

Building documentation on the prototype of a basic CPAP hood made from easily available materials

The following build uses a slice of KG-tube, zipties, adhesive tape, a 200µm thick HDPE dustbag, an unsize swimming cap (available in latex or silicone) and a lenght of cord.

Do not use or test a build without medical supervaillance as to danger of suffocation. A second person should be present for safety reasons under any circumstances. Keep out of the reach of children. When welding plastics, fumes and the danger of fire may occur, use a ventilated and keep means ready to extinguish a fire.



Begin making a U profile ring.

Cut a minimum 2cm thick slice from a DN250 tube.

Smoothen away the edges.

An alternative is adding rims made from tape and zipties as follows:

(turning a grove was more complicated than expected, milling with a handrouter will be tested soon)



Attach zipties to a length of tape, clip of their ends. Smothen the edges on sanding paper.

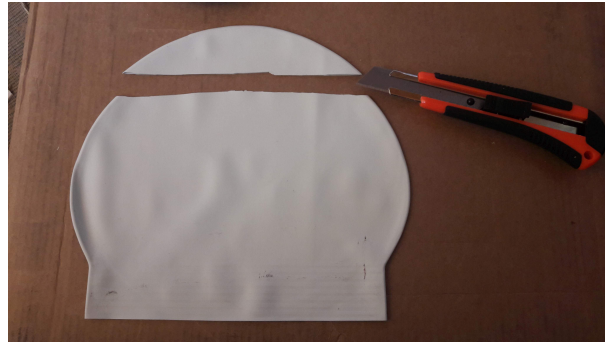
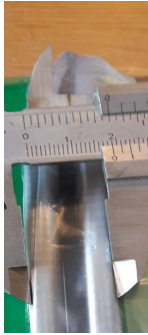
Roll them in for one full turning.



Attach doulbe faced tape to the sticky side over the full width.

Then attach the ribbon to the slice of DN250 Tube.

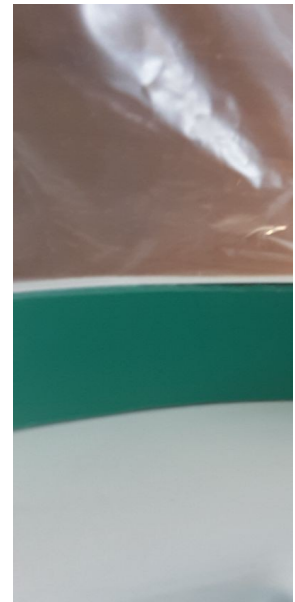
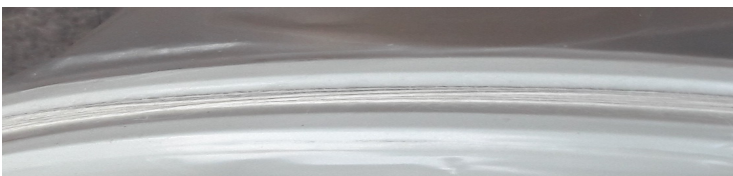




Cut an extra whole into a swimming cap, opposite to the first one and about the same size. Haul the swimming cap over the ring. Work some tension into the rubber skin so the opening for the neck becomes wide enough and does not effect any more tension than required.



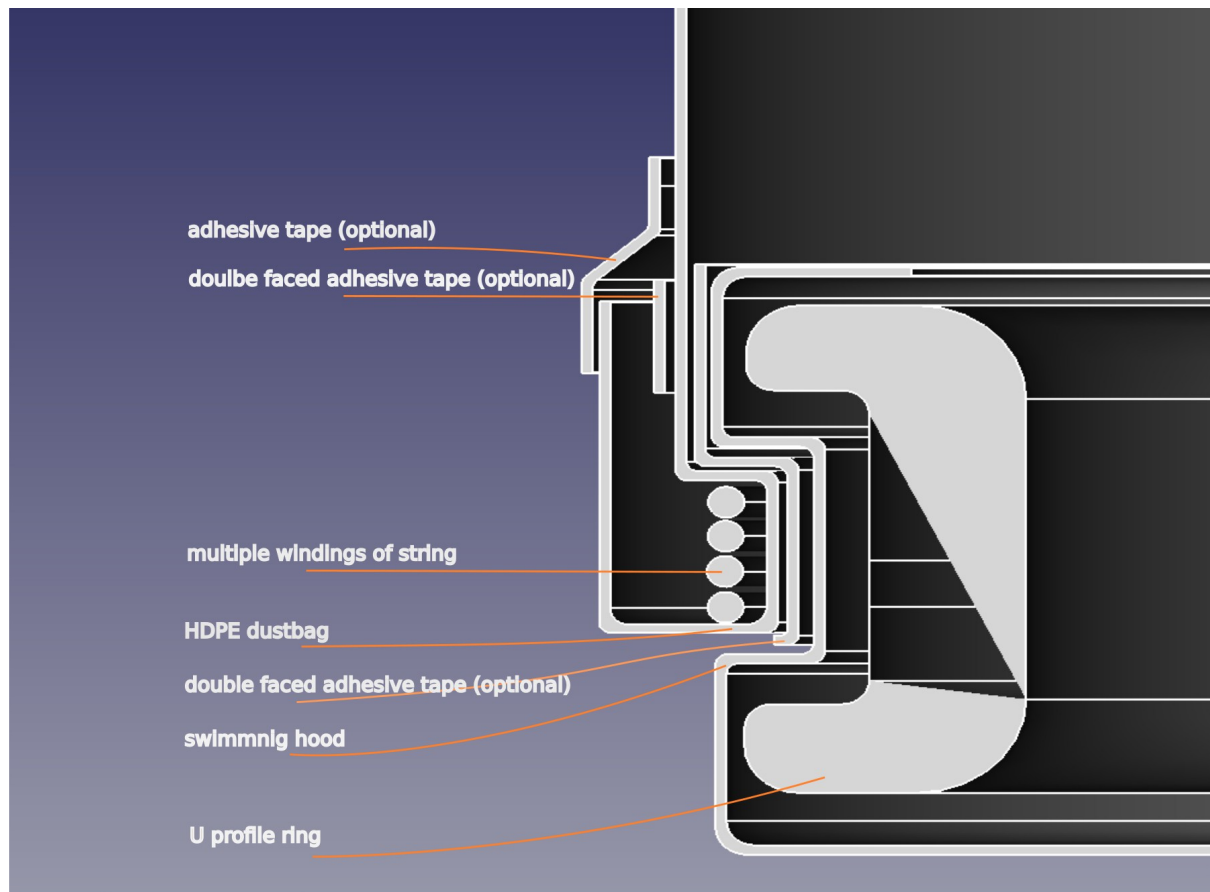
Haul over the dustbag. If it is too wide, use loads of double faced tape, fix it to itself along the ring wherever possible.



Wrap multiple windings of string alongside the groove and build up tension. To increase stability further if required, fold the plastic foil backwards and attach it to itself with another layer of double faced tape.

As an alternative trim the dustbag to a smaller size. When a welding bar is not available, use baking paper and a hot iron. This works only for thick foils, 150 or 200 μm . Use a soft material as an underlayer. Slide a sheet of baking paper between the two layers of foil form a clean welding line as needed to prevent ruptures and small leaks. Use more baking paper as a base layer and another sheet below the hot iron. To ensure for a good sealing, fold and weld the resulting flap to the bag in the area where it is bound to the ring.





screw feedthrough

