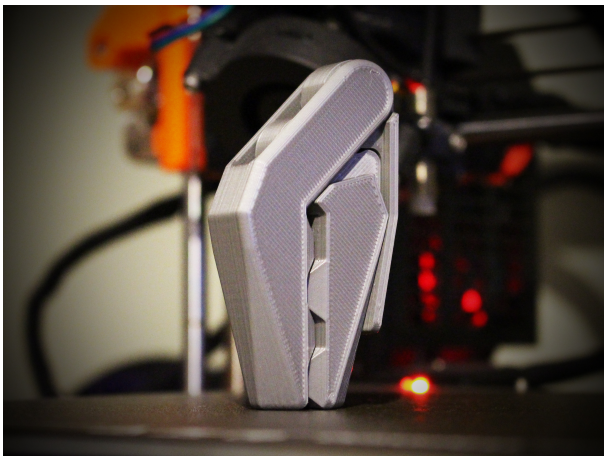
PRUSA PRINTERS BETA



Bag Clip (PRINT IN PLACE CAM)

A **Andrei**

VIEW IN BROWSER

updated 26. 3. 2021 | published 27. 3. 2020

Summary

An elegant bag clip designed to be printed in place as one piece with...

		f	k	h		d
2.22 hrs	1 pcs	0.15 mm	0.40 mm	1	18.00 g	Prusa MK3/S/S+

Household > Kitchen

mechanical seal printinplace holder fresh clip clamp chips chip cam bag

TRAILER

An elegant bag clip designed to be printed in place as one piece with minimal supports. Once printed, the clip is freed into 3 hinged components. The design uses a specially designed cam to give the user a mechanical advantage and lock in place.

The clip opens to approximately 30deg and closes such that there is a clearance of 1mm between teeth. The tolerances were designed to provide smooth motion without any play when printed with PLA on an MK3S.

Starting from an open position, the curve on the first quarter turn of the cam is designed to quickly bring the clip to an almost close. The next quarter turn has a polar slope of 10deg (this was measured to be less than the slip angle for PLA). This section provides the maximum mechanical advantage and is non-backdrivable. The last small portion of the cam has a constant radius to provide a satisfying lock.

Check out 3D Printing Nerd's video about this clip:

NOTE: The current dimensions and tolerances are what I found to work best for me. If you need a version with different dimensions or tolerances, please leave a comment, I'll gladly add more variations. If you want to scale the clip down, check out the mini version of the clip. It has larger vertical clearances to help prevent fusing: https://prusaprinters.org/prints/28360-mini-bag-clip

Print instructions

The 3 components of the clip should be printed all at once in the same position as in the STL/3MF.

Supports should be set to "Support on build plate only".

15% infill works great. However, you can increase the infill for greater strength.

0.15mm layer height should be used. This is because the vertical clearances are 3*0.15mm. Other layer heights will affect the resulting clearances after slicing and could make the parts harder to break free.

The regular files have a 0.1mm clearance on the shaft. For printers requiring a greater clearance, the 015Tol, 02Tol, and 03Tol files have a 0.15mm, 0.20mm, and 0.30mm clearance respectively.

NOTE: It is recommended that you use the 3MF file as it contains some useful support blockers and all the correct settings.

Print Files (.gcode)

DOWNLOAD ALL FILES

cam_clip_3_015mm_pla_mk3s_2h13m.gc 6.9 MB

updated 24. 11. 2020

2.22 hrs f 0.15 mm k 0.40 mm h PLA 17.80 g d Prusa MK3/S/S+

Model Files (.stl, .3mf, .obj, .amf)

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cam_clip_3.3mf
updated 24. 11. 2020
183.5 KB

cam_clip_3.stl
updated 26. 11. 2020
646.1 KB

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updated 24. 11. 2020
188.1 KB

cam_clip_3_015tol.stl
updated 26. 11. 2020
665.8 KB

cam_clip_3_02tol.3mf
updated 24. 11. 2020
188.3 KB

cam_clip_3_02tol.stl
updated 26. 11. 2020
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cam_clip_3_03tol.3mf
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cam_clip_3_03tol.stl
updated 24. 11. 2020
666.0 KB

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