PRUSA PRINTERS BETA

Prusa Protective Face Shield - RC2

Prusa Research

VIEW IN BROWSER

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Summary

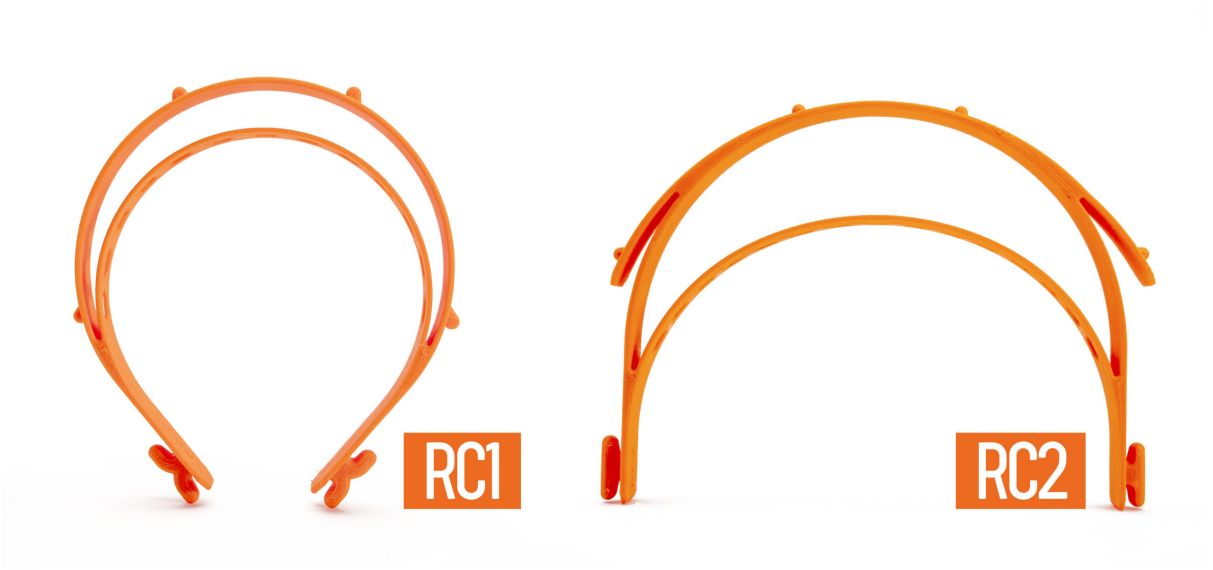
A prototype face shield that we developed. In three days, we went through dozens of prototypes and two verifications with the Czech Ministry of Health.

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 Czech version

Video:

"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-commerical 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.

2.01 hrs	1 pcs	0.25 mm	0.40 mm	8	32.00 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

covid19-shield_025mm_petg_mk3s_2h1r 4.2 MB
updated 18. 3. 2020
2.01 hrs 0.25 mm 0.40 mm PET 32.20 g MK3/S

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

DOWNLOAD ALL FILES

covid19-shield.3mf 284.2 KB
updated 18. 3. 2020

72×72	**bottom_reinforcement.stl** updated 18. 3. 2020	383.1 KB	
72×72	**shield_final.dxf** updated 18. 3. 2020	3.9 KB	
72×72	**shield_longer_version.stp** updated 20. 3. 2020	52.6 KB	
72×72	**covid19_headband_rc2.stl** updated 20. 3. 2020	662.6 KB	
72×72	**covid19_headband_rc1.stl** updated 20. 3. 2020	585.1 KB	
72×72	**covid19_headband_rc2_2pcs.3mf** updated 21. 3. 2020	287.6 KB	
72×72	**covid19_headband_rc2_1pcs.3mf** updated 21. 3. 2020	290.5 KB	

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