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Assembling the Prusa Face Shield

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Assembling the Prusa Face Shield RC1/RC2/RC3 - community version



help.prusa3d.com/g125830

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display the latest
version of this
chapter.



STEP 1 Introduction



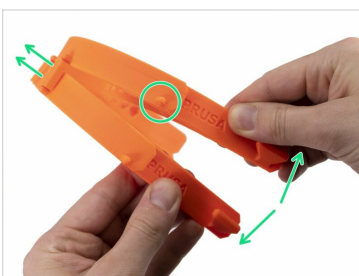
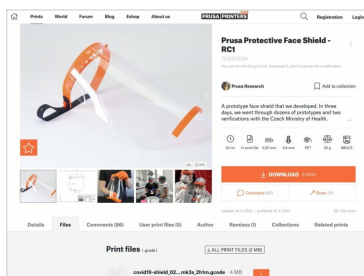
i This guide will help you print and assemble your own **Face Shield(s)**. As an example, we are using a laminating film instead of the plexiglass. *This is an alternative version to the How to assemble the Prusa Face Shield - RC2/RC3*


⚠ WARNING!!! READ THIS!!!

- ◆ **CLEAN WORKSPACE:** It is crucial, that your production environment is absolutely clean!!!
- ◆ **TAKE PRECAUTIONS:** Behave like you are infected. Use the respirator and for the next batches ideally the face shield.
- ◆ **DISINFECT YOUR HANDS AND TOOLS:** Wash your tools and hands regularly, if possible use gloves.
- ◆ **DIVIDE THE STORAGE:** Don't store the parts in one place, separate them into multiple batches. Avoid cross contamination! Use sealable bags! *The virus is expected to die after 96 hours.*
- ◆ **CONSULT THE DESIGN:** Talk to whoever will use this shield (doctors, police, ...). Discuss possible adjustments. One design might not fit all.


⚠ Once again, keep your WORKING SPACE AND YOURSELF AS CLEAN AS POSSIBLE!!!


STEP 2 Getting the printable parts community version





 **The printable files including the description of the changes are available at prusaprinters.org**

 **WARNING:** The design of the shield is currently being verified with the professionals!

 **The distances between the pins are set for the "European" double hole puncher (80 mm), if you have different span, use the STEP file on PrusaPrinters to adjust the distance.**

 Starting with the version RC2, you need to carefully split two headbands from each other, break off the four supports and clean the pins, on which the film will be mounted.

 Recommended for a single use. The effectivity of repeated disinfection is currently being verified.

 This guide is showing assembly of the RC1 version, however the RC2/RC3 assembly is the same.

STEP 3 Preparing the face shield parts

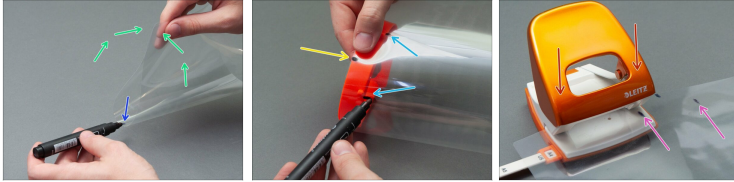


◆ Please prepare the following:

- ◆ Upper part - headband (1x)
- ◆ Lower part - chin (1x)
- ◆ Elastic band - *classic or buttonhole, length 33 cm* (1x)
- ◆ Laminating film - *glued in heated roll, size A4, thickness 0.5 - 1.0 mm* (1x)
- ◆ Hole punch (1x) *designed for 2 hole puncher with a spacing of 80 mm*
- ◆ Marker (1x)

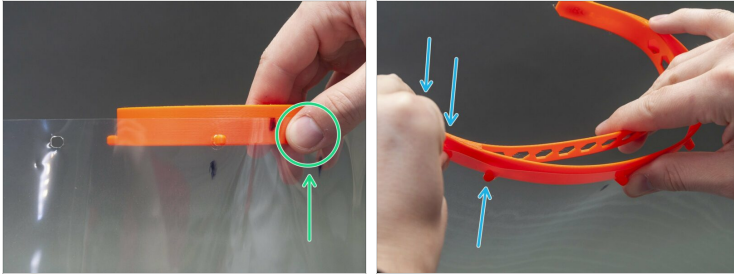
ⓘ The laminating film might be covered with an extra protective layer. Try if this layer decreases the visibility. If needed remove it before proceeding.

STEP 4 Assembling the headband (upper part) on the film



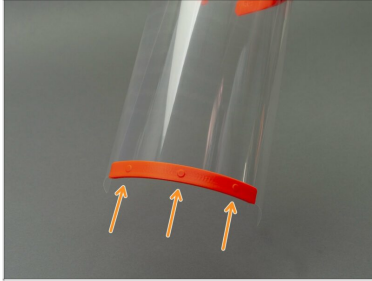
- ◆ Take the longer side of the laminating film and fold it gently in half. Avoid "breaking" the film.
- ◆ Mark the center on the folded film using the marker.
- ◆ Place film with the marked point on the center of the headband.
- ◆ Mark the two pins (protrusions) closest to the center. The side pins will be addressed later. *From our experience it is better to have a slightly bigger distance between the marked points, than the actual distance on the headband. If the distance is too short, the film won't fit.*
- ◆ Align the hole punch to the marked point on the left side of the film. Note that the second marked point is outside.
- ◆ Push the hole punch. It creates two holes on one side.
- ◆ Use the same procedure on the right side. You should have 4 holes in total.

STEP 5 Assembling the headband (upper part) on the shield



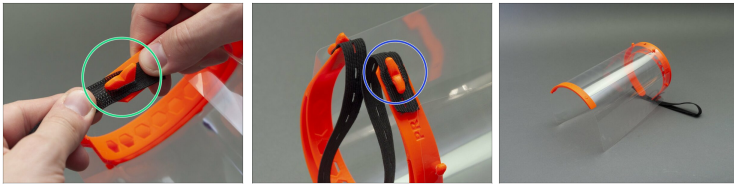
- ◆ Mount the laminating film on the headband using the second hole from the left. Hold it with your thumb.
- ⚠ **The headband must be properly oriented.** The pins must be on the bottom while the laminating film is assembled. For better orientation, use the "PRUSA" sign on the sides.
- ⓘ For easier assembly, it is recommended to push your hand through the headband.
- ◆ Carefully straighten the left side of the headband along the laminating film and insert the pin. As soon as the pin is through, you can release the thumb.
- ◆ Continue on the other side of the headband, apply the same approach. Straighten the headband, avoid bending the laminating film.

STEP 6 Assembling the chin (lower part) on the shield



- ◆ Slide the "chin" on the film.
- ⓘ Ensure that the chin is fully seated. There should be almost no gap between both parts.
- ⓘ From our experience, punching the holes for the "chin" doesn't work well on the soft materials like this film. If the chin keeps falling, consider using a glue.

STEP 7 Assembling the elastic band and final check



- ◆ Take the elastic band and punch through multiple holes at each end with equal spacing. This will enable you to adjust the length if needed.
- ◆ Take either end of the elastic band and hook it around the protrusion on the end of the headband.
- ◆ Place the other end of the elastic band on the opposite side of the headband. Adjust the length if needed.
- ◆ **The face shield is ready!!! Disinfect the shield before the use.**
- ⓘ **To disinfect the shield** you can use Prusa Face Shield disinfection
- ⓘ In case you have an idea for the improvement, please contact us using **covid@prusa3d.com**. Thank you ;)
