

3devo



Composer & Precision Series filament maker safety instructions

- Composer 350
- Composer 450
- Precision 350
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Version 2

December 2018

English guide

INTRODUCTION

For your own safety we have made an instruction and overview for the possible hazards you should be aware of before using the Composer or Precision series filament makers.

To make sure you can safely benefit from the many possibility's the professional desktop extruder can give you.

If there are any questions about user safety you can always contact us at support@3devo.com



SAFETY INSTRUCTIONS

The manufacturer is not liable for any problems caused by the user's failure to observe these instructions.

Read the instructions below and save this document for future questions.

CAUTION

Make sure the filament maker is placed in a room with at least ten air changes per hour. It is also advised to use a fume hood or laminar flow cabinet.

When polymers are heated, melted, and degraded in different ways volatile organic compounds (VOCs) are released into the air, though amounts can vary dramatically based on polymer composition, heating duration, maximum temperature, and other environmental factors. Current research associates VOCs with indoor air pollution which might lead to minor skin and eye irritations, respiratory distress and cancer. Harmful materials such as hydrogen cyanide or styrene may be released when extruding certain plastics.

In some cases it is unknown what the effects of some colorants and plasticizers during extrusion are.

Pay attention to the Materials Safety Data Sheet and the handling instructions of the materials you are using.

CAUTION

- Experimental use is at own risk. Some plastics may cause health hazards. Learn about the material you are using, before extruding them.
- Do not set the temperature too high for the material, this can cause degradation and burning of the materials and the release of toxic gasses VOCs.
- Do not set temperature too low for the material, when the temperature is too low the material will be too solid and might push the nozzle out of the machine.
- Wear protective equipment (work gloves, safety glasses, protective clothing) when operating your filament maker, especially when working with new materials and when the door at the front is opened.
- Do not leave filament maker unattended.
- Do not use materials in the filament maker that are not meant for extrusion. Only use materials when having extensive knowledge of material properties.

CAUTION

Do not set temperature too high for the material. When temperature is too high the material will turn into a liquid. This liquid can come out of the nozzle and might cause burns. When you go even higher the material will decompose and the extrusion process will not be able to be continued. Make sure you know the specific melting temperature and decomposition temperature of the material you are using.

CAUTION

Do not touch hot parts, as there is a potential risk of burns, the nozzle can reach a temperature up to 450 degrees Celsius. The remaining parts can reach a temperature of 100 degrees Celsius:

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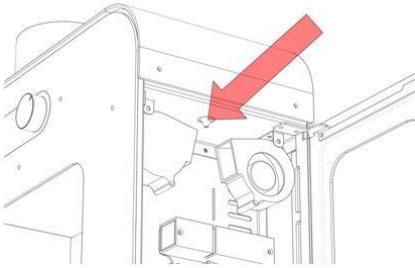


Image: Nozzle

CAUTION

This part of the chassis above the filament fans can be very hot, especially the nozzle cover during the extrusion process. Do not touch these parts while the filament maker is heated or extruding.

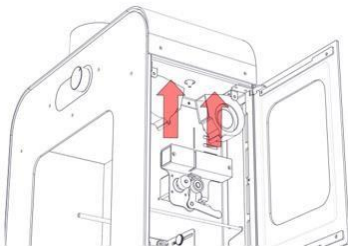


Image: Nozzle cover plate

CAUTION

The top of the hood is being cooled during the extrusion process by the filament fan at the back. However this still means that it can be hot and you should be careful touching it.

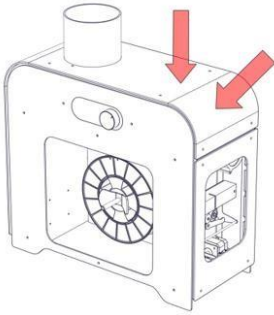


Image: Top of the hood

CAUTION

The top plate above the winder is located directly underneath the extrusion part of the machine, the barrel, screw and heaters. This part can become very hot during high temperature extrusion processes.

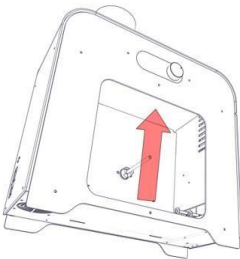


Image: Top plate

⚠ CAUTION

The positioner stepper is a part that will be hot during the extrusion process. Avoid touching it.

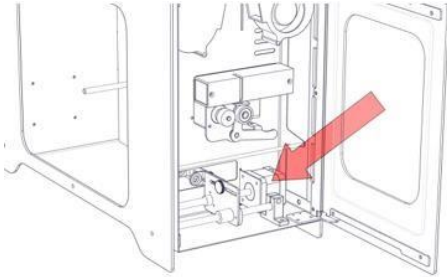


Image: Positioner stepper

⚠ CAUTION

The puller stepper is located behind the puller and mounted on the chassis. This stepper will definitely be hotter than the positioner stepper. Avoid touching it.

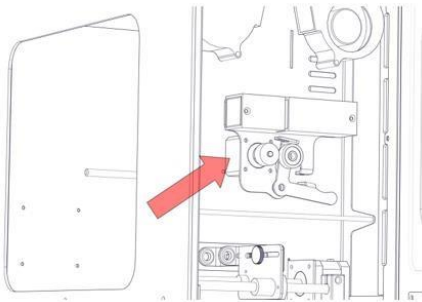


Image: Puller stepper

CAUTION

The puller bearing and puller wheel will both directly get their heat from the filament and therefore can become hot and reach temperatures above 100 degrees Celsius. Do not touch these parts.

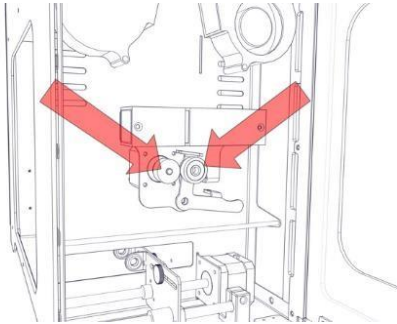


Image: Puller bearing + puller wheels

CAUTION

Do not touch moving parts

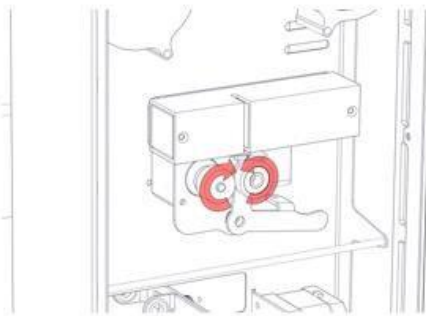


Image: Puller wheels

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⚠ CAUTION

Be aware of moving winder parts

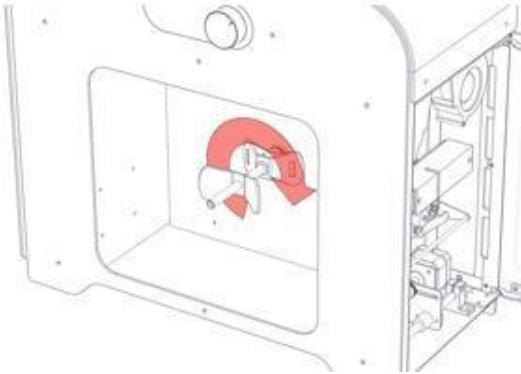


Image: Winder

⚠ CAUTION

Do not touch moving positioner parts

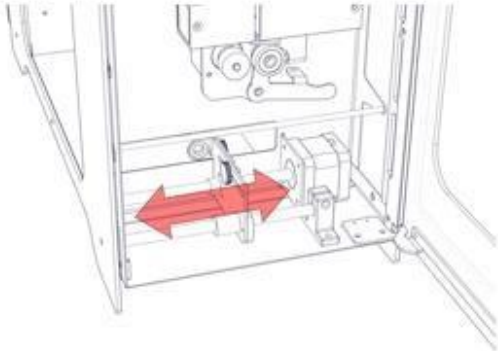


Image: Positioner



SAFETY INSTRUCTIONS – GENERAL

- Place the filament maker on a flat and stable surface.
- Do not use the machine if it is not compatible with the mains electricity in your country. Consult the sticker on the machine.
- Only lift if you are sure you are capable; the machine is heavy. Ask for help or use tools when moving.
- Use the filament maker in a ventilated area and preferable in a working temperature of 20 degrees Celsius. Area should not be too bright, the light could interfere with the optical sensor.
- Minimum age for use of the filament maker is age 18.
- Do NOT put your hands into the extrusion area when the filament maker is in use.
- Maintenance and repair by certified workers only. Please contact 3devo or reseller.
- The filament maker has been extensively tested, but if a failure occurs please contact service@3devo.com

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COMPANY INFO

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