QIDI TECH Q1 Pro Innovative 3D Printing Machine User Guide

Contents

1 QIDI TECH Q1 Pro Innovative 3D Printing Machine
2 Usage Notice
3 Accessory List
4 Starting Up
5 Unboxing
6 How To Remove
7 Printer Introduction
8 Filament Guide For Beginners
9 Specifications
10 Documents / Resources
10.1 References

QIDI TECH Q1 Pro Innovative 3D Printing Machine

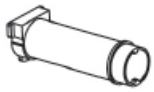
Usage Notice

- Do not place the machine in flammable and explosive materials or near high heat sources, please place the machine in a ventilated, cool, and dust-free environment.
- Ensure the machine is powered off (unplug the power cord) before performing maintenance or modifications.
- Before connecting the power, please follow the power setup instructions to ensure that the voltage is correct.
- Never reach inside the QIDI printer while they are in operation.
- Children should be under constant supervision when using QIDI products.
- The printer contains high-speed moving parts, so be careful of hand pinching.
- There is a potential risk of burns: the print head of the QIDI printers can reach temperatures above 300 ° C, while the hot bed can reach temperatures above 100 ° C. Do not touch either of these parts with your bare hands.
- Do not place the printer in a vibrating or other unstable environment. Otherwise, the shaking of the machine will affect the printing quality.
- After printing, use the residual temperature of the print head to clean the filament around the nozzle with the dedicated tools in time. Do not touch either of these parts with your bare hands.
- Perform routine maintenance for your product by using a dry cloth to clean the printer body when it is turned off. Additionally, remove any dust, bonded printing materials, or foreign objects that may accumulate on the optical axis. Regular lubrication is necessary for the linear shaft and Z-axis screws.
- If the machine is in standby mode for a long time, please unplug the power of it.
- If the machine has not been used for a long time, please pay attention to protecting the printer from dust and damp.
- There are manuals, slicer software, and other related information on the USB flash drive. (The information in the

USB flash drive may not be the latest. You can obtain the latest information by contacting the After-sales Service marked at the end.)

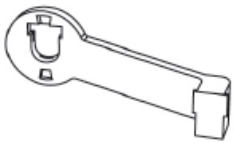
- Modifying system files and installing unofficial plugins means that the customer is waiving their expectations of official support. They will be solely responsible for the security and safety of their printer. Any firmware issues arising from these modifications will not be covered under warranty. If you need to recover the factory system files, customers need to purchase the EM MC-Adapter additionally.

Accessory List



Filament Spool Holder

Holder Cover



Filament Extension Stand

Power Cord

Scraper

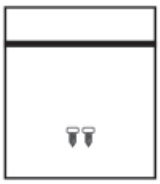
7mm Spanner

Flat Head Screwdriver

Allen Key H1.5
Allen Key H2
Allen Key H2.5

0.4mm Nozzle Cleaning Tool

USB 2.0 Flash Drive



Spare Parts Kit

Starting Up

- Remove the upper foam and take out the printer.

- Remove the power cord from the top cover foam and connect it to the printer. Switch on the printer and proceed with the on-screen instructions to complete the unpacking and loading of the filament.

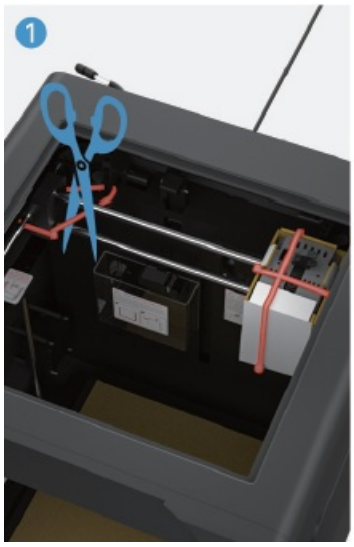
Language

- Please select your preferred language and click on the next step.

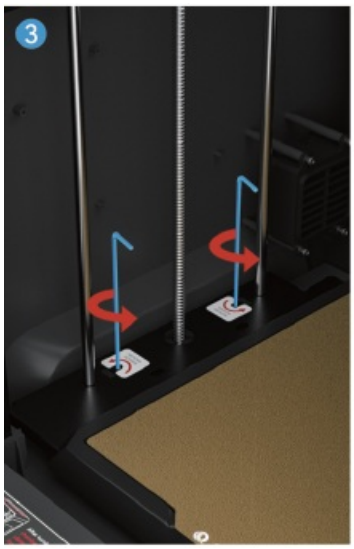
Unboxing

-

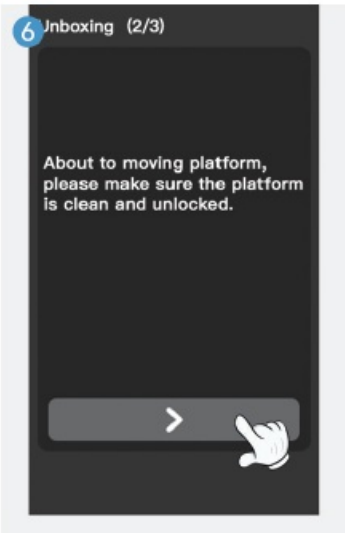
Follow the on-screen instructions to remove the ties fastening the extruder and X-axis, discard the cardboard, and proceed to the next step.



- Follow the on-screen instructions to remove the four screws securing the printing platform in place.

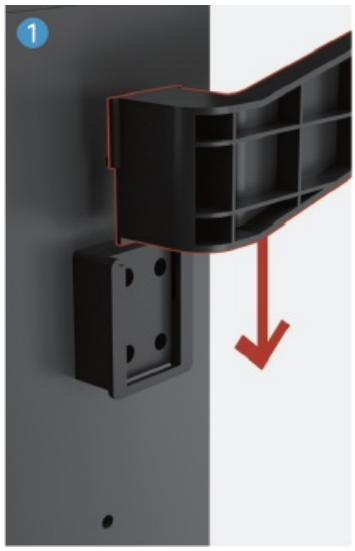


- Click Next. Make sure the print bed is unlocked and clear of any debris before proceeding.



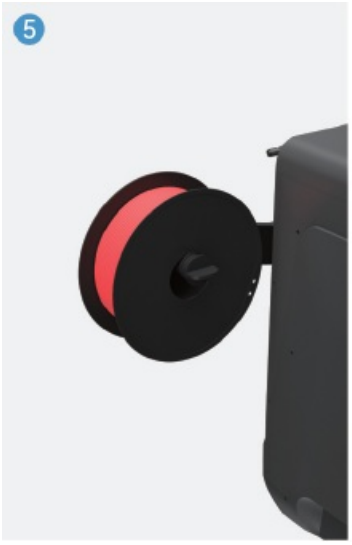
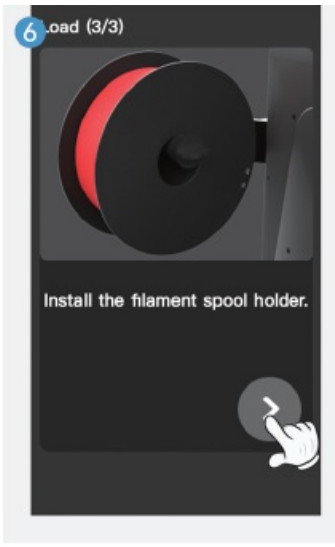
Load Filament

- Take out the corresponding accessories from the top cover foam and install them according to the sticker instructions on the back of the machine.
- Install the filament extension bracket onto the extension bracket fixing block.

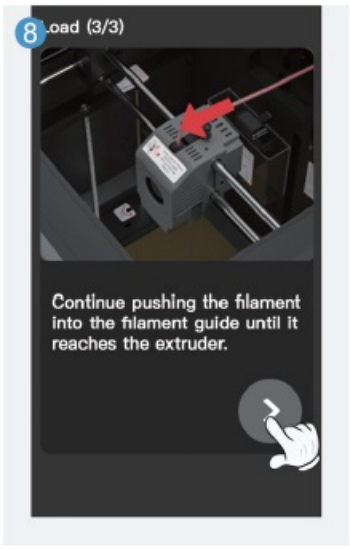


- You can refer to the sticker tips on the back of the machine to install the filament holder on the filament extension rack.

- Place the filament on the filament holder and click Next.
- **Note:** It is recommended to install the filament holder cover on the holder to avoid loss.

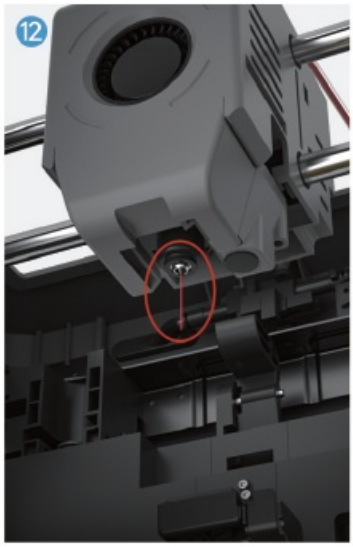



- According to the on-screen prompts, insert the filament from the filament duct to the nozzle.
- Make sure the filament enters the nozzle, then click Next.

- Press the heat button to enter the print temperature of the filament. Allow the temperature to reach the preset value and then proceed to the next step.

- Click the downwards button and allow the filament to extrude from the nozzle.
- **Notice:** If no filament is extruding on multiple attempts, please check that the filament is entering the print head correctly.



- Click Next and finish the start guide.
- **Note:** Before printing for the first time, please perform Auto Bed Leveling and Input Shaping.

First Printing

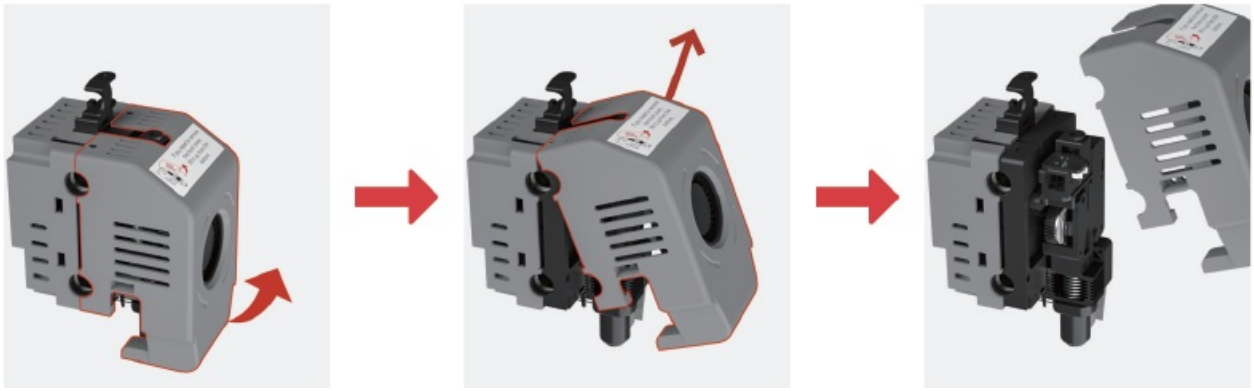
- Please perform automatic bed leveling and input shaping before the first print to make the printing better.
- **Note:** Please do not use the platform calibration function before consulting with after-sales support or logging into the official Wiki to learn how to use it.

- Click the button to start printing.
- **Note:** Built-in models use PLA Rapido filament by default.

- When printing filaments such as PLA/ TPU, it is recommended to open the top cover and front door of the printer to prevent the machine chamber temperature from being too high, causing the filaments to soften and clog the nozzle.
- After turning on the chamber heating, please close the printer cover and front door to keep the chamber airtight.

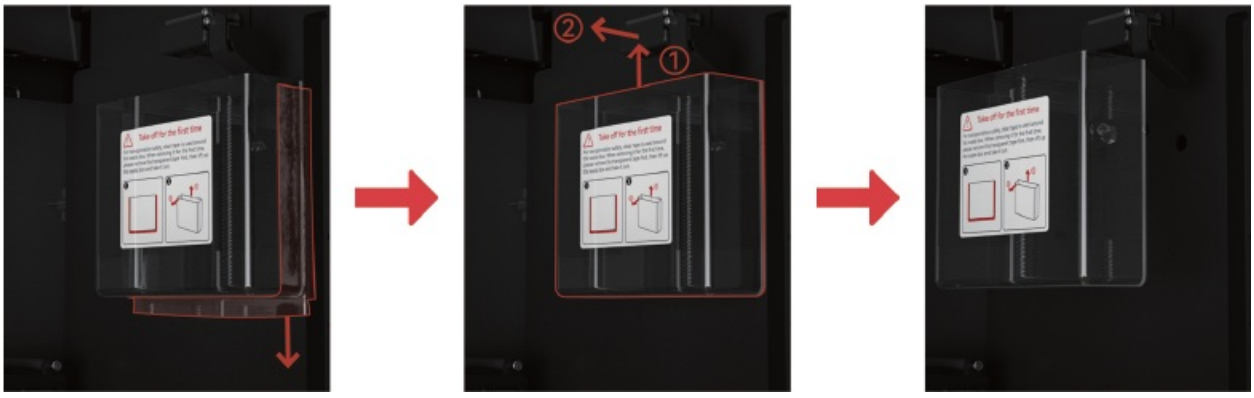
How To Remove

How To Remove The Print Head Front Cover



There is a buckle structure on the top of the front cover of the nozzle, please do not take it out directly. Please lift it from the bottom upward and remove the front cover of the nozzle.

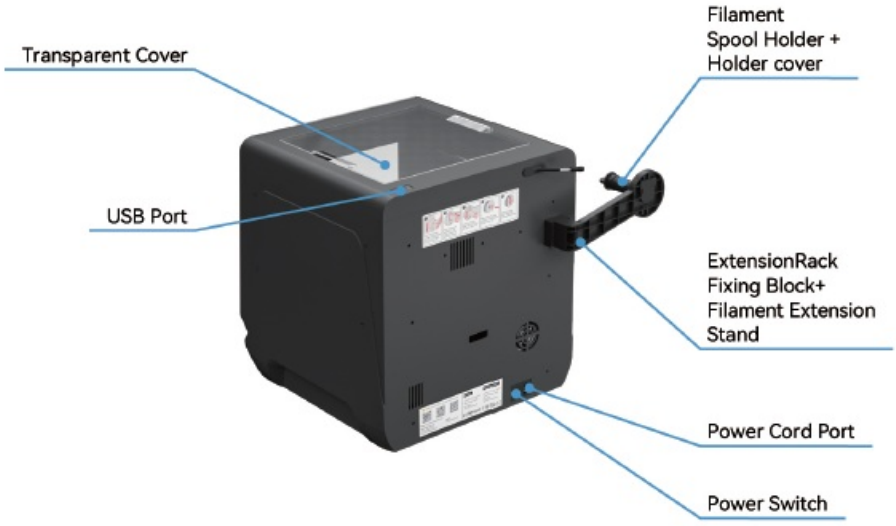
Removing The Scrap Box For The First Time



For transportation safety, clear tape is used around the waste box. When removing it for the first time, please

remove the transparent tape first, then lift up the waste box and take it out.

Printer Introduction



Filament Guide For Beginners

QIDI Filament 1		ABS Rapido	PLA Rapido	PETG-Tough	UltraPA
Preparation	Necessity Of Drying	✗	✗	✗	✓
	How To Dry	/	/	/	60℃ 4-6h
	Nozzle Material	Bimetal Nozzle	Bimetal Nozzle	Bimetal Nozzle	Bimetal Nozzle
	Nozzle Size	All Size	All Size	All Size	0.4/0.6/0.8 mm
	Dry Box	✗	✗	✗	Need to maintain humidity ≤ 15%
	Print With Enclosure	✓	✗	✗	✓
Slicer Parameter	Print Speed	260 mm/s	260 mm/s	180 mm/s	80 mm/s
	Chamber Temperature	50 ℃	/	/	/
	Nozzle Temperature	250-280 ℃	200-230 ℃	240-270 ℃	280-300 ℃
	Build Plate Temperature	100 ℃	60 ℃	80 ℃	80 ℃
	Cooling Fan	30%	100%	60%	20%
Post-processing	Annealing Needs	80-90 ℃ 6-8 hours	✗	✗	70-90℃ 6-8 hours

QIDI Filament 2		ABS-GF25	PA12-CF	PAHT-CF	PET-CF
Preparation	Necessity Of Drying	✓	✓	✓	✓
	How To Dry	70℃ 4-6h	100-120℃ 4-6h	100-120℃ 4-6h	100℃ 4-6h
	Nozzle Material	Bimetal Nozzle	Bimetal Nozzle	Bimetal Nozzle	Bimetal Nozzle
	Nozzle Size	0.4/0.6/0.8 mm	0.4/0.6/0.8 mm	0.4/0.6/0.8 mm	0.4/0.6/0.8 mm
	Dry Box	Need to maintain humidity ≤ 15%	Need to maintain humidity ≤ 15%	Need to maintain humidity ≤ 15%	Need to maintain humidity ≤ 15%
	Print With Enclosure	✓	✓	✓	✓
Slicer Parameter	Print Speed	200 mm/s	200 mm/s	200 mm/s	200 mm/s
	Chamber Temperature	45 ℃	/	/	/
	Nozzle Temperature	250-270 ℃	280-300 ℃	280-320 ℃	280-320 ℃
	Build Plate Temperature	100 ℃	80 ℃	80 ℃	80 ℃
	Cooling Fan	20%	15%	15%	10%
Post-processing	Annealing Needs	80-90 ℃ 6-8 hours	80-100 ℃ 6-8 hours	90-130 ℃ 6-8 hours	90-130℃ 6-8 hours

Generic Filament		ABS	PETG	PLA	TPU 95A
Preparation	Necessity Of Drying	✗	✗	✗	✗
	How To Dry	/	/	/	/
	Nozzle Material	Bimetal Nozzle	Bimetal Nozzle	Bimetal Nozzle	Bimetal Nozzle
	Nozzle Size	All Size	All Size	All Size	0.4/0.6/0.8 mm
	Dry Box	✗	✗	✗	✗
	Print With Enclosure	✓	✗	✗	✗
Slicer Parameter	Print Speed	220 mm/s	120 mm/s	200 mm/s	60 mm/s
	Chamber Temperature	45 ℃	/	/	/
	Nozzle Temperature	240-280 ℃	240-270 ℃	200-230 ℃	220-260 ℃
	Build Plate Temperature	100 ℃	80 ℃	60 ℃	60 ℃
	Cooling Fan	30%	60%	100%	100%
Post-processing	Annealing Needs	80-90 ℃ 6-8 hours	✗	✗	✗

TIPS

1. Some other brands of ABS filaments are less heat resistant and it is recommended to set the chamber temperature to no more than 55 degrees Celsius. Otherwise, the filaments may be soften in advance and cause clogging.
2. If the filaments do not stick to the print platform:
    1. Please check if the nozzle is far away from the print plate, you can adjust the platform upward with the Zoffset adjusting function.
    2. Because of the different ambient temperatures in different regions, the temperature of the heat bed can be increased appropriately to increase the adhesion of the filaments.
    3. If above all can not work, please contact the after-sales service for assistance.

Specifications

MACHINE NAME	**Q1 PRO**

Body	Print Size (W*D*H)	245*245*245 mm
	Dimensions	477*467*489 mm
	XY Structure	CoreXY
	XAxis	10mm High hardness linear hollow steel shafts
	Z-Axis	Dual Independent Lead Screw Motors
	Shell	Plastic
	Chassis	Steel
	Motor	42-48 High-Speed Motor
Print Head	Print Head Temperature	350°C
	Extruder Gear	Hardened Steel Gears
	Transmission Ratio	8.9: 1
	Hot End	Ceramic Plate Heating Hot End Only Need 52s Heating From 20°C To 220°C
	Temperature Measurement U nit	Thermocouple
	Nozzle	Bimetal Nozzle
	Nozzle Diameter	0.4mm
	Filament Diameter	1.75mm
Hot Bed	Printing Platform	Aluminum Substrate Heating Bed
	Printing Plate	PEI Magnetic Build Plate
	Hot Bed Temperature	120°C
Speed	Printing Speed	250-600mm/s
	Maximum Printing Acceleration	20000mm/s”2
Cool Down	Hot End Cooling Fan	Closed-Loop Control
	Model Cooling Fan	Closed-Loop Control
	Auxiliary Part Cooling Fan	Closed-Loop Control
	Motherboard Fan	Closed-Loop Control
	Chamber Circulation Fan	Closed-Loop Control
	Chamber Temperature	60° C Independent Chamber Heating
Filament	Recommended Filament	PLA, ABS,ASA, PETG
	Compatible Filament	TPU, PA, PC, Carbon/ Glass Fiber Reinforced Polymer

Seal Print	Compatible

Sensor	Filament Tangle Detection	Support
	Filament Run Out Sensor	Support
	Automatic Leveling	Support
	Resonance Compensation	Support
Power Supply	Voltage	100-240 VAC, 50/60Hz
	Rated Power	350W
Electronics	Display Screen	4.3 Inch 272*480 Touch Screen
	Storage	32G EMMC and USB2.0 Flash Drive
	Camera	Camera (Up to 1080P) Timelapse Supported
	Motion Controller	Dual-Core Cortex-M4
	Application Processor	Quad-Core 1.5GHz Cortex-A53
	Extruder Independent Processor	Dual-Core Cortex-MO+
WIFI	Wifi Frequency Bands	2.4 GHz
	Transmitter Power (EIRP)	18 dBm **(MAX)**
	Protocol	IEEE 802.11b/g/n
Software	Slicer	QIDI Slicer and other third-party software, such as Ultimaker Cura, Simplify3D, PrusaSlicer, Orea etc.
	Operating System	Windows, MacOS, Linux

- Scan the QR to receive our latest product updates and latest news.
- **Official Website:** www.qidi3d.com.

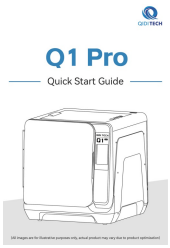
If you need support, please feel free to contact us:

- **E-mail address:** Q1 Ams@qidi3d.com.
- Q1 support@qidi3d.com.
- **Skype ID:** Q1 support@qidi3d.com.
- Please visit the QIDI Tech official Wiki for more machine usage and maintenance tutorials. https://wiki.qidi3d.com/en/home.

- If you have any suggestions or complaints, please contact with this E-mail address: Audrey@qd3dprinter.com.
- **TEL:** 0086-577-66881077

(All images are for illustrative purposes only, actual product may vary due to product optimization)

Documents / Resources

	QIDI TECH Q1 Pro Innovative 3D Printing Machine [pdf] User Guide Q1 Pro, Q1 Pro Innovative 3D Printing Machine, Innovative 3D Printing Machine, 3D Printing Machine, Printing Machine, Machine

References

- User Manual