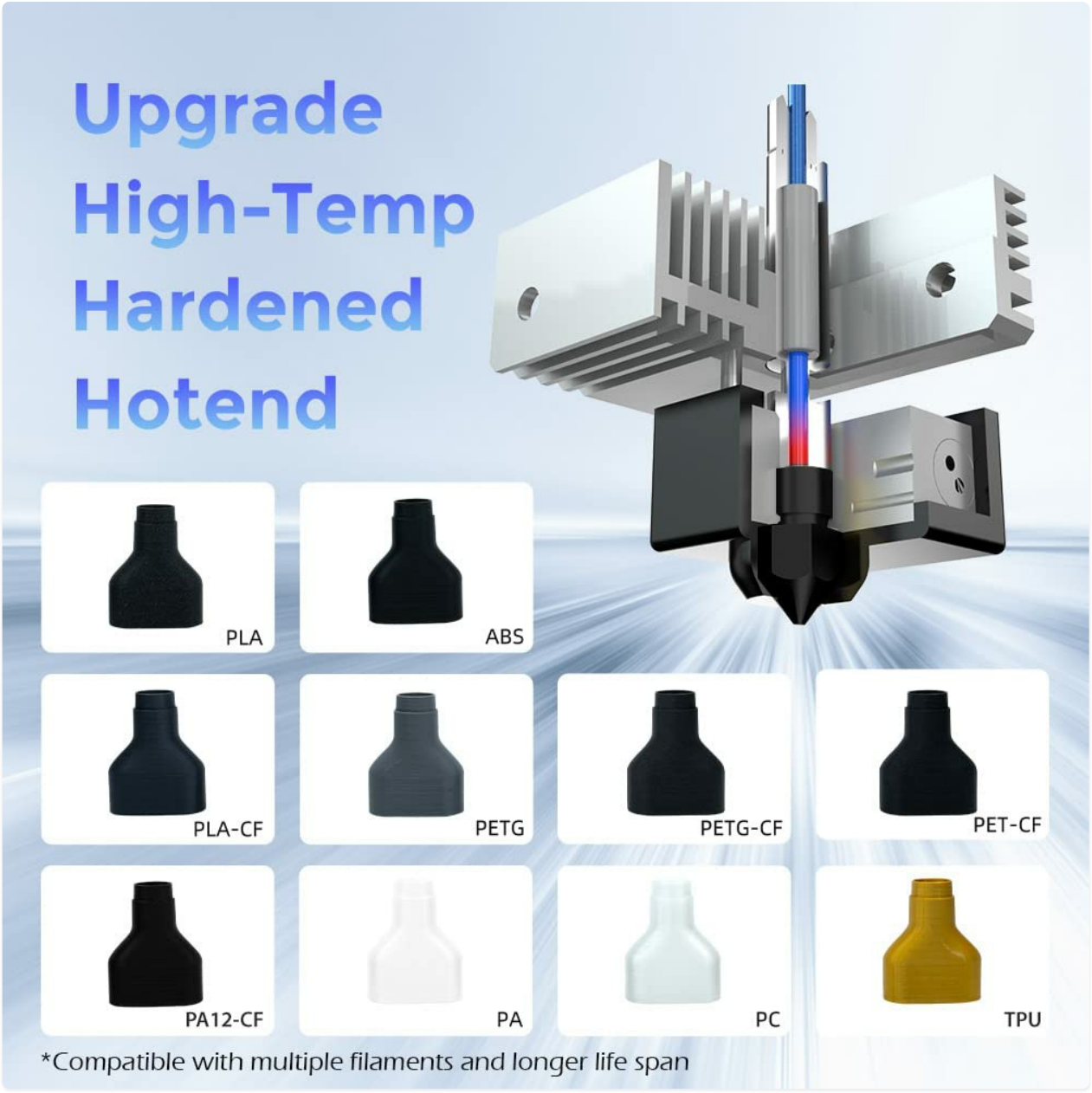


Figure 5: The upgraded high-temp hardened hotend supports diverse filament materials.

2.4 Starting a Print

Insert your MicroSD card with the prepared G-code file into the slot on the front of the printer's base. Navigate to the 'Print' option on the display, select your file, and confirm to begin printing. The printer supports resume printing functionality in case of power loss.

Figure 6: The Aquila S3 in operation, demonstrating its printing capabilities.

3. Maintenance

Regular maintenance ensures the longevity and consistent performance of your Voxelab Aquila S3 3D printer.

3.1 Lead Screw and Rod Cleaning

Periodically inspect and clean the Z-axis lead screw and smooth rods. Remove any dust or debris, and reapply a thin layer of appropriate grease or lubricant to the lead screw to maintain smooth vertical motion.

3.2 Build Plate Care

After each print, allow the PEI spring steel platform to cool down completely. Prints will typically pop off easily once cooled. Clean the surface with isopropyl alcohol to remove any residue and maintain optimal adhesion for future prints.

3.3 Extruder and Nozzle Maintenance

Regularly check the extruder gears for filament debris and clean as necessary. If you experience clogs or reduced extrusion, perform a cold pull or carefully clean the nozzle according to standard 3D printer maintenance practices. The hardened nozzle is designed for durability but proper care is still essential.

4. Troubleshooting

This section addresses common issues you might encounter with your Voxelab Aquila S3 and provides solutions.

- **Printer Not Powering On:** Double-check the power cable connection and verify that the 115V/230V voltage selection switch at the rear of the printer is correctly set for your region.
- **Poor First Layer Adhesion:** Ensure the build plate is clean and free of oils or debris. Re-run the 25-point auto-leveling procedure. Adjust Z-offset if necessary.
- **Filament Clogging:** This can be caused by incorrect printing temperature, a dirty nozzle, or heat creep. Verify filament type and temperature settings. Perform a cold pull or clean the nozzle.
- **Layer Shifting:** Check that all belts (X and Y axes) are properly tensioned. Ensure the printer is on a stable surface to prevent vibrations.
- **Noisy Operation:** While the Aquila S3 features a silent N32 mainboard, excessive noise might indicate a need for lead screw lubrication or inspection of moving parts for obstructions.

5. Technical Specifications

Feature	Specification
Brand	Voxelab
Model	Aquila S3
Print Size (Build Volume)	220 x 220 x 240 mm
Max Printing Speed	200 mm/s
Extruder Type	All-Metal Dual-Gear Direct Drive Extruder
Max Nozzle Temperature	300°C
Leveling System	25-point Intelligent Leveling
Print Platform	PEI Spring Steel Platform
Product Dimensions	19.09 x 13.54 x 15.82 inches
Product Weight	20.64 Pounds
Material	Metal
Color	Black
Compatible Devices	Laptop, Smartphone
Operating System	Linux
Rated Power	350W

6. Warranty and Support

Voxelab is committed to providing excellent customer service and support for your 3D printing journey.

6.1 Warranty Information

All Voxelab 3D printers are provided with a**one-year warranty** from the date of purchase.

6.2 Technical Assistance

Voxelab offers **lifetime technical assistance** for all its 3D printers. If you have any questions regarding product operation, software, or encounter any issues, please do not hesitate to contact the support team.

6.3 Contact Information

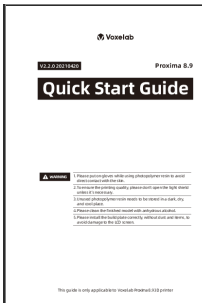
Email: support@voxelab3dp.com

Official Website: www.voxelab3dp.com

Social Media: Follow Voxelab on Instagram, Facebook, and YouTube for the latest news and updates.

Related Documents - Aquila S3

	Voxelab Aquila 3D Printer User Manual Comprehensive user manual for the Voxelab Aquila 3D printer, covering setup, operation, troubleshooting, and after-sales service. Includes detailed instructions, specifications, and safety guidelines.
	Voxelab Aquila X2 3D Voxelab Aquila X2 3D 3D
	Voxelab Polaris 3D Printer Quick Start Guide A comprehensive guide to setting up and operating the Voxelab Polaris 3D printer, including installation, leveling, first print, post-processing, and software usage with CHITUBOX and VoxelPrint.
	Voxelab Aquila X2 3D Printer User Manual Comprehensive user manual for the Voxelab Aquila X2 3D printer, covering product introduction, assembly, operation, troubleshooting, and after-sales service.
	Voxelab Aquila D1 3D Printer User Manual Comprehensive user manual for the Voxelab Aquila D1 3D printer, covering setup, operation, maintenance, and troubleshooting.

	[Voxelab Proxima 8.9 Quick Start Guide: Setup, Operation, and Maintenance] This guide provides essential information for setting up, operating, and maintaining the Voxelab Proxima 8.9 3D printer. It covers safety precautions, printer components, leveling, first printing, post-processing, FEP film replacement, software usage, and general maintenance.