



## Grabhole 70mm front support beam for Anamorphics



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### Summary

a very sturdy support beam for anamorphic projection lenses, all new and enhanced version of an already proven design

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this is the newest development on [my original 70mm front support](#) for anamorphic projection lenses.

While the old design was simple and sturdy enough, the “noses” housing the locking screw and nut could lose shape and therefore tension over time, especially when printed in PLA. This new design follows a simple question: how do I get around the loss in resilience?

The new approach is simple: just don't have any openings and create tension by compressing the whole clamp.

**note.**

**this clamp is robust and will serve you well for years. But only if you follow the instructions properly - PLA and your standard**

**settings won't cut it here. Please mind the printing instructions on the end of this description.**

## **about.**

I installed some tiny air pockets in the beam (as seen in the attached screenshot). This will let your slicer handle those areas as “outside” and apply the settings for walls, top-, and bottom-layers which will add material and stability.

Little added noses will give some guidance to reach proper LWS height; you can use e.g. a ruler to help yourself out. See attached screenshot.

One downside that will be a let down to some users: I stopped making this clamp for various riser blocks and only go for 40mm width. If stability is a major concern, it makes very little sense to use risers like the SmallRig 840 that has 4,5mm less width, and therefore much less material (and given the shape this clamp has, in some important parts). I know that the SmallRig clamp is beloved, but it isn't available as individual item for years and I can't think of a single reason **why I should aim in precisely the wrong direction.**

The good news is that the clamps I use are very cheap (even though you might need to wait a minute on the shipping because they are from AliExpress). They are from a company called **BGNing and are less than \$5 a pop** and can even be ordered with your logo on them - I know how much some people love their logo, so see it as an opportunity to increase your brands visibility even more. They even come with articulating locking screws for the 15mm rods, there's really not much else you could ask for?

Another downside is that the range of securing the scope is smaller than before, however as so many scopes sit around this diameter I don't worry about that.

## **the anti-slip.**

Another new feature that deserves its own bullet-point is the (optional) anti-slip. Anti-slip is a small piece printed of TPU that gets inserted into the clip and helps to prevent your scope from slipping around.

The good thing about the old design is that it can, within reason, fit lenses which are a tad smaller or larger than 70mm in diameter (truth be told, just as now it was 71mm even back then). My good fella Tim-Meister L suggested to make the not-open design a tad bigger so anyone can install rubber or something to prevent slippage on the smooth plastic. So my idea was to include something into the design that does this exact job without interfering with the overall diameter. Also, because it is a separate piece,

you can print in a contrast-colour or even the one you use for your CI. So you can push brand-visibility beyond any comprehensible border.

Anti-slip gets simply pushed into the support beam and, by pushing against the scope, already adds to the cause. Because it is made of flexible material it doesn't harm the scope nearly as much as solid plastic could, also when in use you don't need to screw the clamp as tight as without to get a much better grip, pushing less tension onto your precious antique.

Here's a short and terrible video to show how it works:

## **BOM - what you need.**

- 1x M4 screw, 40mm, **no countersunk head!**
- 1x M4 nut
- a 15mm riser block with a width of 40mm, **like BGNing ones** (brand-logo opportunity)
- a screw fitting the thread on the riser block, usually M6, at least 20mm in length; a

## **printing advice.**

This is not so much the usual advice as it is a close-to-follow-instruction.

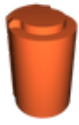
For this clamp to work well over time, you really want a non-brittle, slightly flexible material; **so no PLA**. I have no experience with ASA and the other fancy materials, but I can wholeheartedly recommend **PETG** for this print.

Use many outer walls. The whole circular opening should consist of outer wall - **not infill!** This is so the printing direction is in favour of the tension we apply (Prince Rupert's Drop, anyone?). If you are using Cura and a 0,4mm nozzle, a Wall Line Count of 8 fits the print. See attached screenshot. Still set the infill to gyroid at ~35%, then you'll get a really stable beam.

For the anti-slip, it depends a lot on the shore value of your material. I like to start with 2-3 outer walls, set the infill to 50% concentric and check/adjust from there.

I am aware that these settings increase printing time and “waste” a lot of material. But we want a stable beam to support our lenses worth hundreds of Dollars - we shouldn't skimp on a few cents of plastic and electricity.

# Model files



grabhole70mmsupport\_antislip\_v3.stl



grabhole70mmsupport\_v41.stl

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