

QZMini Extruder

User and maintenance manual



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Safety instructions

When using any electrical device, basic safety precautions should always be observed.

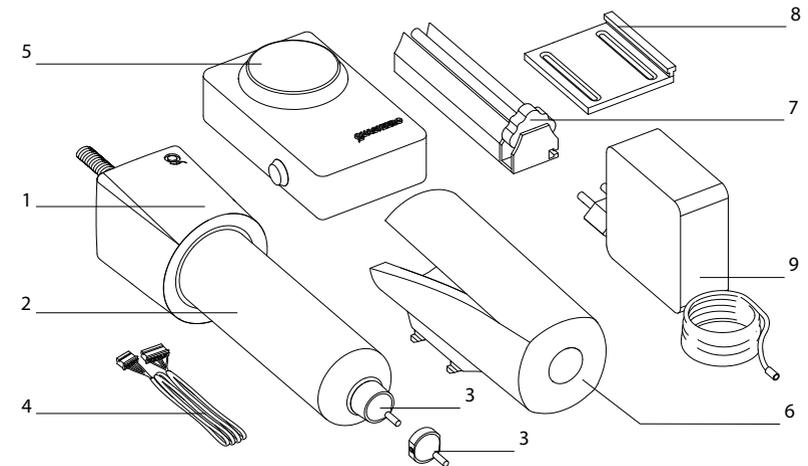
- 1) If the device has any defect, do not attempt to repair it yourself. Contact info@quasizero.design for appropriate repairs.
- 2) Regularly check that the cable and device are not damaged. Do not use the device if the cable shows signs of damage. If the cable is damaged, it must be replaced by the manufacturer, a technical service provider, or a similarly qualified person to avoid hazards.
- 3) Check that the power supply voltage corresponds to that shown on the device's manual user.
- 4) Ensure that the plug to be used has a ground connection.
- 5) Make sure your hands are dry before touching an electrical device, cable, or plug.
- 6) Do not immerse the device, cables, or plugs in water or any other liquid.
- 7) Unplug the device when it is not use.
- 8) Carefully clean the device after use.



Parts list

Please keep the original box, as it may be needed for future shipping. Inside the box you will find everything necessary to start printing:

1. Extruder Head
2. Syringe 150 ml
3. Nozzle diameter 4.0 and 2.0
4. Extra cable 4-Pin XH 2.54 to 4-Pin XH2.54 connector
5. Extruder control box
6. Syringe Holder
7. Height regulator
8. Holder for printer
9. Power supplier





Usage instructions

Make sure all parts of the product are present and in perfect conditions. The QZMini extruder can be used in two modalities: manual or attached to a FDM 3D Printer.

Manul use assembly

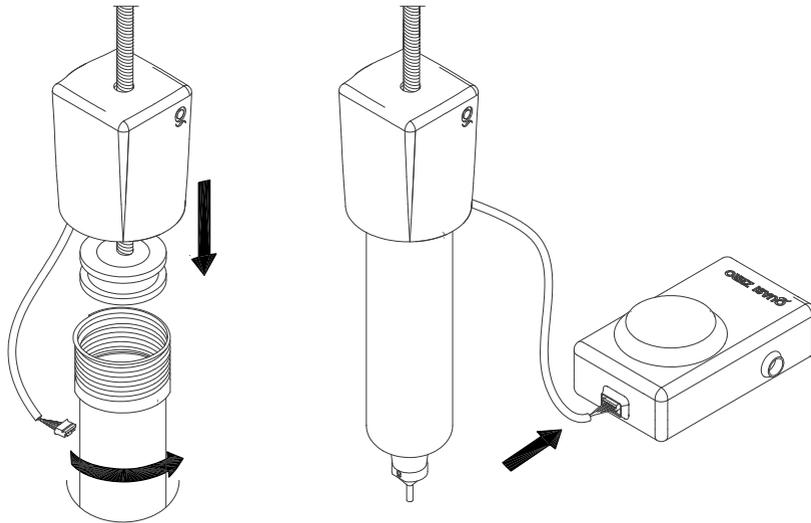
Before the use check that the piston slides smoothly inside the syringe. If it shows resistance, apply oily products such as vaseline or glycerine to facilitate movement.

Step 1 – Fill the syringe with your material, being careful not to fill it completely. Leave some empty space so you can insert the plunger later.

Step 2 – Insert the syringe into the lower part of the Head extruder and screw it in place.

Step 3 – Connect the Head extruder cable to the control box.

Step 4 – If the cable is too short, you can use Cable (4) as an extension to connect the extruder to the control box.



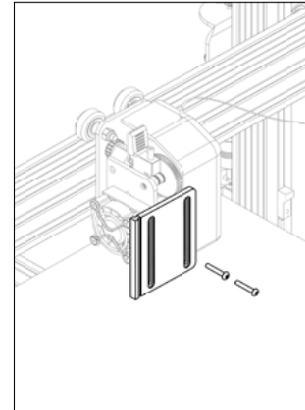
3D printer use assembly

To ensure proper communication between your printer and the QZMini extruder, you can use the cable from the Head extruder directly.

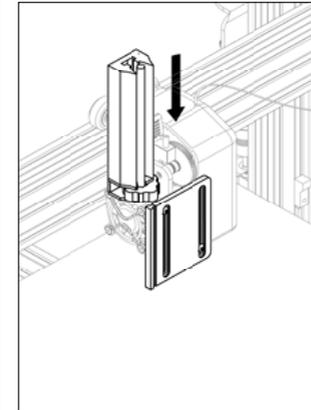
If this cable is too short, you can use the extension cable included in the box.

Please note that not all 3D printers use the same type of connector. During the purchase process, you should select your printer model so that we can include the correct cable in the package.

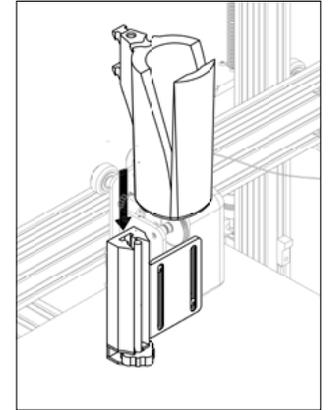
Assembling QZMini in a 3D Printer:



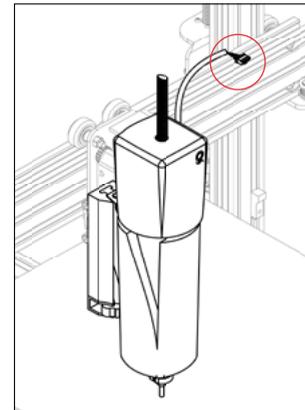
Step 1 - Attached the Holder to your printer.



Step 2 - Slide down Height regulator in to the holder



Step 3 - Insert the Syringe holder in to the Height regulator passing the screw in the two holes



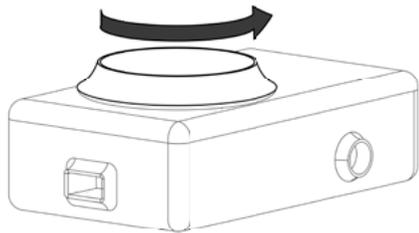
Step 4 - Connect the Head extruder cable to you machine



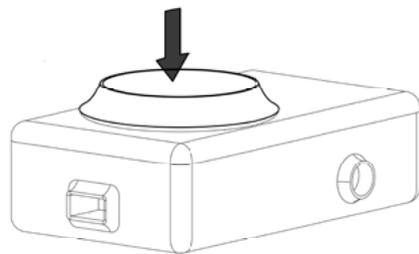
Control box functions

For the manual use the Control box is needed to power the Head extruder and control the extrusion parameters, such us extrusion speed.

Control box panel operation:



EXTRUSION SPEED
Rotate the dial to increase or reduce the extrusion speed.



PAUSE
Press one time the screen to activate the pause mode. Press agant to restart.



Technical specifications

General specifications		
	Control box	Extruder
Dimension [H x W x D]	120 x 60.5 x 35 mm	235 x 65 x 65 mm
Weight aprox.	140 g	555g
Connector	EU Plug JST XH 2.54 mm 4 Pin Male	JST HX 2.54 mm 4 Pin Female
Body structure	PLA	PLA

Electrical specifications	
Voltage	5-27 V DC
Rated current/phase (motor)	2.5 A
Supply Voltage Max	24 A
Electrical network connection	Domestic electrical network 230 V AC
Motor	Stepper motor Nema 17 non captive
Step Angle	1.8 grados
Holding Torque	0.5 Nm (70.82 oz.in)
Phase resistance	0.8 ohmios
Inductance	1.8 mH ± 20%(1KHz)
Connection diagram	A+ A- B+ B- Red Red/Wht Green Green/Wht

Head Extruder specifications	
Technology	Liquid deposition material (LDM)
Max dimension admissible grain	1 mm
Availables Nozzle	4 mm, 2 mm
Tank volume	150 ml
Body Structure	Aluminiun y PLA



Cleaning and maintenance

Syringe tank cleaning:

- 1) Move the piston to the beginning of the syringe.
- 2) Rotate the syringe clockwise to detach it from the extruder.
- 3) Clean the syringe and piston with water using a brush or cotton swab to clean it from material residuals.



In compliance with Directives: 2012/19/EU and 2015/863/EU on the restriction of the use of dangerous substances in electric and electronic equipment as well as their waste disposal. The symbol with the crossed dustbin shown on the package indicates that the product at the end of its service life shall be collected as separate waste.

Therefore, any products that have reached the end of their useful life must be given to waste disposal centres specialising in separate collection of waste electrical and electronic equipment, or given back to the retailer at the time of purchasing new similar equipment, on a one for one basis.

The adequate separate collection for the subsequent start-up of the equipment sent to be recycled, treated and disposed of in an environmentally compatible way contributes to preventing possible negative effects on the environment and health and optimises the recycling and reuse of components making up the apparatus. Abusive disposal of the product by the user involves application of the administrative sanctions according to the laws

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