



Prusa Protective Face Shield - RC2



Prusa Research

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Summary

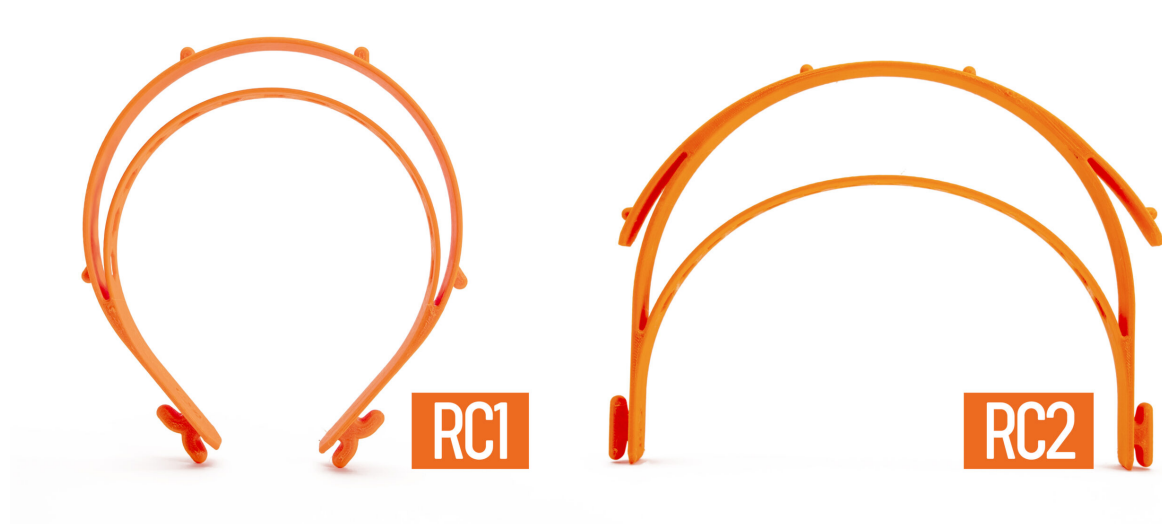
A prototype face shield that we developed. In three days, we went through dozens of prototypes and two verifications with the Czech Ministry of Health.

Version RC2 Changes from RC1:

- Increased wall thickness (slightly stiffer and more durable)
 - Inner wall from 1.5 mm to 2 mm
 - Outer wall from 2 mm to 2.5 mm
- The headband is no longer printed compressed - Lower pressure on the temple
- The visor was moved further away from the forehead - This allows a better fit over bigger respirators and protective goggles
- The printed part now has an extension for the visor (the visor curves less than the headband).

For now, both RC1 and RC2 versions are relevant. RC1 lets you fit more printed parts on a single print bed. However, if maximum yield isn't the priority, RC2 provides slightly better protection and is more comfortable to

wear.



If you want to manufacture shields for others PLEASE READ THIS CAREFULLY

- **Act as if you were infected by the COVID-19 virus.** Wear a face mask and a fresh pair of gloves when collecting each batch of printed parts. Store the parts immediately in a sealable bag.
- Talk with whoever you're making the shields for, let them know about your manufacturing environment
- There is still debate about how long the virus survives on plastic, but most sources mention 2-3 days. That means that by letting the packed face shields sit for 2-3 days before distributing them, you'll greatly reduce risk of transmission
- **Do not store the entire stock in one place**, minimize the risk of cross contamination

More information: <https://blog.prusaprinters.org/from-design-to-mass-3d-printing-of-medical-shields-in-three-days/>

Assembly manual: [English version](#) [English Community version using a laminating foil](#) [Czech version](#)

Video:

["https://www.youtube.com/embed/pP7z3iw76GA"](https://www.youtube.com/embed/pP7z3iw76GA)

Rubber band You can either use a thicker one and make a hole in it at each end (make at least 10 mm cut) or use a thin one and tie it to both ends of the shield.

Visor / front plate

•

there is a DXF drawing in the file section (and an alternative longer version)

- the holes can be made with a standard office hole puncher
- we used 0.5 mm thick petg sheet (Covestro VIVAK), but you should be able to use any clear laser cuttable plastic with similar thickness.

Visor PDF drawings [Normal size](#) [Extended version \(dentists\)](#)

Licence and selling of face shields We share these files under non-commercial licence. It would be great if you donated these shields to those in need for free. If you need to cover your production costs, we are ok with you selling the shields for production cost. However, we do not want to see these shields on eBay for \$50.



5.91 hrs



1 pcs



0.25 mm



0.40 mm



8



105.00 g



MK3/S

[Healthcare](#) > [Accessibility](#)

Supports are not necessary. Print with at least 3 perimeters, about 30% infill.

Ideally, print it from PETG.

Print Files (.gcode)

[↓ DOWNLOAD ALL FILES](#)

72x72

rc2_covid19__2pcs_025mm_petg_mk3s_5 10.9 MB

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⌚ 5.91 hrs ≡ 0.25 mm 🌀 0.40 mm 🌀 PET ⚖️ 105.20 g 🖨️ MK3/S



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








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72x72

covid19_headband_rc2_2pcs.3mf 287.6 KB

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72x72	covid19_headband_rc2_1pcs.3mf updated 22. 3. 2020	290.5 KB	
72x72	covid19_headband_rc2.stl updated 22. 3. 2020	662.6 KB	
72x72	covid19-shield.3mf updated 22. 3. 2020	284.2 KB	
72x72	covid19_headband_rc1.stl updated 22. 3. 2020	585.1 KB	
72x72	bottom_reinforcement.stl updated 22. 3. 2020	383.1 KB	
72x72	shield_final.dxf updated 22. 3. 2020	3.9 KB	
72x72	shield_longer_version.dxf updated 23. 3. 2020	300.2 KB	

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