

Operating Instructions

3D Printing Pen 3DP1

Item No. 1646098

Intended use

The product is used to create three-dimensional objects made of plastic filament. A heating element inside the pen heats the plastic filament. At the push of a button, the nozzle extrudes a thin thread of filament that hardens in the air. The product is powered via the power adaptor which is included in delivery.

This product is intended for indoor use only. Do not use it outdoors. Contact with moisture (e.g. in bathrooms) must be avoided under all circumstances.

For safety and approval purposes, you must not rebuild and/or modify this product. If you use the product for purposes other than those described above, the product may be damaged. In addition, improper use can result in short circuits, fires, electric shocks or other hazards. Read the instructions carefully and store them in a safe place. Make this product available to third parties only together with its operating instructions.

This product complies with the statutory national and European requirements. All company names and product names are trademarks of their respective owners. All rights reserved.

Delivery content

- 3D printing pen
- Small plastic tool
- 3x PLA-filament (3 m)
- 2x stencil
- Power adaptor
- USB cable (1.2 m)
- Operating instructions



Up-to-date Operating Instructions

Download the latest operating instructions at www.conrad.com/downloads or scan the QR code shown. Follow the instructions on the website.

Explanation of symbols



The symbol with the lightning in the triangle is used if there is a risk to your health, e.g. due to an electric shock.



The symbol with the exclamation mark in the triangle is used to indicate important information in these operating instructions. Always read this information carefully.



The arrow symbol indicates special information and advice on operation.



This symbol warns you of hot surfaces.

Safety instructions



Read the operating instructions carefully and especially observe the safety information. If you do not follow the safety instructions and information on proper handling in this manual, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.



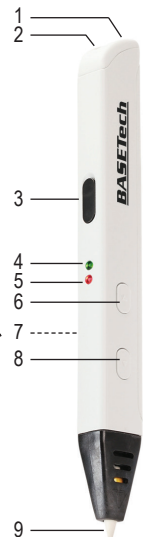
- This appliance may be used by children over 8 years of age and people with reduced physical, sensory or mental capabilities if they have been given supervision or instruction concerning the safe use of the appliance and understand the potential hazards.
- Children must not clean or service the product without appropriate supervision.
- Children should always be supervised by an adult to ensure that they do not play with the appliance.
- Do not leave packaging material lying around carelessly. This may become dangerous playing material for children.
- Protect the appliance from extreme temperatures, direct sunlight, strong jolts, high humidity, moisture, flammable gases, steam and solvents.
- If it is no longer possible to operate the product safely, take it out of operation and protect it from any accidental use. Safe operation can no longer be guaranteed if the product:
 - is visibly damaged,
 - is no longer working properly,
 - has been stored for extended periods in poor ambient conditions or
 - has been subjected to any serious transport-related stresses.
- Do not place the product under any mechanical stress.
- Please handle the product carefully. Jolts, impacts or a fall even from a low height can damage the product.
- Feed only suitable filament into the feed opening.
- Caution. Do not touch the nozzle tip during operation because it is very hot. Risk of burns!
- The mains outlet must be located near to the device and be easily accessible.



- As power supply, only use the supplied mains adaptor.
- Only connect the power adaptor to a normal mains socket connected to the public supply.
- Before plugging in the power adaptor, check whether the voltage stated on the power adaptor complies with the voltage of your electricity supplier.
- Never connect or disconnect power adaptors if your hands are wet.
- Never unplug the power adaptor from the mains socket by pulling on the cable; always use the grips on the plug.
- When setting up the product, make sure that the cable is not pinched, kinked or damaged by sharp edges.
- Always lay the cables so that nobody can trip over or become entangled in them. This poses a risk of injury.
- For safety reasons, disconnect the power adaptor from the mains socket during storms.
- If the wall plug transformer is damaged, do not touch it; there is danger to life from electric shock! First, switch off the mains voltage to the mains socket to which the wall plug transformer is connected (switch off at the corresponding circuit breaker or remove the safety fuse, then switch off at the corresponding RCD protective switch, so that all poles of the mains socket are disconnected). You can then unplug the wall plug transformer from the mains socket. Dispose of the faulty wall plug transformer in an environmentally friendly way; do not use it any more. Replace it with a wall plug transformer of the same design.
- Never use the product immediately after it has been brought from a cold room into a warm one. The condensation generated could destroy the product. The plug-in power supply unit also involves danger to life by electric shock! Allow the product to reach room temperature before connecting it to the power supply and putting it to use. This may take several hours.
- Never pour any liquids over electrical devices or put objects filled with liquid right next to the device. If liquid or an object enters the interior of the device nevertheless, first power down the respective socket (e.g. switch off circuit breaker) and then pull the mains plug from the mains socket. Do not operate the product anymore afterwards, but take it to a specialist workshop.
- In schools, training facilities, hobby or self-service workshops, handling of electrical devices must be monitored by trained personnel.
- When operating on commercial premises, the relevant accident prevention regulations of workers' compensation boards for electrical equipment must be observed.
- Consult an expert when in doubt about the operation, safety or connection of the appliance.
- Maintenance, modifications and repairs must only be completed by a technician or an authorised repair centre.
- If you have questions which remain unanswered by these operating instructions, contact our technical support service or other technical personnel.

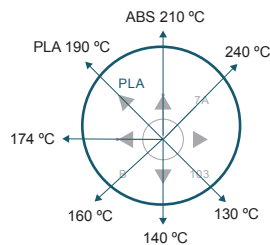
Operating elements

- 1 Feed opening
- 2 DC-socket
- 3 Temperature and material control
- 4 LED heating indicator green
- 5 LED operation indicator red
- 6 Unload button
- 7 Speed control
- 8 Feed button
- 9 Nozzle tip



Select filament type

- Open the cover of the temperature and material control (3).
- Use the delivered small plastic tool to set the filament at the temperature and material control. Use only PLA and ABS with a diameter of 1.75 mm. The preset temperature is 190 °C for PLA and 210 °C for ABS. You can adjust the temperature in steps. The temperature range is 130 - 240 °C. You can also perform the adjustment during operation. See illustration.



→ An incorrect temperature setting can cause material jamming.

- Before feeding the filament kindly observe that the end of the filament is flat and straight. Please see illustrations below.



correct



wrong



wrong

Operation



Warning! The nozzle tip (9) is very hot during operation. Do not touch! Risk of burns!

Never touch the nozzle or the rubber area at the pen tip during and immediately after operation. Also inform other people in the immediate vicinity.

The extruded filament is very hot for a short time. Do not touch! Risk of burns!

Unload excess filament from the pen after use and before storing. Disconnect the product from the power supply. Place the product in the pen holder.

Direct contact with the hot tip will cause damage to painted surfaces, plastics and clothing.



Inhaling toxic fumes can lead to serious illness. If necessary, use a suitable smoke mask or smoke extraction system.

Do not use poor quality filaments.

Do not use ABS filament in PLA mode and vice versa.

a) Connecting the power adapter

- Connect the USB-A plug of the USB cable with the power adapter.
- Connect the DC plug with the DC socket (2).
- Connect the mains plug of the power adaptor to a standard mains socket.
- The red LED operation indicator (5) lights up.

→ You can also use the product with a suitable power bank (output: 5 V/DC, 2A).

b) Feed filament and extrude

- Select the filament type you would like to use. Check whether the material setting is correct and that the filament is flat and straight. See section "Select filament type".
- Feed the filament into the feed opening (1). Press the feed button (8). The green heating indicator (4) starts to flash and the product preheats. Preheating lasts about 45 seconds. As soon as the working temperature is reached, the flashing stops and the heating indicator lights steady.
- Double click the feed button and the filament will be extruded. You can also hold the feed button depressed to extrude the filament. Release the feed button to stop the extrusion.
- As soon as the molten material leaves the nozzle tip (9) you can start with your creation.
- Adjust the extrusion speed steplessly with the speed control (7).
- Press the feed button once to stop the extrusion of the filament. Extrusion starts again after applying a double click on the feed button.

c) Fine temperature adjustment

Filaments of different colours have different melting points. Therefore you may need to adjust the temperature for the best results. Please follow these rules:

- If you hear a sputtering sound and/or many bubbles are visible, the temperature is too high. Reduce the temperature.
- When using PLA filament, if the extruded material is too thin and liquid, the temperature is too high. Reduce the temperature.
- If the colour of the extruded material is a dull colour and the motor coughs, the temperature is too low. Increase the temperature.
- Normally, the extruded material should be soft and smooth. There should be no or only a few bubbles.

Material unload and change

- Unload the material before you stow away the product.
- During operation apply a double click at the unload button (6) (green LED heating indicator lights up steadily) and the material will be fed in reverse direction out of the feed opening (1).
- Gently pull the material out. Thereafter press the unload button once to stop the motor.
- If you would like to use the same material in a different colour, you can feed it directly or you can unload the previous material first.
- If you would like to use a different material you must unload the previous material first. Thereafter disconnect the power supply for about 5 seconds in order to restart the printing pen. Then select the filament type as described.

Tips to avoid material jamming

- Unload the filament after your work is finished.
- If you need PLA filament instead of ABS filament feed the filament in ABS mode.
- As soon as the PLA filament leaves the nozzle change to PLA mode.

Tips to clear material jamming

- Disconnect the power supply for about 5 seconds.
- Select the ABS mode (temperature 210 °C) and wait for about 45 seconds until the product is heated up.
- Feed the PLA filament in the ABS mode.
- Push in the PLA filament by hand until it exits the nozzle.

Troubleshooting

Possible fault	Reason	Suggested solution
LED operation indicator does not light up.	Power adaptor or DC plug not properly connected.	Connect plug properly.
	Defective power adaptor.	Replace power adaptor.
Filament does not leave the nozzle.	Temperature not high enough.	Increase temperature.
	No feeding of filament. Filament not straight.	Unload filament and cut-off straight at the end.
Working temperature can not be reached.	Defective heating element.	Product must be repaired.

Care and cleaning

- Disconnect the product from the mains before each cleaning. Let the product cool down completely.
- Never immerse the product in water or other liquids.
- Do not use any aggressive cleaning agents, rubbing alcohol or other chemical solutions as they can cause damage to the housing and malfunctioning.
- Clean the product with a dry, fibre-free cloth.

Disposal



Electronic devices are recyclable waste and must not be disposed of in the household waste. At the end of its service life, dispose of the product in accordance with applicable regulatory guidelines.

You thus fulfill your statutory obligations and contribute to the protection of the environment.

Technical data

a) 3D printing pen

Input voltage / current.....	5 V/DC, 2 A
Suitable filament.....	ABS or PLA (each Ø 1.75 mm)
Adjustable temperature range	130 - 240 °C
Preset temperature.....	210 °C (ABS), 190 °C (PLA),
Ø nozzle tip / material.....	0.6 mm / ceramic
Operating conditions.....	-10 bis +55 °C, 5 – 95 % RH
Storage conditions.....	-20 bis +70 °C, 5 – 95 % RH
Dimensions (L x W x H).....	175 x 17 x 20 mm
Weight	40 g

b) Power adapter

Input voltage.....	100 – 240 V/AC, 50/60 Hz
Output voltage / current.....	5 V/DC, 2 A
USB cable length.....	1.2 m