

How to adjust filament clamping range

FELIX Pro 1

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Revision 2

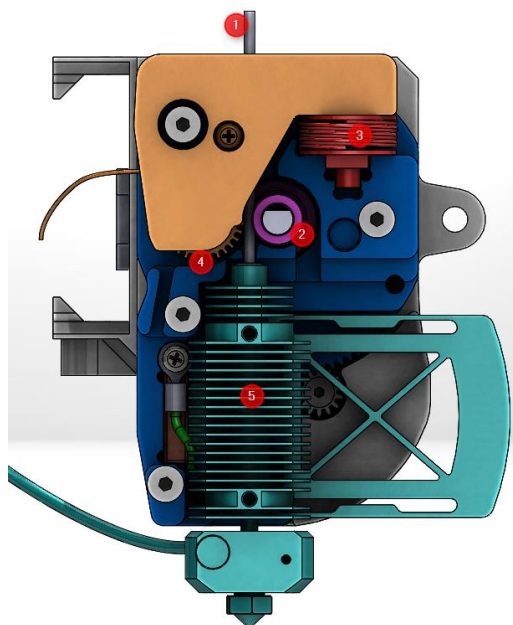


1 Introduction

In some cases it might be necessary to adjust the clamping range of the filament arm inside the extruder. For hard filaments this is normally not necessary, however for soft filaments it could be needed to prevent the filament to be squashed too much that it will get stuck in the extruder.

2 Clamping mechanism

The filament clamping mechanism consists of a spring that pushes a wheel against the extruder driving wheel. It has an adjustable range in which it can clamp. The clamping force itself cannot really be adjusted. The clamping wheel is toothed to be able to detect if it is rotating.



1. Filament
2. Extruder drive wheel
3. Clamping spring
4. Clamping wheel
5. Hot end

Figure 1: Overview print head components

For example, Flex material is rather soft. If the clamping mechanism is adjusted to maximum range, the filament will be squeezed flat, causing unnecessary wear to filament and clamping mechanism (and interfering with the jam detection sensing mechanism).

By decreasing the clamping range, the filament will only be squeezed to a certain extent and then no further. However, if the clamping range is set too small, it is possible that the clamping wheel is not pushing far enough to completely push the filament against the extruder drive wheel.

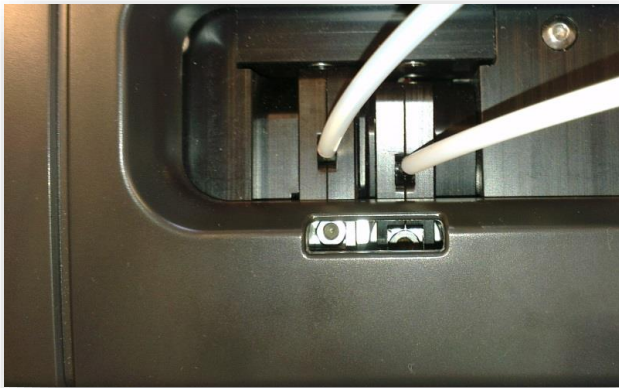
3 Adjust the clamping range

The clamping range can be adjusted by turning the bolt that runs through the clamping spring.

If you turn it clockwise, the spring is compressed further and the clamping range is decreased.

If you turn it counter clockwise, the spring is able to expand more and the clamping range is increased.

To reach the bolt, you need to home the x axis of the printer. Through the slit in the top cap you can see the bolts of the two extruders:



You will need a 3 mm Allen key to turn the bolts. To be able to turn the bolt on the right extruder, you need to select it, so it rotates towards the slit.

If you are unable to continue or have any questions, you can check at the support section of our website or you can contact us directly:

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Kind regards,

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