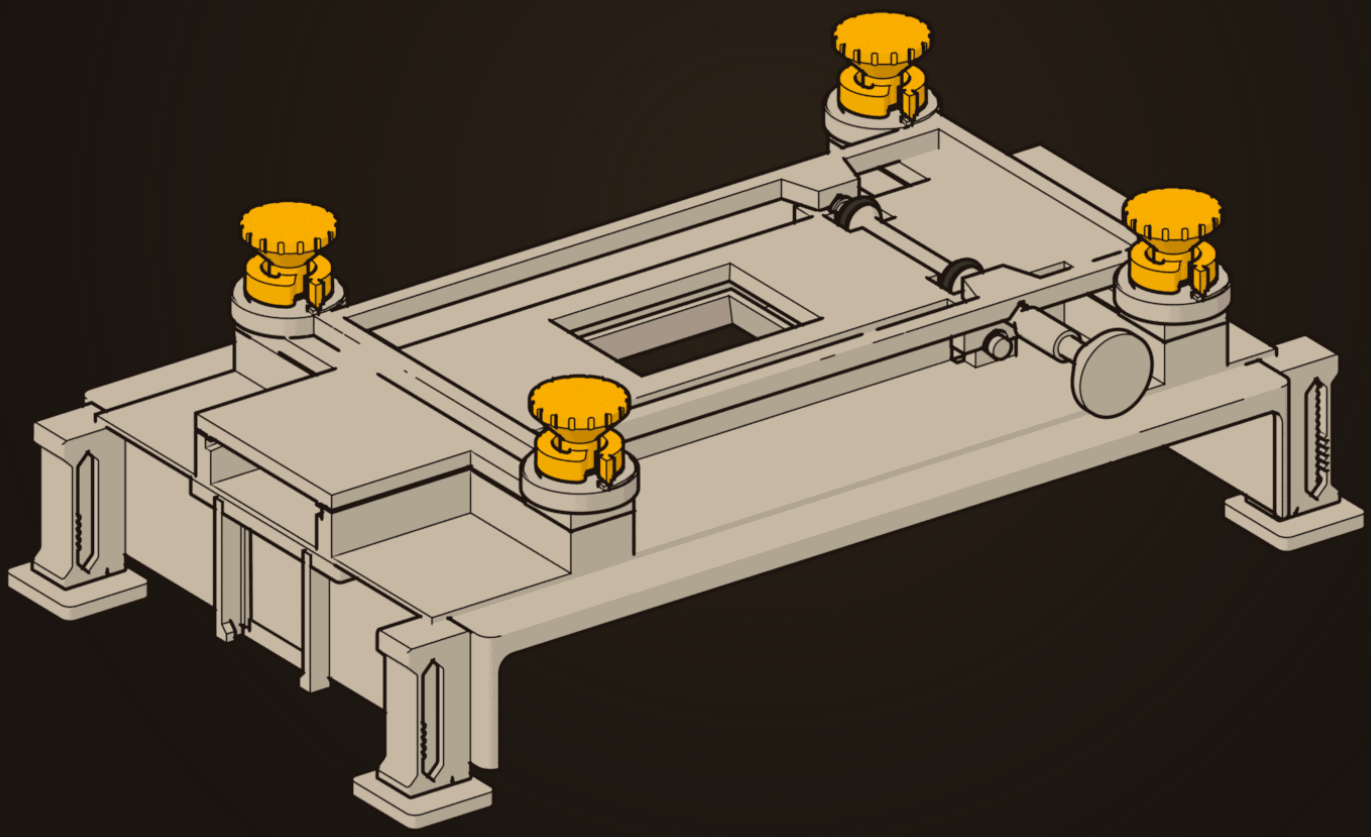
FILM BUDDY

Print guide

Film Buddy Scanning Enclosure R2

Printer setup, the settings for every part, the test fit, and how to protect your film.



Choose a build.

35mm: one chassis, four feet, four keys, and one each of the 35mm carrier, mask, roller bridge, top roller and lower roller. That's 14 printed pieces.

120: the same nine shared pieces, plus the 120 carrier, roller bridge and two rollers. The ZIP includes masks for 6×4.5, 6×6, 6×7 and 6×9. Print the sizes you use; only one mask goes in at a time. Printing all four brings the total to 17 pieces.

We've included an optional phone light tray on its own plate. It holds a phone used as a light source, not a camera.

Each ZIP has a Bambu Studio build project, separate mask projects and a small Test Fit project. You'll also find individual STLs in their print orientation, this README, the license, a Print Guide PDF with every print setting and an Assembly Guide PDF with each step in pictures. You can keep the test key and roller for the finished build.

What you'll need.

PLA or PETG recommended. We print ours in PLA with a 0.4 mm nozzle.

You'll need **4 nitrile/Buna-N O-rings: 5 mm inner diameter × 2 mm cross-section, 9 mm outer diameter, 70A hardness** (about 13/64 inch × 5/64 inch). Two rings go on each roller. Buy eight only if you want to keep rings on both the 35mm and 120 roller pairs.

- Amazon — uxcell, pack of 10
- Witmer — nitrile 70A, sold individually; buy four

Links are for convenience only. Film Buddy isn't affiliated with these sellers and earns nothing from purchases. Any standard 5 × 2 mm O-ring should work.

Works with light sources such as the CineStill CS-Lite. Film Buddy is not affiliated with or endorsed by CineStill.

Inner diameter	Cross-section	Outer diameter	Hardness
5 mm	**2 mm**	**9 mm**	**70A**

Printing.

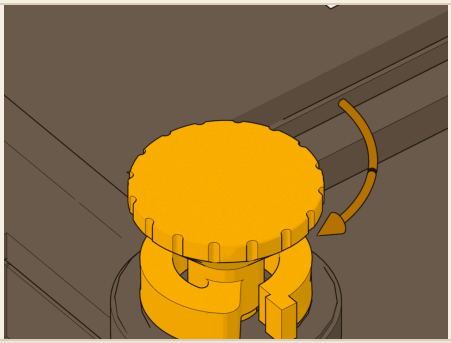
Tested on Bambu Lab H2D. We haven't physically tested other printers. Use a 0.4 mm nozzle, a textured PEI plate and **100% scale**. The chassis won't fit an A1 mini.

Our projects start with the stock P1S 0.4 mm profile and a 256 × 256 mm layout. Open the 3MF as a project, choose your printer and filament preset, and keep the per-part settings. The saved filament preset is PLA; choose a suitable PETG preset if that's what you're printing. Check every plate before you print. You can skip the optional tray plate.

We've checked slicing with the P1S and H2D presets. That doesn't replace checking the fit of your own prints. Orca, Prusa and Cura can import the geometry but may drop settings, so use the table below. The STLs are already oriented for printing. Keep the rollers upright.

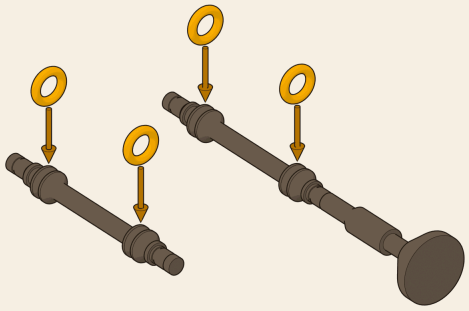
Test the fit first.

Print **Test Fit.3mf** before the full build. It contains one key and one lower roller for your chosen format. Remove the key's supports and the roller's brim. Check for rough shafts, blocked grooves or damaged spring arms before printing the rest. You'll need the matching chassis, carrier, mask and bridge to check how they fit.



The key should turn snugly with finger pressure.

It passes if it enters the aligned openings, turns clockwise to its stop and holds the stack without wobble. Stop if it needs force, turns white, cracks or leaves the stack loose. Clear support remnants and first-layer flare, then check scale and layer height. If it still binds, calibrate flow and elephant-foot compensation before reprinting the key. If it's loose, check that the parts match and that your layer height and flow are correct. Don't force the key or rescale the whole kit.



The rollers should spin freely by hand.

Check with all four rings fitted and the bridge secured. Rubbing, twisted rings or a roller that binds under the bridge means it hasn't passed. Clear any brim or strings, check the roller alignment and reseat the rings. Reprint a rough or bent roller upright at 0.12 mm. Check flow before changing dimensions.

Print settings.

Part	Layer (mm)	Infill	Walls	Top/bottom	Supports	Brim (mm)	Orientation
Shared parts							
Main chassis	0.24	15%	4	4/4	None	0	Upside down, deck on bed
Foot ×4	0.16	100%	4	5/5	None	0	Upright, pad on bed
Locking key ×4	0.16	100%	4	5/5	Tree, build plate only	3	Upright, retaining foot on bed Solid infill supports the turning load; tree supports preserve the curved spring arms.
35mm							
35mm carrier	0.2	15%	4	5/5	None	0	Flat, broad base on bed
35mm mask	0.24	15%	4	4/4	None	0	Flat, broad base on bed Keep the saved flat face down to preserve the film-facing surface.
35mm roller bridge	0.16	100%	4	5/5	None	0	Flat, broad base on bed
35mm top roller	0.12	100%	4	8/8	None	6	Upright, shaft vertical Fine upright layers preserve the round journals and grooves; the wide brim steadies the tall shaft.
35mm lower roller	0.12	100%	4	8/8	None	6	Upright, shaft vertical Fine upright layers preserve the round journals and grooves; the wide brim steadies the tall shaft.
120							
120 carrier	0.12	30%	4	8/8	None	0	Flat, broad base on bed
120 6×6 mask	0.12	15%	4	8/8	None	0	Flat, broad base on bed Keep the saved face down and use the listed layers; the 6×9 mask uses extra infill across its longer opening.
120 6×4.5 mask	0.12	15%	4	8/8	None	0	Flat, broad base on bed Keep the saved face down and use the listed layers; the 6×9 mask uses extra infill across its longer opening.
120 6×7 mask	0.12	15%	4	8/8	None	0	Flat, broad base on bed Keep the saved face down and use the listed layers; the 6×9 mask uses extra infill across its longer opening.
120 6×9 mask	0.12	30%	4	8/8	None	0	Flat, broad base on bed Keep the saved face down and use the listed layers; the 6×9 mask uses extra infill across its longer opening.
120 roller bridge	0.16	100%	4	5/5	None	0	Flat, broad base on bed
120 top roller	0.12	100%	4	8/8	None	6	Upright, shaft vertical Fine upright layers preserve the round journals and grooves; the wide brim steadies the tall shaft.
120 lower roller	0.12	100%	4	8/8	None	6	Upright, shaft vertical Fine upright layers preserve the round journals and grooves; the wide brim steadies the tall shaft.
Optional							
Phone light tray	0.24	15%	4	4/4	None	0	Flat, broad base on bed

For the keys, use tree supports on the build plate only: 30° threshold, 0.16 mm top/bottom gap, 0.25 mm XY gap and three interface layers. The table includes top and bottom layer counts. We use 30/45 mm/s outer/inner walls for keys, feet, bridges and lower rollers, and 30 mm/s outer walls for top rollers. These settings are saved in the projects.

Before you scan: protect your film.

- Test first. Run a strip of scrap or unwanted film through the enclosure several times and check it under light for scratches, dust lines, or pressure marks before using film you care about.
- Check your print. Sand or remove stringing, seams, sharp edges, and support marks anywhere film touches. Rough or warped prints can scratch film.
- Check the O-rings. Use clean, undamaged 5 × 2 mm O-rings, seated fully in their grooves. Replace any that are cracked, flattened, or dirty.
- Keep it clean. Dust and grit trapped in the film path can scratch film. Clean the path and rollers before each session.
- Handle film gently. Don't force film that binds or drags. Stop and find the cause.
- Mind your camera. Make sure your camera, lens, and light source are securely mounted and supported. The enclosure is not designed to carry the weight of a camera.

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